

693rd Meeting of Senate

Wednesday, October 27, 2021 at 3 p.m.

Remote participation MS TEAMS-

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Phone Conference ID: 152 354 41#

A G E N D A

Approx. Timing	#	Agenda Item	Action
3:00	1.	Call to Order	
3:01	2.	Approval of the Agenda (including consent items)	Approval
3:02	3.	Business Arising from the Minutes	
ACTION ITEMS			
3:05	4.	Reports of Standing Committees	
	4.1	<u>Undergraduate Student Affairs Committee</u>	Approval
	4.2	<u>Information Technology and Infrastructure Committee</u>	Approval
DISCUSSION ITEMS			
3:20	5.	<u>Report of the Chair</u>	Information
3:30	6.	<u>Report of the President and Vice-Chancellor (including appendices A-D)</u>	Information/Approval
	7.	Report of the Provost and Vice-President, Academic (<i>see President's report</i>)	Information
3:45	8.	<u>Report of the Vice-President, Research</u>	Information
3:55	9.	Two Row Council - oral report	Information
4:00		***** SENATE BREAK*****	
4:10	10.	Generative Discussion - <u>Reporting Requirements</u>	Discussion
4:50	11.	Other Business	
Approx. 4:55	12.	Adjournment	
CONSENT ITEMS			
	13.	Minutes	
	13.1	<u>692 Meeting of Senate held on September 15, 2021</u>	Approval
	14.	<u>Report of the Academic Colleague</u>	Information
	15.	<u>Report of the Actions of the Board of Trustees</u>	Information
	16.	Reports of Standing Committees	
	16.1	<u>Academic Review Committee</u>	Approval
	16.2	<u>Undergraduate Program Committee</u>	Approval
	16.3	<u>Graduate Studies Committee</u>	Approval
	16.4	<u>Information Technology and Infrastructure Committee</u>	Information
	16.5	<u>Planning Priorities and Budget Advisory Committee</u>	Information
	16.6	<u>Teaching and Learning Policy Committee</u>	Information
	16.7	<u>Research and Scholarship Policy Committee</u>	Information
	16.8	<u>Governance Committee</u>	Information



TO: Chabriol Colebatch, Secretary to the University and General Counsel Brock University

FROM: Professor Tim Dun
Chair, Senate Undergraduate Student Affairs Committee

DATE: October 6, 2021

REPORT TO SENATE 693, October 27, 2021

ACTION ITEMS - FOR APPROVAL

MOVED (DUN/)
THAT Senate approve the *Policy on Undergraduate Student Awards* as attached.

Rationale: Several years ago Senate delegated administrative responsibility for awards to the Provost, leaving Senate with policy oversight but no policy to oversee. The policy was developed to fill this oversight gap.

MOVED (DUN/)
THAT the Senate amend *FHB 3A: 14 Awards* as outlined below:

14. AWARDS

14.1 AUTHORITY

Senate is responsible for the educational policy of the University, and, with the approval of the Board in so far as the expenditure of funds is concerned, may enact by-laws and regulations for the conduct of its affairs, and, without limiting the generality of the foregoing, Senate has power, to deal with all matters arising in connection with awarding of fellowships, scholarships, bursaries, medals, prizes and other awards.

Administrative responsibility for undergraduate awards lies with the Provost & Vice-President, Academic, with institutional regulations and standards outlined in the *Policy on Undergraduate Student Awards*.

Responsibility for the oversight of undergraduate awards is under the Undergraduate Student Affairs Committee (USA), with the authority of Senate to:

- i) Advise and make recommendations to Senate concerning policies affecting undergraduate scholarships, awards and bursaries and the financial accessibility of students to undergraduate programs;
- ii) Annually review and approve the Guidelines for Student Awards;
- iii) Grant delegated authority to the Provost, & Vice-President Academic to:

- a) establish award programs and award terms congruent with Senate policies;
- b) collect award applications as required by award terms;
- c) convene committee, as appropriate, to consider applications;
- d) make award decisions based on established award terms;
- e) recommend medal recipients to Senate prior to Convocation;
- f) facilitate student award appeals for review by the Senate Appeals Board;
- g) delegate responsibilities related to undergraduate awards while maintaining responsibility for them.

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14.2 CATEGORIES OF UNDERGRADUATE AWARDS

14.2.1 Definition of Award

An award is a generic term used to refer to any award type including scholarships, prizes, medals and bursaries (see 14.2.2). Student awards are offered to entering and continuing students to encourage and recognize high levels of academic achievement as well as other areas of significant student achievement.

14.2.2 Types of Awards for Undergraduate Students

- i) **Scholarship:** a monetary award given on the basis of academic merit and which may also include other areas of achievement. Academic merit is interpreted as a minimum average of 75 percent although individual award terms may require a higher level of achievement. An exception is made for Athletic Financial Awards which fall under Ontario Universities Athletics regulations.
- ii) **Prize:** includes book prizes, department/program prizes given at the end of program years or at convocation, and prizes for other areas for excellence. Awards and prizes recognize students' achievements in such areas as academic merit, leadership, commitment, support and participation, research, and professional development.
- iii) **Medal:** a non-financial award made to the top graduating students for the year. Examples of medals include two Governor General's Silver Medal, one President's Medal, Spirit of Brock Medals and Dean's Medals.
- iv) **Bursary:** a non-repayable grant to assist academically-qualified students who are in financial need.

Senate 641

14.3 ELIGIBILITY FOR UNDERGRADUATE AWARDS

In addition to any eligibility criteria established under Guidelines for Student Awards the following criteria must be met:

- i) Brock University entering student scholarships and continuing student scholarships are limited to students pursuing a first university degree. Students entering the Teacher Education program are not eligible for university entrance and continuing scholarships, unless otherwise specified in the award terms.
- ii) Students must be pursuing a Brock degree to be eligible for awards. Students studying at Brock University on a Letter of Permission or on exchange from another university are not eligible for Brock University awards.
- iii) If the value of awards applied to a student account, exceeds the student account balance, the difference will not be refunded to the student unless the student has completed their degree or the award is a bursary identified as immediate financial need. The difference will be carried over to the following academic term.
- iv) Students have five years from their date of entry to qualify and utilize their renewable awards. A renewable award may only be renewed a maximum of three times.

Senate 641

14.4 GENERAL TERMS AND CONDITIONS

- ~~i) For awards with financial need criteria, the Student Awards and Financial Aid Office, will assess the level of financial need of individual students.~~
- ~~ii) Contests, such as raffles, are not considered an appropriate basis for awards.~~
- ~~iii) Student awards may not be offered before an Offer of Admission.~~
- ~~iv) If there are no qualified candidates for an award, no award will be made.~~
- ~~v) Award terms must conform to all Senate policies/regulations, as well as the laws of the Government of Canada and Province of Ontario or their legal jurisdictions under which the University operates, including the Brock University Act.~~

Rationale: Revisions to the Faculty Handbook Awards section to reflect the newly developed *Policy on Undergraduate Student Awards*.

CONSENT ITEMS - FOR INFORMATION:

At the September 23, 2021 meeting Anna Lathrop, Vice-Provost and AVP Student Services and Lynn Wells, as Provost and Vice-President Academic, consulted with members of USAC on the results of the Medical Note Review working group. The committee engaged in a discussion and provided feedback to be considered and brought back at a future meeting where revisions to Faculty Handbook language under the purview of USAC (FHB 3A:9.4.1 Deferred Examinations) can be considered.

POLICY ON UNDERGRADUATE STUDENT AWARDS

PURPOSE

The purpose of this Policy is to set standards for the administration of undergraduate student Awards at Brock, in order to ensure consistency in fundamental practices and procedures.

This document operates within a policy context that includes:

- Section 3.A.14 of the *Faculty Handbook*, which grants delegated authority to the Provost & Vice-President, Academic to administer and oversee undergraduate Awards;
- The *Donor Relations, Naming and Recognition Policy*, which outlines guiding principles for the stewardship of current and future gifts to the University, including endowed and non-endowed Awards funds; and
- The *Endowment Management Policy*, which establishes rules and principles for endowment management, including criteria for spending eligibility.

SCOPE

This Policy applies to all student Awards at Brock that are funded through the University budget and/or are approved or administered through Student Accounts and Financial Aid.

Awards that are funded through the budgets of academic units and administered at the departmental level are not covered by this Policy. However, all Awards at the University are expected to respect basic principles of equity, fairness and non-discrimination in the allocation process.

This Policy does not apply to Awards established outside the University, including but not limited to those offered by federal and provincial governments, the Tri-Council agencies and private organizations.

POLICY
STATEMENT

1. Brock University is committed to fairness and non-discrimination when determining eligibility and when allocating undergraduate student Awards.
2. Awards may be created to recognize academic achievement, although they may also recognize non-academic achievements in areas which the University deems worthy of consideration. Awards may also be created to recognize areas of student need.
3. Eligibility for Awards shall be free of criteria based on personal characteristics such as race, ancestry, colour, ethnic origin, sex, creed, age, marital status, family status, sexual orientation, and disability, for example.
4. Notwithstanding the above, the University may from time to time establish Awards that are designed as a special program under the *Ontario Human Rights Code*, such as “to relieve hardship or economic disadvantage or assist disadvantaged persons or groups to achieve or attempt to achieve equal opportunity.”
5. Terms of Awards shall conform to the laws of the Government of Canada and the Province of Ontario, as well as to Senate policies and regulations and to the Brock University Act. The University will ensure that terms of awards are reviewed regularly to ensure compliance.
6. Awards shall be understood to be awarded by the University. While donors, partners and other third parties may participate in the deliberation process, the final choice of recipients will rest with the University.
7. The University may provide assistance to external agencies offering Awards where there may be benefit to students at the University. These requests will be reviewed on an individual basis by Student Awards and Financial Aid.
8. The University shall establish a common method for determining student financial need in the allocation of awards, reviewing and adapting it as needed. For Awards with financial need criteria, Student Awards and

Financial Aid will assess the level of financial need of individual students.

9. Student Awards and Financial Aid will have discretion to ensure that students are not unduly penalized with respect to eligibility or allocation of Awards by participating in experiential learning, placements, exchanges, or other curricular or co-curricular activities that may enhance their studies or student experience. These exceptions would also apply to medical and compassionate leaves at the discretion of the administrative unit.
10. While there is no maximum to the number or value of undergraduate Awards a single student can hold, the University shall strive to strike an appropriate balance in the allocation of Awards between recognizing excellence and supporting a broad range of students.
11. The University reserves the right to decide to terminate an undergraduate Award at its discretion.

ESTABLISHMENT OF AWARDS

In order to be constituted as an established award, an award must have set terms and conditions that have been certified by the appropriate University representative to be in conformity with this Policy.

Terms for awards should:

- Comply with all relevant legislation, including pertinent University policies;
- Be consistent with the University's vision, mission and values; and
- Be practical for the University to administer.

The terms and conditions of all established awards shall be recorded in the Student Financial Services Office.

ELIGIBILITY

The following criteria are established related to eligibility for undergraduate student Awards:

- Students must be pursuing a Brock degree to be eligible for Awards. Students studying at Brock on a Letter of

Permission or on exchange from another university are not eligible for Brock Awards.

- Undergraduate Awards for entering and continuing students are limited to students pursuing a first university degree. Students entering the Teacher Education program are not eligible for university entrance and continuing Awards unless otherwise specified in the Award terms.
- Only Brock courses will be used to determine eligibility and calculate grade requirements for non-entrance awards.
- Unless it is otherwise prescribed in the terms of an Award, students will be considered for Awards based on the assumption of a full course load.
- Student Awards may not be offered before an offer of admission has been made. Deadlines to accept entering Awards cannot be set before any sector-wide policies or regulations the University is bound to under central application processes.
- In cases where no student is deemed eligible for an Award, the Award shall not be awarded.
- Awards shall be made based on set eligibility criteria. Contests, such as raffles, are not an appropriate basis for allocating Awards.

RENEWABLE AWARDS

Students who receive renewable Awards will have five years from their date of entry to use the Award. A renewable Award may only be renewed a maximum of three times.

REFUNDS AND CARRY-FORWARD

If the value of Awards applied to a student account exceeds the account balance, the difference will not be refunded to the student unless the student has completed their degree or the Award is a bursary identified as immediate financial need. Instead, the difference will be carried over to the following academic term.

CANCELLATION OF AWARDS

Students who withdraw, reduce their course load or otherwise alter their program of study may be required to forfeit all or part of their Award as dictated by the terms of reference for the Award. The decision will be made by the Student Financial Services Office and will be based on the terms of the Award, the circumstances leading to the student's decision, and the educational costs already incurred. A cancelled Award will take

the form of a charge against the student's University fees account.

DEFINITIONS

For the purposes of this Policy, an "Award" means a scholarship, prize, medal, or bursary, and or other form of recognition bestowed upon students.

Types of student Awards include:

- 'Scholarships', which are monetary Awards given to students on the basis of financial need, academic merit or other areas of achievement. 'Academic merit' is usually interpreted to require a minimum average of 75 percent. Exceptions are made for Athletic Financial Awards, which fall under Ontario University Athletics regulations.
- 'Prizes', which include book prizes, certificates of achievement, Dean's Honour List notations, department or program prizes given at the end of program years or at Convocation, and prizes for other areas of excellence such as leadership, commitment, support, participation, research, and professional development.
- 'Medals', which are non-financial Awards made to the top graduating students of the year. These include for example the Governor General's Silver Medals, the President's Medal, the Spirit of Brock Medals and the Dean's Medals.
- 'Bursaries', which are non-repayable grants awarded to assist students who are in financial need and who maintain a satisfactory academic standing.

COMPLIANCE AND REPORTING

This Policy is under the jurisdiction of the Brock University Senate.

The Provost & Vice-President, Academic or their designate will report annually to Senate via the Undergraduate Student Affairs Committee on the allocation of undergraduate awards.

Information Table format:

Policy Owner:	Provost & Vice-President, Academic
Policy Lead:	Provost & Vice-President, Academic
Policy Classification:	XXX
Approval:	XXX
Effective date:	Month yyyy
Next review:	Month yyyy

Revision history:	Adopted Month yyyy
Related documents:	Donor Relations, Naming and Recognition Policy Endowment Management Policy Faculty Handbook

DRAFT



To: Chabriol Colebatch, University Secretary &
General Legal Counsel, Brock University

From: Tim Ribaric
Chair, Information, Technology, and
Infrastructure Committee

Date: October 19, 2021

Report to: Senate 693, October 27, 2021

ACTION ITEMS

1. Learning Management System

MOVED (Ribaric/)

THAT Senate endorse the acquisition of a new Learning Management System that addresses the needs identified in the attached Learning Management Report dated September, 2021.

2. Classroom Modernization – addition of a new section to Faculty Handbook III C

MOVED (Ribaric/)

THAT Senate approve the addition of Section III C:5.4 Classroom Modernization to the Faculty Handbook as outlined:

FHB 3 C: 5.4 Classroom modernization

Senate is responsible through the Information Technology & Infrastructure Committee for academic policy related to classroom technology, classroom infrastructure, and classroom standards. This includes:

- Policy related to how classroom standards are defined and maintained at the University (e.g., how often they are reviewed and renewed based on industry trends);
- Policy oversight and strategic visioning for classroom standards, infrastructure and technology needs.

Administrative responsibility for these areas, including approval of any related spending and expenses, lies with the Provost & Vice-President, Academic. This responsibility will be carried out in a manner that is consultative, representative, and that balances the interests of the many stakeholders that make up the University.

Rationale: To continue on the work begun last year to modernize the terms of reference for IT&I this motion is presented. It seeks to formalize the tasks undertaken by the previously constructed Classroom Modernization Committee.

CONSENT ITEMS - INFORMATION

The Committee received reports from,

3. Information Technology Services

All work done on the SIS is done in consultation with the Registrar's office (RO) and the Faculty of Graduate Studies (FGS). A roadmap of required enhancements is identified and prioritized by RO and FGS. Enterprise Solutions (ES), meets monthly with RO and FGS to review the roadmap, make modifications to required items and prioritizations.

Work done over the last few months and those currently in progress (selected sample)

- COVID-19
 - o Creating a declaration tool for faculty/staff/students/community members. Allow individuals to identify vaccination status and upload proof of vaccination/exemption
 - o Blocking students from system access and sakai (on-campus) course access if non-compliant, prior to removing students from courses.
 - o Identify students/student athletes/staff who are required to take part in a RASP program (rapid antigen testing).
- Scheduling
 - o Enhance scheduling options to include "hyflex" as a valid course delivery format. This requires part of the course to be taught in class, and another part to be taught synchronously on-line.

- Accommodate SUNDAY as a valid day to schedule items
- Registrar's office / Faculty of Graduate Studies
 - Digitay/MyCred is an electronic platform for sharing documents with student.

4. Facilities Management

- Expansion of Village Rd. and Lot S, adding 196 new parking space to the Campus
 Current Major Capital Projects – Design Stage
Goodman School of Business – MCA Renovations 5,000 sq. ft renovation,
 Tender ready for December, construction start is Feb./March 2022
Nursing Labs Renovation – East Academic Construction start December.

 Current Major Capital Projects – Construction Stage
- Validating, Prototyping, Manufacturing Institution (VPMI) Inniskillin Hall
Addition: Project delayed due to the effects of poor weather and Covid effects
 of labour and material shortages. Completion date estimated Feb. 2022

Residence 8 – New Construction , Anticipated project completion date is the
 end of December.



LMS Review Resource Selection Team Report

September 2021

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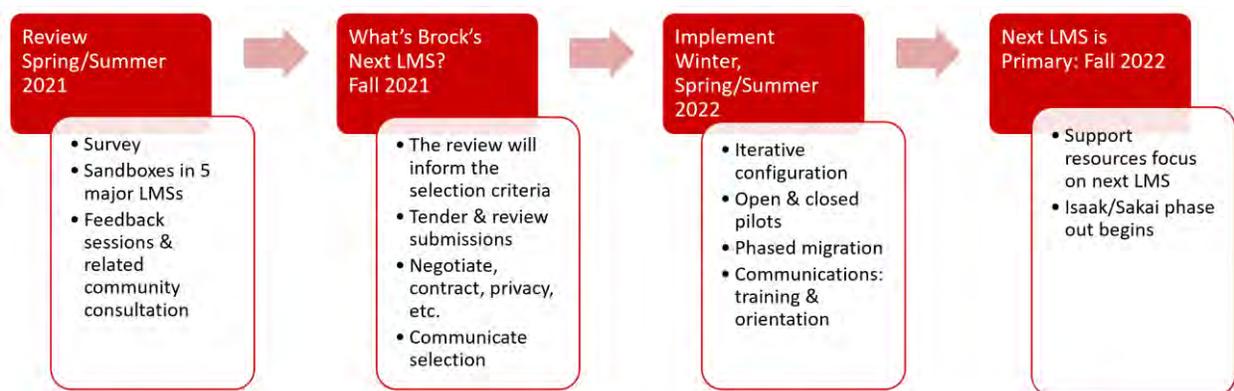
Summary

The Resource Selection Team, created by Senate on March 3, 2021, has consulted with the Brock University community, and compiled a list of specific priority and feature requirements of a modern LMS that Brock University's current Sakai-based LMS does not meet.

After extensive university-wide consultations it is the perspective of the Learning Management System Review Resource Selection Team that Brock University should conduct a competitive process to replace its current LMS.

More information about the consultation process, the current LMS state at Brock University, and future potentialities for a modernized LMS are detailed below.

Timeline



Description of Consultation Activities

Consultations

During the review period, presentations were made to three faculty Chairs and Directors meetings and an Associate Deans meeting. Feedback was collected from each session.

In consultation with Senate Information & Technology Committee, a summary of the proposed review and a request for comment was circulated with all faculties and the library. The report, as well as written comments from faculty members and librarians, was circulated in the Senate minutes of March 3rd of 2021.

Report to Senate

The report to Senate, included in the March 3, 2021 agenda, outlines the consultation process and information to be gathered through the review process.

Campus Survey

During the month of June 2021, a cross-sectional survey was conducted to understand users' experiences with Sakai as well as to discover the importance of specific functionality and features within an LMS. The survey was sent out through several channels: emailed to the Deans to forward to their respective Faculty

members, Provost's newsletter, CPI newsletter, BUSU newsletter, university-wide Sharepoint site, homepage of Isaak-Sakai, Student Life and GSA social media channels, and presented in various Chairs and Directors meetings (Education, Math & Science). 531 responses were received.

The [findings from this survey can be accessed online](#).

Sandbox Experience and Survey

From June 29, 2021 to August 5, 2021, the Brock University community was given the opportunity to explore leading learning management systems: Blackboard, Brightspace, Canvas, OpenLMS/Moodle, and Sakai 21. Participants were randomly assigned to an LMS sandbox, through a novel process we dubbed [Mission LMS](#). Participants could access, explore, click, and create content to explore the features and functionalities for each of these systems over a five-week period. This provided the Brock University community an opportunity to experience LMSs that function differently than Brock's current LMS and submit feedback on the parts of that experience Brock University should look to emulate and what it should avoid. 759 individuals accessed the Mission LMS site and 367 responses were collected.

The [findings from the Mission LMS experiences can be accessed online](#).

Resource Selection Team

The Resource Selection Team met virtually eleven times between April 11, 2021 and August 23, 2021. Team membership is listed in Appendix A.

Current Landscape at Brock University

The initial report to Senate described the growing use of Brock University's LMS and related technologies that augment LMS functionality, such as the Echo360 video platform and Crowdmark online marking platform. LMS growth has continued since that time, with average daily logins per user averaging 1.7 logins (8,901 unique daily users) in September 2019, rising to 1.9 in September of 2020 (19,809 unique daily users) and 2021 (17,982 unique daily users). Online testing has also risen well beyond expected usage levels. Monitoring and 5-day forecasting tools were created in the summer of 2020 to support capacity planning as intensity, complexity, and costs to operate the system continue to rise.

The initial March 2021 report to Senate organized Brock University's current LMS related challenges into technical, functional, integration and innovation issues which situated the need for a review. These are outlined below together with the associated findings from the review.

Technical Issues

Issues are occasionally found by students and instructors, often attributed to the shrinking development and testing community, e.g., recurring delayed E-Mail notification bugs, rubric bugs, odd quizzing behaviour. There are also challenges scaling the usage of the current LMS to new and ongoing online assessments for exceptionally large courses.

What we learnt

The need for system reliability was consistent in the feedback from the community survey and faculty Chairs and Directors meetings. Survey results identified instability or "glitches" as the fifth most common challenge. Transitioning to a provider that operates client tenants on a cloud infrastructure could improve Brock University's reliability by adding the resources of all

Canadian clients to those available to Brock as well as related operational supports. This also matches Brock University's board-approved "Cloud first" IT approach.

"Doesn't seem intuitive or user friendly for student grades - too much room for error (like how it doesn't calculate grades correctly if you don't put all zeros in first), and you can release all grades at once, but if a TA does that by accident (and they shouldn't have that ability), there is no way to do a mass unrelease."

Functional Issues

Forums are unable to handle large class engagement, there is no document preview and markup, marking and grading functions are limited or inconsistent between tools which causes extra time and resources to manage appropriately (e.g., complex, and limited ability to assign TAs to mark assessments; cannot rescore quiz questions after delivery; yet to be released tests are not visible anywhere, not even as forewarning) and Sakai's requirement to refresh and reload pages does not match contemporary user expectations.

What we learnt

Survey responses noted functional constraints within the current LMS tools, mostly relating to the Tests and Quizzes, Assignments, and Gradebook tools, other tools were also mentioned as being restrictive. Inconsistencies in how permissions and roles are applied across tools create expectations in one area that are not met by another, leading to incidents that the instructional teams are forced to respond to. The Tests and Quizzes tool received many suggestions for improvement including more detailed assessment and activity statistics, more efficient ways to submit media (video and images), and more accessibility features.

Feedback across all components of the current LMS suggest a need to transition to a responsive and dynamic experience that provides good defaults for complex operations in contrast to the current reliance on full page-loads, scrolling, and a lack of systemic support for complex operations.

Integration Issues

SAKAI does not support latest integration specifications for application programming interface (API), including learning tools interoperability (LTI), publishers cannot integrate all their tools' features, and Microsoft chose not to create a Teams integration for Sakai.

What we learnt

Survey results identified the Echo360 video platform as the most important integration "that your course or course experience could not function without." The second most important was "I don't use any of these external tools" which could be associated with their lack of integration and discoverability. Course Readings, the Brock University Library's ARES system, was the third most used external tool. When alternatives were presented through the Mission LMS experience, including in Sakai 21, participants responded positively.

Innovation Issues

Lack of intuitive interface properly supported in an app/smartphone platform and all sites must share an undergraduate-focused course format.

What we learnt

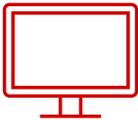
The fourth most common challenge with the current LMS in the survey responses was “Outdated” and does not meet high expectations set by contemporary online experiences. Instructor responses suggested that the current LMS limited their pedagogical approaches because of lack of functionality or perceived complexity, and the inability to rely on user intuition exceeded the benefits. All consultations indicated the importance of a mobile experience and the integration of information such as calendars and notifications to smartphones.

Instructors also reported that incidental accommodations, such as extra time or a retakes for quizzes or assignments, were difficult to provide to students in response to the types of unpredictable, real-time events associated with teaching and learning during the pandemic.

Brock University has made minor contributions to Sakai, including a few interface items and accessibility improvements, but the institution is not able to contribute on a large-scale. The initial report to Senate noted that Sakai has lost long-term contributors, noting [NYU has recently announced its migration to D2L Brightspace from Sakai](#), removing a significant source of innovation and development from the Sakai community. Subsequently, [Notre Dame has announced that it will be transitioning from Sakai to Canvas](#).

Needs Identified from Consultations

A modern, straightforward, familiar interface



The most salient theme across all consultations is the need for an intuitive and user friendly LMS. The Brock community ranked easy and clear course content layout options (n=338), accessibility (n=284), and modern easy-to-use interface (n=253), as the most important features of an LMS. After experiencing a variety of other systems, the Brock faculty, staff, and students reiterated that the most-liked features are ease of use or navigation (specific to creating and building a course), the aesthetics of the system (desirable layout), and intuitiveness. Although one of the reported priorities for an LMS is to provide familiarity in experience (76%), a few of the primary reasons for dissatisfaction (22.7%) with the current Sakai system are a lack of intuitive or user-friendliness (n=116), outdated interface (n=52), and a confusing layout (n=27).

“make a user friendly app that people can log in on from their phones and not have to log in every time they wanna check their homework, as it makes the process of completing schoolwork that much more annoying.”

Ease of content creation



The Brock community desires intuitive and effortless content creation and navigation through prioritizing processes such as: automating tasks (61%), simplicity in completing tasks (59%), and allowing for content and options of their choosing (55%). In terms of site and content creation, a few of the top ranked features by faculty, staff, and students are ease of organization of content (drag and drop) (n=249), ability to navigate between multiple tabs and windows of the same course (n=188), contemporary text editor (n=57), flexible group creation and management (n=31), and options for multiple modes of content delivery (n=15).

“Through the activity stream, you were able to see all tasks for all your courses. Then, you were able to click on each individual task and information would pop up regarding the grades or the assignment. This sort of information is not as easily accessed on Sakai.”

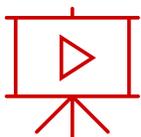
Integrated and interactive dashboard



The most sought-after feature that other LMSs have and Brock University’s current LMS does not offer, is one integrated location that allows users to track content and progress across all sites. Although it varied in form and function across all LMSs, this feature is a consistent highlight for faculty, staff, and students. The ability to see a snapshot of each course in one place, identify deadlines and outstanding assessments, and view an integrated calendar and checklist, allows students and instructors to stay organized and focus their attention on top priorities.

“It needs to have sensible names for things, and intuitive processes. I spent a ton of time this year trying to figure out how to do things that should be simple, like creating a question pool for quizzes, or sorting out gradebook.”

Seamless integration of multimedia



We know that video and audio content is a crucial aspect of online teaching and learning. At Brock, the most important external tool in our current LMS is the Echo360 video tool, 34% of respondents indicated that their course/course experience could not function without it. The ease of upload of multimedia content (videos, images) into the LMS is the most important feature (n=263) when it comes to site and content creation for faculty, staff, and students. More specific features such as simple submission of video and audio content for assessments, and providing video and audio recorded feedback to students were mentioned as desirable aspects.

"The submission page is much simpler than the one on Sakai/Isaak especially when it comes to submitting video or audio files which could be beneficial to certain majors."

Robust grading and feedback tools



Three of the top five built-in tools that the Brock community suggested their course experience could not function without are Assignments (n=359), Gradebook (n=337), and Tests and Quizzes (n=253). This high usage and the importance of these tools supports the notion that a robust grading and feedback feature is foundational to the LMS. When looking at assessment and communication a few of the most important features ranked by faculty, staff, and students are ease of grading/annotation (n=275), straightforward assessment creation/submission (n=156), and submission receipts for assessments (n=48). Although the ability to grade student submissions within the web browser was a welcomed addition to Sakai 21, faculty found that there were more options around assessments and grading in the other LMSs. This includes annotation, bulk editing, import/export of grades, event log in gradebook, grader notifications and specific file type submissions.

"I was most impressed by the process of grading assignments. I love that I can annotate the assignment in my web browser and that I can do that while filling out the rubric on the side. Having to download all of the assignments on my computer and then load them individually in Word was a hassle. This is much more streamlined"

Complementary mobile experience



One of the most significant challenges with our current Sakai-based LMS is its lack of a platform-specific mobile app. Despite this limitation, the Brock community continues to access Sakai through their mobile devices (23.5% of our LMS usage is accessed via mobile browsers), which supports the data that users want the LMS to be easy to use and stable, including having a mobile application (n=86). The sandbox experiences represented limited use of the provided LMS' mobile apps but for the few users that found their way to these applications their responses were positive.

"make a user friendly app that people can log in on from their phones and not have to log in every time they wanna check their homework, as it makes the process of completing schoolwork that much more annoying."

Ease of content migration



When considering a change in the LMS one of the most important considerations that faculty, staff, and students have noted is the need for an easy import/export of content between sites, other LMSs, and related technologies (n=151). Users of our current Sakai system appreciate the easy transfer of content from site-to-site (n=23) and want to ensure that functionality is sustained in the future LMS. There have been significant developments in automated LMS migration services in recent years, as noted by [Mohawk College's migration of 20,000 courses in 10 days](#). The short-term success of a new LMS will be primarily judged by the migration experience.

Acquisition Recommendation

Brock University should conduct a competitive process to replace its current LMS. This process should be open to qualified vendors representing products explored during the sandbox, or not, and vendors committed to implementing and supporting open sources LMSs, including Sakai.

Brock University's current LMS and all of the alternatives explored have a claim to be part of the Next Generation Digital Learning Environment (NGDLE), a concept first written about in 2015 by [Educause's Malcom Brown that has been further explored since](#). Brock University should use the information gathered to find areas that distinguish the available options from each other, reflect the needs identified by the Brock University community, and complement other components of the Brock University student experience.

The selection criteria should be based on the recommendations in this report and all of Brock University's existing privacy, security and accessibility policies. Functional requirements should be evaluated separately from vendors' financial submissions.

Appendix A

Resource Selection Team membership

Chair	Dr. Madelyn Law	Associate Vice-Provost, Teaching & Learning
Project Manager	Matt Clare	Associate Director, Technology-Enabled Learning, Centre for Pedagogical Innovation
Members	Mike Brousseau	Manager, Educational Technologies, Centre for Pedagogical Innovation
	Dr. Alex Christie	Assistant Professor with the Centre for Digital Humanities
	David Cullum	Associate Vice-President, Information Technology Services
	Ben Johnson	Undergraduate student representative (as appointed by BUSU)
	Alba Kotyk	Application Architect, Information Technology Services
	Amanda Macdonald	Graduate student representative (as appointed by the GSA)
	Maggie Whitfield	Staff representative
	Dr. Dawn Zinga	Associate Dean representative

Report to the Information Technology & Infrastructure Committee

INFORMATION ITEM

TOPIC: Major Projects Update - ITS

September 21, 2021

David Cullum, Associate Vice-President, Information Technology Services

EXECUTIVE SUMMARY

1. Purpose of the Report

- Major IT projects are undertaken to:
 - Align with student / faculty / staff needs and the University's strategic requirements in a cost-effective and compliant manner;
 - Implement new technology, enhancements or improved functionality;
 - Increase student, faculty and staff efficiency and effectiveness.

2. Background

- Technology is constantly changing even as client needs are constantly evolving;
- Technology increases productivity;
- A summary of key IT major projects is provided below, along with the status of each:

Project	Status
Unified Communications (Telecommunications) update (Appendix 1)	Underway
Identity and Access Management update (Appendix 2)	Underway

3. Next Steps

- Updates will be provided to IT&I on an on-going basis for key IT major projects.

4. Background Materials

Appendix 1 - Unified Communications (Telecommunications) update (4 pages)

Appendix 2 - Identity and Access Management update (2 pages)

Appendix 1 - Unified Communications (Telecommunications) Update

September 10, 2021

Project Status Update

Project Description: Information Technology Services (“ITS”) has been exploring new technologies to replace the existing end of life phone system. The existing phone system became unsupported in 2020 and spare parts are scarce and costly.

ITS has met with multiple telecom vendors to gain a better understanding of the functionalities that their technologies provide. ITS is investigating a unified communication (UC) solution which will leverage technologies and tools such as voicemail, phones, Office 365, instant messaging and video conferencing to facilitate communications and collaboration regardless of location or device. In addition, the Call Center, call recording, chat collaboration, emergency notification, reporting and metrics will be addressed with additional functionality.

A Proof of Concept (POC) will be conducted with ITS and key stakeholders from across the University, including Campus Security, University Advancement, Residences, Registrar’s Office, Facilities Management and employees (faculty and staff).

Impact: Faculty, Staff

Status/Issues: Covid-19 has impacted the Unified Communications project in many ways. The requirement for University departments to provide services to students has led to the rapid deployment of remote call centres for Brock Central, Parking Services, Student Health Services, Student Accessibility, Personal Counselling and the ITS Helpdesk. This has addressed one major risk with the current phone system.

All analog PRI phone lines have been converted to SIP trunks allowing for lower cost and scalable Voice-over-IP (VoIP) telephony services. A Session Border Controller (SBC) has been deployed to allow Call Centres to leverage these VoIP lines and enable further integration for cloud-based phone systems.

Analog Telephone Adapters (ATA) will be procured and deployed to remove the legacy PBX from the call path, mitigating the risk to analog systems such as emergency and elevator phones.

ITS has completed a Telecommunications Survey to assess satisfaction with the University’s current telephone system and gather interest in participating in a product selection team. This team will provide more in-depth information on specific features and functionality required in a replacement product. This team will also be responsible for developing the success criteria for possible proof-of-concepts and participation in the evaluation of the same.

Data from the survey (attached to this Appendix) has been analyzed and the project team will begin reaching out to respondents and stakeholder groups shortly. Data from the survey supports the goals of this project with a focus on mobility, ease of use and the use of multiple communications channels such as voice, video, email and chat. Additional questions to identify required features and functionality will be developed which will also be used in the RFP for product selection.

Upcoming Milestones:

- | | |
|---------------------------------|----------------|
| • Create product selection team | FY2021/2022 T2 |
| • Develop success criteria | FY2021/2022 T2 |
| • Submit RFP | FY2021/2022 T2 |

Schedule

	Original	Current
Request for Information	FY 2018/2019 T3	Complete
Risk mitigation	FY 2020/2021 T3	FY 2021/2022 T3
Submit RFP	FY 2019/2020 T3	FY 2021/2022 T2
Begin POCs	FY 2019/2020 T3	FY 2021/2022 T3
Award vendor	TBD	TBD
Implementation	TBD	TBD
Phase out old phones	TBD	TBD

Project Team

Information Technology Services	<p>Maria Pillitteri, Project Manager Andreas Paulisch, Infrastructure Architect Michael Tisi, Director, IT Infrastructure Luciano Della Smirra, Manager, Telecommunications Dan Minniti, Senior Electronics Technologist Dawit Telahun, Senior Electronics Technologist Patti Froese, Supervisor, Project & Administrative Support Office</p>
Service Provider	<p>Allstream (SIP trunk) TBD (Unified Communications)</p>

Telecommunications Survey results

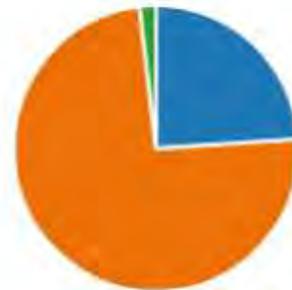
217
Responses

07:27
Average time to complete

Closed
Status

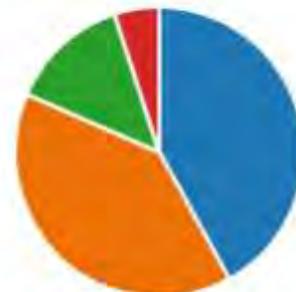
1. What is your relationship with the University

● Faculty	52
● Staff	161
● Other	4



2. I primarily use telephony technology to communicate with:

● other faculty and staff at Brock	159
● people outside the University	150
● students	51
● Other	19



3. Please select the devices that you have used for communication at Brock University

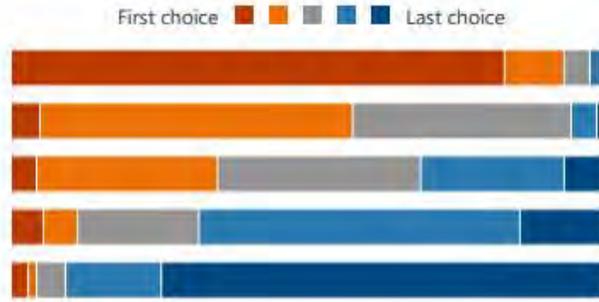
● Laptop/Camera	189
● Headset	75
● Mobile phone	145
● Office phone	183
● Other	15



4. Please rank your preference of devices that you have used for communication during the pandemic

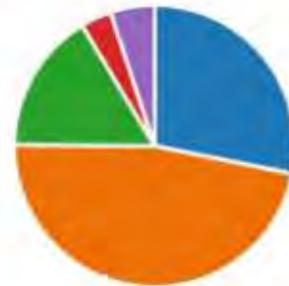
Rank Options

- 1 Laptop/camera
- 2 Mobile phone
- 3 Headset
- 4 Office phone
- 5 Other



5. Which of Brock University's telecommunications systems do you use?

- Telephone system 127
- Microsoft Teams 212
- Lifesize 73
- Fax 16
- Other 23



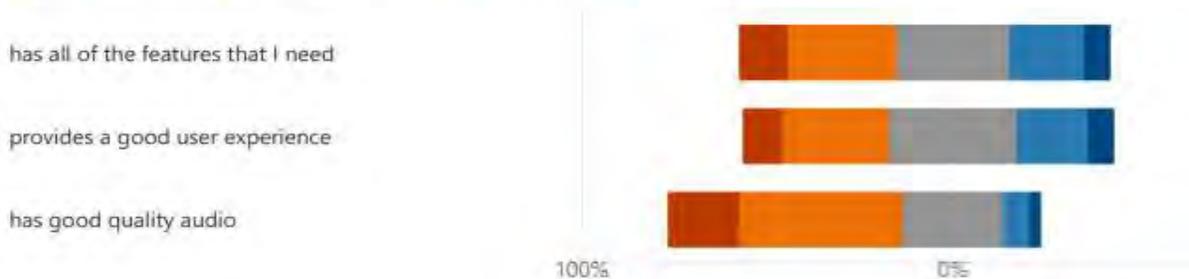
6. How would you rate your satisfaction with Brock University's Telephone System

Insights
206
 Responses



7. Brock University's telephone system

Strongly Agree Agree Neutral Disagree Strongly disagree



Appendix 2 - Identity and Access Management update

September 10, 2021

Project Status Update

Project Description: The existing identity and access management system (IAM) is currently the dedicated Student Information System (SIS) IAM, which has been modified over the years to incorporate functionality for other systems. The current IAM was never intended to be an enterprise-level IAM, but was subverted for lack of other options. Over 15 years, it has evolved to accommodate many additional institutional requirements and additional systems. The intent has always been to deploy an enterprise-level IAM, and allow the current IAM to remain dedicated to the SIS.

There are several recognised issues with the current system:

- Since it has been developed entirely in-house, it does not leverage any off-the-shelf components and requires significant effort to maintain and augment;
- The system predates hosted or cloud-based systems, which means that some enterprise-level requirements cannot currently be met. Cloud-based features that we are entitled to cannot be leveraged;
- It is becoming more difficult and limiting to keep the on-premise accounts in sync with cloud accounts;
- Lifecycle management of accounts cannot be easily managed under the current structure, resulting in a confusing user experience, additional licensing costs and staff overhead;
- Brock is lacking an “external user” model which would allow non-Brock users to access Brock computing resources by using their home institution or social media credentials, thereby reducing licensing costs and staff overhead, as well as improving the user experience.

There is a potential for improved user experience and access to greater functionality in reworking the identity framework. The current IAM was designed and evolved from an IT perspective. The future IAM solution should be designed from the user perspective. In addition, in order to address University requirements, a full role-based access control (RBAC) strategy must be implemented.

Therefore, the focus of this project is to assess the University’s current “as deployed” state, and perform a gap analysis of where we need to be in relation to IAM leading practices and stakeholder needs. The contract has been awarded to KeyData with work scheduled to commence in the second half of August 2021.

KeyData will review exiting IAM documentation and hold workshop sessions with stakeholders across the University to gather additional requirements. KeyData will analyze the data and provide written recommendations on Brock’s future state IAM environment with an emphasis on role-based access controls, account consolidation (i.e., one account per person even if they have multiple personas), access request and approval processes and account naming conventions. The KeyData report will also suggest off-the-shelf software solutions along with high level costs and provide a suggested roadmap to implement the findings. The report with initial findings is expected in October 2021.

Completed Milestones:

- Project presented to IT&I for support - April, 13, 2021
- RFP delivered to potential vendors - May 14, 2021
- Contract for vendor awarded to KeyData
- Interviews with stakeholders led by KeyData to began late August 2021
- Kickoff Session held and stakeholder meetings scheduled starting week of September 13

Impact: Students, faculty and staff

Status/Issues:

- **Phase 1 - Assessment.** ITS has engaged a vendor that specializes in identity and access management in higher education institutions to perform a current state assessment. The vendor will meet with stakeholders across the University, in both the faculties and administrative areas, to gather information, understand the challenges and evaluate potential opportunities. The vendor deliverable will be a report with recommendations on end user requirements and how best to move forward to address the issues discovered during the assessment.
- **Phase 2 - Design.** ITS will review the vendor report and design a solution that addresses the various requirements identified by the stakeholders. Additional vendor engagement may be required. It is anticipated that the final solution will be a hybrid comprised of off-the-shelf as well as custom in-house developed components.
- **Phase 3 - Implementation.** ITS will implement the solution designed in Phase 2. Additional vendor engagement may be required.

Schedule

	Original	Current
Phase 1 - Assessment	FY2021/22 T1 to T2	FY2021/22 T1 to T2
Phase 2 - Design	FY2021/22 T2 to T3	FY2021/22 T2 to T3
Phase 3 - Implementation	FY2022/23	FY2022/23

Project Team

Information Technology Services	Josh Sekel, Project Manager Andreas Paulisch, Team Member Alba Kotyk, Team Member Patti Froese, Team Member
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Report to the Information Technology & Infrastructure Committee

INFORMATION ITEM

TOPIC: Major Projects Update - ITS

October 19, 2021

David Cullum, Associate Vice-President, Information Technology Services

EXECUTIVE SUMMARY

1. Purpose of the Report

- Major IT projects are undertaken to:
 - Align with student / faculty / staff needs and the University's strategic requirements in a cost-effective and compliant manner;
 - Implement new technology, enhancements or improved functionality;
 - Increase student, faculty and staff efficiency and effectiveness.

2. Background

- Technology is constantly changing even as client needs are constantly evolving;
- Technology increases productivity;
- A summary of a key IT major project is provided below along with its status:

Project	Status
Student Information System (SIS BrockDB) update (Appendix 1)	Underway
Institutional Customer Relationship Management (CRM) solution - see separate report	

3. Next Steps

- Updates will be provided to IT&I on an on-going basis for key IT major projects.

4. Background Materials

Appendix 1 - Student Information System (SIS BrockDB) update (2 pages)

Appendix 1 - Student Information System (SIS BrockDB) update

October 12, 2021

Project Status Update

Project Description: Enhancement of the Student Information System (SIS BrockDB) is ongoing to provide efficiencies, additional functionality, mandated requirements and an improved user experience for students, faculty and staff. A portfolio of projects has been identified and prioritized in a roadmap with the Registrar's Office and Faculty of Graduate Studies.

This SIS has been architected to be sustainable and scalable as it is a custom in-house solution. SIS enhancements include but are not limited to annual reviews for potential updates to registration, admissions, Ministry reporting, student finance and the SIS platform.

Impact: Students, faculty and staff

Status/Issues:

The following projects were completed during the past quarter:

- Various reports created for Registrar's Office and the Faculty of Graduate Studies;
- Automation of PS Profiles verification;
- Adjusted ESL adjudication to accommodate a changed process (splitting terms in half, i.e., FALL part 1, FALL part 2 that is not currently accommodated);
- COVID-19 vaccination reporting;
- COVID-19 declaration tool for students, employees and guests, with reviewing tool for Human Resources and Student Affairs staff;
- Identification and deregistration of students who are non-COVID compliant from in-person classes;
- Preparations and updates for the 2022 OUAC Admissions cycle.

The following projects are in progress / scheduled:

- Digitary - platform to be used for transcript distribution to students;
- Mobile experience for students (delayed);
- Expanded online forms and workflow (Change of Major delayed);
- Hyflex and on-line mixed delivery options for scheduling;
- Consecutive graduate degrees (i.e., MBA/MPH - delayed due to COVID work);
- T2202 amended files (require XML file of amendments to be sent to CRA);
- Admissions, top choice data collection for analytics (non-101 completed, 101 in progress);
- Transition to an 8-digit student ID number: review BrockDB to identify export files to third party systems to ensure 8-digit ID number can be accommodated (background work);
- E-transcripts (OUAC) electronic files to XML format (inbound/outbound) - mandated;
- Tenure and Promotion - automated security assignments;
- Tenure and promotion - automate roles;
- Identity Access Management - project underway with discovery sessions;
- Accommodate SUNDAY as valid scheduling day;
- Teacher Practicum Preference declaration form.

Schedule

	Original	Current
Roadmap with timelines for enhancements with quarterly reviews (to be adjusted according to University priorities, mandated requirements and budget approval) - ongoing review	FY2019/20 T1 to T3	ongoing

Project Team

Information Technology Services	Alba Kotyk, Team Lead Patricia McDonnell, Team Member Patti Froese, Team Member
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CRM PROJECT OVERVIEW

OCTOBER 19, 2021

CRM*: HIGH-LEVEL OVERVIEW

What is a CRM?

- What is CRM? CRM is an abbreviation for Customer Relationship Management. It's a system used to build and manage customer relationships. It helps manage the interactions with customers and potential customers. With a CRM platform, customer preferences are recorded, and customer activity can be tracked.
- A technology / system for managing all relationships and interactions with customers and potential customers. CRMs can be used to manage customer relationships across the entire customer lifecycle inclusive of customer service (first contact to conversion, supports, services/areas of interest), marketing, digital ecommerce for B2C and B2B interactions and more.

*<https://www.salesforce.com/ca/crm/what-is-crm/>

*www.act.com

CRM*: HIGH-LEVEL OVERVIEW

Benefits of a CRM?

- A central tool for contact management across the institution with transparency for administrative purposes
- Increase collaboration across admin. units
- Tracking of interactions (i.e. how many have contacted the YWCA, GNCC, etc.)
- Reporting on areas of interest and trends across segments
- CRM tracks activity on website for conversion
- Overall, a CRM solution helps focus on an organization's relationships with individual people — including customers, partners, etc. — throughout the lifecycle with them, including finding new customers, conversion, and providing support and additional services throughout the relationship...

*<https://www.salesforce.com/ca/crm/what-is-crm/>

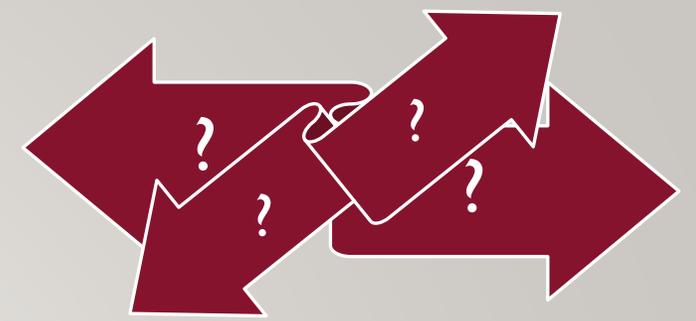
*www.act.com

CRM FOR HIGHER-ED:

How can higher education institutions use a CRM?

- Enquiries for programming and courses
- Changes in careers, roles, industries
- Trends for tracking course and area of interest leading to conversion
- Tracking website views – what are the combination of programs and courses an individual views and ultimately chooses

CURRENT PLAUSIBLE LEARNER / EMPLOYER EXPERIENCE AT BROCK



- CCEE – outreach for WIL and Coop opportunities with wine industry employers
 - Alumni – outreach for Homecoming session or alumni events
- CCOVI – outreach for wine industry session
 - Goodman – outreach for an invitation to speak at an event or on a panel
- BrockLINC – reaches out to the wine industry for mentors for entrepreneurs
 - Community Outreach – connects with the industry partner for response to government policy
 - Research – research opportunity related to retail or climate change
 - Faculty – a guest speaker in their program
 - Professional Studies – contacts wine industry employer re: training needs
 - And, so on

CRM VENDORS

Examples of CRM System Solution Providers

- [Zoho.com](https://www.zoho.com)
- [Hubspot.com](https://www.hubspot.com)
- [Salesforce.com](https://www.salesforce.com)
- [Monday.com](https://www.monday.com)
- [Pipedrive.com](https://www.pipedrive.com)
- [Moderncampus.com](https://www.moderncampus.com) (Destiny One)

CRM PROJECT OVERVIEW

Overview

- Project Management from ITS
- Stakeholders & Information Sharing
- Committee
- Project Charter & Critical Path
- Requirements Gathering & Validation
- Expressions of Interest
- Sandbox / Demos
- Vendor Selection & Procurement
- Implementation & Support

Report to the Information, Technology and Infrastructure Committee

INFORMATION ITEM

TOPIC: Five-Year Long-Term Capital Plan Outlook - FY 2022/23 to FY 2026/27

September 21, 2021

Ken Chan, Vice-President, Administration

Scott Johnstone, Associate Vice-President, Infrastructure and Operations

Edward Wall, Associate Vice-President, Ancillary Services

Josh Tonnos, Chief Financial Officer & Associate Vice-President, Financial Services

David Cullum, Associate Vice-President, Information Technology Services

EXECUTIVE SUMMARY

1. Purpose of the Report

- The purpose of this report is to provide Committee members with an overview of the Five-Year Long-Term Capital Plan (LTCP) for the period FY 2022/23 to FY 2026/27.
- These projects all facilitate the University's mission of leadership, innovation and excellence in learning, teaching, research, scholarship and creativity across disciplines.

2. Key Background

- The LTCP is a rolling five-year planning tool utilized to address capital requirements. It is a road map that addresses the minimum anticipated needs for this period and highlights the continuing pressures to address deferred maintenance funding.
- The Fiscal Framework provides for Capital Budget guidance; however, at this time the Fiscal Framework is being updated for 2022-23 to revisit these priorities in conjunction with the Institutional Strategic Plan priorities. Recommended updates to the capital funding strategy will be provided at the cycle 2 meeting.
- Capital Projects identified for FY 2022/2023 will be further prioritized and formally presented to the Board in cycle 2.
- Based on the May 2021 Report, provided to the committee in cycle 5 on June 23, 2021, the current identified Deferred Maintenance is \$330,020,597. The LTCP does not provide for the elimination of DM, and projects are prioritized based on the Brock University Values and Fiscal Framework. In addition to the Fiscal Framework's capital funding strategy, debt financed projects such as Decew Residence Renewal and the completion of the Zone expansion have contributed significantly towards reducing deferred maintenance.
- The proposed LTCP has been developed in consultation with the Brock community and is intended to address:
 - Online course delivery enhancements and learning management system replacement
 - Major capital projects identified through consultation with the Brock community.
 - Deferred maintenance which is compiled through the annual VFA audit.

- Classroom modernization needs.
- Legislated projects for the Accessibility for Ontarians with Disabilities Act.
- Parking lot maintenance and renewal.
- Space management through effective and efficient use of space and space re-allocation moves.

3. Next Steps

- FM, ITS, Ancillary Services and Financial Services will continue to meet with key stakeholders and groups to ensure widespread Brock community input, enabling the finalization of the FY 2022/23 plan. *To be presented to the Board of Trustees in Cycle 2.*

4. Background Materials

Appendix 1 - Proposed Five-Year LTCP for FY 2022/23 to FY 2026/27 (3 pages)

LONG TERM CAPITAL PLANNING (LTCP) - FIVE YEAR PLAN					
	2022/2023	2023/2024	2024/2025	2025/26	2026/2027
Major Capital Projects					
Schmon Tower Renewal	-	-	1,000,000	2,000,000	5,000,000
Sankey Chambers Expansion and Podium Stairs DM Replacement	-	-	1,500,000	-	-
Total Major Capital Projects	\$0	\$0	\$2,500,000	\$2,000,000	\$5,000,000
University Deferred Maintenance					
HVAC Upgrades and Replacement	800,000	3,600,000	3,100,000	7,100,000	3,100,000
Roof Replacement	750,000	750,000	725,000	-	600,000
District Energy Water Supply Replacement	2,325,000	1,155,000	1,035,000	540,000	-
Elevator Modernization Program	450,000	850,000	250,000	150,000	250,000
Potable Water Main Replacement	-	155,000	270,000	-	-
Washroom Upgrades - Mackenzie Chown	75,000	75,000	75,000	75,000	75,000
MacKenzie Chown Complex Abatement	-	500,000	-	-	-
Flooring Renewal	60,000	60,000	60,000	60,000	60,000
Interior & Exterior Door Replacements	60,000	60,000	60,000	60,000	60,000
Painting of Public Spaces	50,000	50,000	50,000	50,000	50,000
Energy Efficiency Upgrades	150,000	150,000	150,000	150,000	150,000
Annual High Voltage Maintenance	100,000	100,000	100,000	100,000	100,000
Annual BAS Controls Modernization	100,000	100,000	100,000	100,000	100,000
Annual Furniture Replacement (exam desks, chair, classrooms, etc.)	50,000	50,000	50,000	50,000	50,000
Motor Control Centre Upgrade	-	110,000	-	150,000	-
Animal Care Consolidation in Cairns	-	-	300,000	-	-
Fire Hydrant Lines Replacement	150,000	-	-	-	-
Total University Deferred Maintenance	\$5,120,000	\$7,765,000	\$6,325,000	\$8,585,000	\$4,595,000
Campus Site Upgrades					
Road Repairs	200,000	830,000	1,275,000	-	750,000
Replacement South Campus Works Yard	475,000	750,000	-	-	-
Campus Landscape Enhancement	50,000	50,000	50,000	50,000	50,000
External Signage and Wayfinding	200,000	-	-	250,000	-
Jubilee Court Landscaping and Podium Stairs	-	350,000	-	-	-
Complete Village Watermain Loop	-	-	200,000	-	-
Centralized Chemical Storage	200,000	-	-	-	-
Athletics Upgrades	100,000	100,000	100,000	100,000	100,000
Total Campus Site Upgrades	\$1,225,000	\$2,080,000	\$1,625,000	\$400,000	\$900,000
Academic Teaching Renovations and Renewal					
Classroom Modernization & Renewal	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Total Academic Teaching Renovations and Renewal	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
AODA Accessible Built Environment					
Exterior Paths	50,000	50,000	-	-	-
Universal Washroom Upgrades	70,000	70,000	70,000	70,000	70,000
AODA Improvements	40,000	40,000	40,000	40,000	40,000
Total AODA	\$160,000	\$160,000	\$110,000	\$110,000	\$110,000
Audits and Studies					
Annual Facility Condition Audit (VFA)	75,000	75,000	75,000	75,000	75,000

LONG TERM CAPITAL PLANNING (LTCP) - FIVE YEAR PLAN					
	2022/2023	2023/2024	2024/2025	2025/26	2026/2027
Utilities Master Plan	-	400,000	-	-	-
Lands Use Master Plan	400,000	-	-	-	-
Arc Flash Study	-	-	100,000	-	-
Total Audits and Studies	\$475,000	\$475,000	\$175,000	\$75,000	\$75,000
Vehicles and Wheeled Equipment					
Brock University Fleet Replacement	221,000	150,000	183,000	152,000	150,000
Total Vehicles	\$221,000	\$150,000	\$183,000	\$152,000	\$150,000
Ancillary Services - Parking					
Parking Lot Annual Repairs and Upgrades	400,000	310,000	420,250	430,756	441,525
Parking Lot Renewal	-	-	-	1,483,442	1,800,000
Parking Technology Upgrades	-	100,000	-	-	-
Total Ancillary Parking	\$400,000	\$410,000	\$420,250	\$1,914,198	\$2,241,525
Ancillary Services - Residence					
Residence Infrastructure Renewal	500,000	1,000,000	1,000,000	1,000,000	1,000,000
Residence 8 Infrastructure Reserve	152,440	157,013	161,724	166,575	171,573
Village Residences - Exterior and Interior Renewal	1,000,000	1,000,000	1,000,000	-	-
Residence Elevator Upgrades	-	-	300,000	-	-
Residence - Roof Upgrades	-	600,000	600,000	600,000	500,000
Residence - HVAC Upgrades	500,000	350,000	-	-	-
Dining Hall Needs	500,000	250,000	250,000	250,000	250,000
Residence Furniture Replacement	250,000	250,000	250,000	250,000	250,000
Total Ancillary Residence	\$2,902,440	\$3,607,013	\$3,561,724	\$2,266,575	\$2,171,573
ITS New or Flexible					
PCI Compliance	299,700	299,700	299,700	299,700	200,000
Network Switches-Admin-Deferred Maintenance	203,000	141,500	259,600	114,850	286,900
Network Switches - Administrative-Growth	20,000	20,000	20,000	20,000	20,000
Network Switches - Residences-Deferred Maintenance	35,000	92,000	22,000	150,000	-
Network Switches - Residences-Growth	15,000	15,000	15,000	15,000	-
Network Appliances-Admin-Deferred Maintenance	-	50,000	160,000	-	30,000
Network Appliances-Residence-Deferred Maintenance	-	50,000	170,000	-	60,000
Network Internet-Administrative-Growth	-	-	-	-	-
Network Internet-Residences-Growth	-	-	-	-	-
Wireless-Administrative-Growth	72,000	50,000	50,000	50,000	50,000
Wireless-Administrative-Deferred Maintenance	100,000	-	157,500	460,680	90,000
Wireless-Residence-Deferred Maintenance	180,000	-	157,500	67,500	90,000
A.V. -Deferred Maintenance	44,000	46,000	48,000	50,000	52,000
A.V. (including Video Conferencing)-Growth	44,000	46,000	48,000	50,000	52,000
UPS-Admin-Deferred Maintenance	60,000	60,000	60,000	60,000	40,000
UPS-Residence-Deferred Maintenance	25,000	25,000	25,000	27,000	25,000
CCTV-Admin-Deferred Maintenance	40,000	40,000	40,000	40,000	50,000
CCTV-Residence-Deferred Maintenance	10,000	10,000	10,000	10,000	25,000
Enterprise Card Access & Video Mgmt. System	287,000	250,000	25,000	25,000	25,000
Proxy Card-Deferred Maintenance	30,000	30,000	30,000	30,000	30,000
Servers-Deferred Maintenance	140,000	120,000	-	100,000	500,000

LONG TERM CAPITAL PLANNING (LTCP) - FIVE YEAR PLAN					
	2022/2023	2023/2024	2024/2025	2025/26	2026/2027
Server Room UPS Replacement & UPS Administrative	80,000	-	-	-	-
Disk Storage-Deferred Maintenance	-	-	-	160,000	-
Data Back Up-Deferred Maintenance	75,000	-	60,000	140,000	-
Azure Infrastructure	25,000	-	-	-	-
Service Vehicle Replacement	-	-	-	-	-
Cabling Infrastructure	50,000	50,000	50,000	50,000	50,000
Alarms/Security/IP Clocks-Deferred Maintenance	25,000	25,000	25,000	25,000	25,000
Computer Purchase & redeployment-Deferred Maintenance	600,000	600,000	600,000	600,000	600,000
Telephone System-Replacement	250,000	250,000	250,000	250,000	250,000
Datacentre Renovation	550,000	550,000	-	-	-
Total ITS New or Flexible	\$3,259,700	\$2,820,200	\$2,582,300	\$2,794,730	\$2,550,900
ITS Core Activities					
Core Subscription Fees	1,187,831	1,247,222	1,309,583	1,375,062	1,443,816
Core Strategic Student Solutions	572,000	478,342	485,509	492,819	517,460
Learning Management System	750,000	580,000	580,000	580,000	580,000
Total ITS Core Activities	\$2,509,831	\$2,305,564	\$2,375,092	\$2,447,881	\$2,541,276
Total Projects - Campus	\$8,201,000	\$11,630,000	\$11,918,000	\$12,322,000	\$11,830,000
Total Projects - Ancillary Services	\$3,302,440	\$4,017,013	\$3,981,974	\$4,180,774	\$4,413,098
Total Projects - ITS	\$5,769,531	\$5,125,764	\$4,957,392	\$5,242,611	\$5,092,176
Grand Total - ALL PROJECTS	\$17,272,971	\$20,772,777	\$20,857,366	\$21,745,385	\$21,335,274
Revenue - Fiscal Framework Guidance *					
New or "flexible" capital	\$4,792,000	\$4,792,000	\$4,792,000	\$4,792,000	\$4,792,000
Core Capital (deferred maintenance)	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000
Base Ancillary Contribution	\$3,246,000	\$3,246,000	\$3,246,000	\$3,246,000	\$3,246,000
Additional Ancillary Contribution	\$776,950	\$796,374	\$816,283	\$836,690	\$857,607
Subtotal	\$14,814,950	\$14,834,374	\$14,854,283	\$14,874,690	\$14,895,607
Other - unidentified (variance)	\$2,458,021	\$5,938,403	\$6,003,083	\$6,870,694	\$6,439,666
Grand Total	\$17,272,971	\$20,772,777	\$20,857,366	\$21,745,385	\$21,335,274

Report to the Information, Technology and Infrastructure Committee

INFORMATION ITEM

TOPIC: T1 Financial Update on Capital and Related Project Plan

September 21, 2021

Ken Chan, Vice-President, Administration

Josh Tonnos, Chief Financial Officer & Associate Vice-President, Financial Services

Scott Johnstone, Associate Vice-President, Infrastructure and Operations

David Cullum, Associate Vice-President, Information Technology Services

EXECUTIVE SUMMARY

1. Purpose of the Report

- Provide the Capital Infrastructure Committee with the trimester three update of the Capital and Related Projects, consistent with the Committee Charter and reporting requirements.

2. Key Background

- Currently there are 132 open projects: 68 Facilities Management (FM), 14 Residence and Ancillary Services, and 50 Information Technology Services (ITS).
Appendix 1 - Figure 1 illustrates the activity with respect to the number of projects.
- A breakdown of the FM, Residence and Ancillary Services, and ITS projects by category identifies a total of \$46 million remaining to spend.
 - The FM project funds remaining to spend of \$19.2 million, includes the Niagara Validating, Prototyping and Manufacturing Institute (FedDev-VPMI) construction and equipment projects.
 - The Residence and Ancillary funds remaining to spend of \$20.8 million, includes Decew Residence Renewal and Residence 8.
 - The ITS project funds remaining to spend of \$6.1 million, includes Project Mosaic, and the Student Information System.

Appendix 1 - Figure 2 illustrates the activity with respect to the type and dollar amount of projects by Facilities Management, Residence and Ancillary Services, and Information Technology Services.

3. Next Steps

- As this report serves as an update on project activity, the next steps will be the finalization of the FY 2022-23 Capital Plan, to be presented to the Board of Trustees in Cycle 2.

4. Background Materials

- Appendix 1 - T1 Financial Update on Capital and Related Project Plan (1 page)

Figure 1: Status of Capital Projects as of August 31, 2021

	Facilities Management	Residence and Ancillary Services	Information Technology Services
Total projects open as of April 30, 2021	46	11	33
Projects opened to August 31, 2021	31	4	23
Projects closed/completed to August 31, 2021	9	1	6
Total projects open as of August 31, 2021	68	14	50

Figure 2: Capital and Related Project Summary (By Category) (000's)

Project	Revenue / Funding	Spending to August 31, 2021	Remaining to Spend
Facilities Management (FM)			
AODA* Projects	265	37	228
Above surface/sub surface utilities, drainage, roads, parking lots, sidewalks	3,265	1,184	2,081
Adaptations/renovations and major renewal projects	2,818	1,338	1,480
Audits and studies	508	140	368
Buildings	6,490	1,525	4,965
Energy conservation and demand management	1,336	501	835
Major capital projects	31,092	23,001	8,091
New construction and replacement (under \$1M)	0	0	-
Vehicles and wheeled equipment	327	10	317
FM - surplus/deficit	807	-	807
Total Facilities Management	46,908	27,735	19,172
Residence and Ancillary Services			
Above surface/sub surface utilities, drainage, roads, parking lots, sidewalks	6,259	5,016	1,242
Adaptations/renovations and major renewal projects	13,651	13,016	634
Audits and studies	0	0	-
Buildings	88,983	71,433	17,550
Residence and Ancillary Services - surplus/deficit	1,344	-	1,344
Total Residence and Ancillary Services	110,237	89,466	20,771
Information Technology Services			
Enterprise software projects	13,489	9,905	3,584
Hardware evergreening projects	2,420	717	1,703
Hardware growth projects	342	126	216
IT infrastructure projects	577	52	524
ITS - surplus/deficit	46	-	46
Total Information Technology Services	16,873	10,799	6,074
Total Capital and Related Projects	174,017	128,000	46,017

*AODA -Accessibility for Ontarians with Disabilities



To: Chabriol Colebatch, University Secretariat
From: Don Cyr, Senate Chair
Date: October 21, 2021
Re: **Chair's Report to Senate 693rd Meeting**

As we start down the road of developing an academic strategic plan, it might be wise for us to be aware of various trends - Standard SWOT analysis (Strengths, Weaknesses, Opportunities and Threats). Some argue the problem with SWOT is organizations spend too much time focusing on the weaknesses and threats. Hence, one alternative to strategic planning is an approach called Appreciative Inquiry – in simple terms figure out what you do well and do more of it. However, it can be argued that an examination of various challenges can lead to opportunities. The following are, in my opinion, some broad sectoral trends.

Direction of the College Sector

It is interesting to note the recent results of a survey carried out by Colleges Ontario in seeking support for provincial government policy changes. The goal would allow colleges to broaden their career-specific degree programs. Although a relatively small survey (1000 participants) a summary of the results can be found here:

<https://www.newswire.ca/news-releases/70-per-cent-of-ontarians-support-the-creation-of-three-year-degrees-at-colleges-poll-814888008.html>

As noted in the report, colleges currently offer

“a mix of four-year degree programs, two-year and three-year diploma programs, in-class apprenticeship training and post-graduate certificate programs for university and college graduates.”

“Colleges are urging the provincial government to approve policy changes that would allow colleges to broaden their career-specific degree programs.”

The survey explores the public's appetite (generally found to be positive) for colleges to offer:

- 3 year Bachelor's degrees (69% strongly or somewhat agreed)
- An increased number of 4-year degree programs (78% strongly or somewhat agreed)

For many years, Ontario Colleges have been very successful at offering post-graduate diplomas in specific areas. Frequently taken by students graduating with a bachelor's degree and then enrolling in career oriented post-graduate diplomas, typically one year in length. The related question in the survey was:

“When people with a bachelor's degree complete an additional year of study at a university, they generally receive a master's degree. When people with a bachelor's degree complete an additional year of study at a college, they generally receive a post-graduate certificate. Please indicate whether you support or oppose allowing colleges to award master's degrees in career-specific areas rather than post-graduate certificates.”

- 52% of the respondents strongly or somewhat supported.

When serving as Brock's Academic Colleague (AC) on the COU, I recall the ACs receiving a verbal update on a general public survey that the COU had a consulting firm carry out. We did not receive a copy of the report however, I recall one interesting result: that many of the respondents did not easily differentiate between colleges and universities.

A relatively recent example of the appetite for the Ministry to grant colleges the ability to offer Bachelor's degrees was the approval for the offering of BSc degrees in Nursing. Could Bachelors of Engineering be on the horizon? Many Colleges have significant programs in the trades including those in computing related fields and even mechatronics. Such colleges have equipment and infrastructure already in place.

Growth of Private Universities

We are also beginning to see some significant growth in private universities in Ontario. Their offerings are primarily focused on high demand, career oriented and typically higher tuition programs (Business, Computer Science – typically at least 20% higher tuition than other degree programs at public institutions). Some examples:

International Business University

In 2020 International Business University (IBU) was given the approval to be a degree granting university in Ontario and are now advertising aggressively on radio, offering a Bachelor of Commerce (Honors) degree in international management and technology.

Their website (<https://ibu.ca/>) indicates

- *Online and on Campus offerings*
- *Hybrid*

- *At a student's own pace*
- *Maximum of 30 students per class, 1 on 1 mentoring and personalized academic advising*
- *96 core credit hours a total of 42 credit hours covers core business subjects*
- *Students will take courses outside of business as well, including Contemporary World History, Arts and Contemporary Studies, Psychology and Cognition, and Critical Thinking*

<https://ibu.ca/wp-content/uploads/2021/06/Academic-Calendar-2021-06-09-Updated.pdf>

Domestic tuition and fees appear to be competitive, relative to public universities. However, international tuition is significantly lower - roughly half that charged by public institutions.

The Board of the IBU includes former presidents of the universities of Waterloo, UOIT, Guelph and Brock-elect. https://ibu.ca/about-ibu/#our_team.

Yorkville University

<https://www.yorkvilleu.ca/>

Originally established in New Brunswick, Yorkville received approval for university status and degree granting in Ontario in 2017, offering in-person and online programming in

- *Bachelor of Business Administration with specialization in Project Management*
- *Bachelor of Creative Arts*
- *Bachelor of Interior Design*
- *Average class size of 20*

Yorkville also offers other degree programs approved in BC and New Brunswick which we could imagine expanding into Ontario. In New Brunswick in particular, in addition to an undergraduate business degree with many different accredited specializations, they offer:

- *Master of Education in Educational Leadership*
- *Master of Arts in Counselling Psychology*
- *Doctor of Counselling and Psychotherapy*

Yorkville's board and leadership (President is the former dean of Business at Guelph) also includes a number of individuals that have migrated from public sector institutions.

University Canada West

Continuing the trend of migration of leadership from public to private institutions, Sheldon Levy has recently been appointed President of University Canada West

Sheldon Levy has served in many capacities in higher education in Ontario including president of Ryerson University and Ontario's Deputy Minister of Advanced Education and Skills Development,

<https://www.ucanwest.ca/media/news-releases/sheldon-levy-appointed-interim-president-of-university-canada-west>

University Canada West (<https://www.ucanwest.ca/>) offers a number of degree programs in British Columbia, both in person and online, and is now owned by Global University Systems (GUS). GUS is a private limited corporation registered in the Netherlands with a large number of private university operations worldwide.

<https://www.globaluniversitysystems.com/>. GUS also owns the *Canadian College of Technology and Business* in Vancouver and the *Toronto School of Management* <https://www.torontosom.ca/> which offer a number of career oriented diplomas and shorter certificate (microcredentials?) programs.

At the time of writing this report, our Academic Colleague Jennifer Li received additional information from the COU October 21st meeting of the Academic Colleagues. She has thankfully included it in her report. Provides a more complete picture of the private university landscape.

You will note the application pending from Global University Systems to launch a Niagara Falls University.

Perspectives on the University System

The fall often seems to be a time when we see a critical examination of the role of universities, generally focusing on what can be improved.

CBC IDEAS broadcast

On October 12th, CBC's radio show IDEAS focused on the general malaise of universities. (<https://www.cbc.ca/radio/ideas/why-universities-are-failing-to-prepare-students-for-the-job-market-1.6208196>)

Specifically,

- Tuition rising, especially for international students
- Extensive use of part-time or adjunct instructors – loss of connection of students to full time faculty for things as simple as reference letters.
- Lackluster literacy, numeracy and critical thinking skills of graduating students.
- Masters and doctoral programs geared for academic positions that graduates have little hope of attaining.

The podcast includes interviews with two recent authors (among others) on the general topic:

(1) Harvey Weingarten - Former President of the University of Calgary and former President of the Higher Education Quality Council of Ontario (HEQCO). *Nothing Less than Great: Reforming Canada's Universities* (June, 2021). Can be found on Amazon.

A cursory glance would suggest much of the book is based upon his time as President of HEQCO and reflects the studies carried out by the organization during his tenure, along with other Canadian and international studies. For example his comments regarding the lack of literacy, critical thinking and numeracy skills in graduating students are based on prior HEQCO studies such as:

Weingarten, H. P., Brumwell, S., Chatoor, K. & Hudak, L. (2018). *Measuring Essential Skills of Postsecondary Students: Final Report of the Essential Adult Skills Initiative*. Toronto: Higher Education Quality Council of Ontario
<https://heqco.ca/pub/on-test-skills-summary-of-findings-from-heqcos-skills-assessment-pilot-studies/>

Detailed information on this particular issue can be found in the background briefing I prepared for the 674 Senate Generative Discussion (November 2019): *Skills and Competencies Metric*

Weingarten covers several topics focused on university transformation. Each chapter ends with a recommendation. When asked what have been the most innovative developments in university education in Canada/Ontario, he points (and indicates in

Chapter 7 of the book) to the establishment of the University of Waterloo and co-op based learning, and the development of problem based learning in the medical school at McMaster. He also suggests the need for easier incorporation and establishment of non-traditional higher education providers (*perhaps code word for private institutions?*)

(2) Oz Almog (sociologist and historian, Department of Israel Studies, University of Haifa Israel.), co-author (along with Tamar Almog) of *All the Lies: What Went Wrong in the University Model and What Will Come in its Place* (2020)

https://www.researchgate.net/publication/343760188_Academia_All_the_Lies_-_What_Went_Wrong_in_the_University_Model_and_What_Will_Come_in_its_Place

Much like the IDEAS interview, this book represents a wide ranging rant about what is wrong with universities and the system as a whole. No stone is unturned – outdated curriculum or teaching methods, criticisms of scientific research, humanities, mismanagement etc. Perhaps captured somewhat by the subtitles within Chapter 10:

- *The Lies and Denial*
- *On the Verge of Financial Bankruptcy*
- *On the Verge of Moral Bankruptcy*
- *On the Verge of Scientific Bankruptcy*
- *On the Verge of Managerial Bankruptcy*
- *On the Verge of Educational Bankruptcy*

There are recommendations for changing the future of university education, some tied to the recent necessity of online course development, driven by COVID. The general theme is that it was a great system, based on a US model adopted by many other countries. However, it is now in disarray.

The book ends in a somewhat interesting twist, primarily blaming the problems with universities upon the social and cultural decline of the United States with the subtitle (again within Chapter 10): *The Crisis in Academia as an Expression of the Crisis in American Culture*.

The issue, I suggest, is not whether these concerns about the direction/nature of the university system are necessarily correct, but rather the perception that the general public has and what that can lead to in terms of government perspectives.

The Good News: Maclean's University Ranking 2022

<https://www.macleans.ca/hub/education-rankings/>

Caveat: Oz and Tamar Almog suggest, in their recent book, that the focus on rankings by universities is an exercise in self-deception 😊.

Of the 15 universities in the Comprehensive Category, we have come in 12th (up from 13th last year). A slow but upward trend. Low points are Student Awards, Student/Faculty ratio and Total Research Dollars (naturally hampered by the lack of an engineering school). Laurier scored 14 in Research Dollars while Brock's score was 15.

OVERALL RANKING (Comprehensive Category)

▼	Name	Rank Last Year	Student Awards	Student / Faculty Ratio	Faculty Awards	Total Research Dollars	Scholarships & Bursaries	Student Services
*1	Simon Fraser	[1]	1	3	*2	3	9	2
*1	Victoria	[*2]	3	5	1	2	3	5
3	Waterloo	[*2]	2	7	*2	4	1	12
4	Guelph	[4]	*8	15	4	1	4	6
5	Carleton	[5]	4	8	7	8	6	10
6	York	[*6]	*8	14	*5	10	2	9
7	Wilfrid Laurier	[8]	12	12	10	14	5	4
8	Memorial	[9]	7	2	9	5	12	13
*9	New Brunswick	[*6]	5	1	*13	7	13	11
*9	UQAM	[*10]	6	6	*5	9	14	15
11	Ryerson	[12]	14	13	*13	6	11	1
12	Brock	[13]	13	*10	8	15	7	7
13	Concordia	[*10]	*8	*10	12	13	10	14
14	Windsor	[14]	11	9	11	12	15	3
15	Regina	[15]	15	4	*13	11	8	8

In terms of Student Satisfaction we have done very well, coming in 3rd with a healthy showing in all categories.

STUDENT SATISFACTION (Comprehensive Category)

Comprehensive Universities											
	Name	Course Instructors	Student Life Staff	Admin Staff	Academic Advisors	Mental Health Services	Extra-curriculars	Experiential Learning	Residence Living	Promoting Indigenous Visibility	Sexual Assault Prevention
1	UQAM	1	2	3	1	2	5	4	9	13	1
2	Victoria	3	4	1	3	5	3	2	6	1	2
3	Brock	8	3	2	2	1	2	5	3	4	4
4	Wilfrid Laurier	6	1	7	6	3	1	6	2	7	6
5	Waterloo	2	*9	*5	5	15	7	1	4	15	14
6	Carleton	4	6	8	7	10	6	10	7	5	9
7	Guelph	5	5	4	4	14	4	11	1	11	13
8	New Brunswick	7	12	*5	9	9	12	7	15	10	15
9	Ryerson	9	7	11	8	11	11	9	8	14	7
10	Concordia	12	8	13	15	8	8	12	10	6	5
11	Simon Fraser	14	14	9	12	12	13	3	11	2	10
12	Windsor	13	11	15	14	4	10	8	12	12	3
13	York	10	13	14	13	7	9	15	*13	9	8
14	Memorial	15	*9	10	10	6	14	13	*13	8	11
15	Regina	11	15	12	11	13	15	14	5	3	12

Program Rankings

Maclean's also ranks some programs, indicating the top 20 in each case, based on program and research reputation regardless of category (medical/doctoral, comprehensive, undergraduate – total of 49 institutions)

- Nursing: 19 (tied with Windsor) – good showing
- Business: Brock did not make the top 20
- Computer Science: Brock did not make the top 20
- Education: Brock was 12th – great showing
- Engineering: NA

International Student Survey – Canada on Top

CTV reports that a recent survey of close to 4,000 international students indicates that 39% rated Canada as their top choice for post-secondary studies compared to the US and UK, both at 17% and Australia at 16%.

<https://www.ctvnews.ca/canada/canada-top-destination-for-post-secondary-education-students-say-in-new-survey-1.5621461>

Understandably perhaps, other results indicate that international students are not particularly interested in online programs, with 38% indicating they would defer entry to study face-to-face and 37% would be open to online as long as it transitions to face-to-face.

Report to Senate of the Provost & Interim President
October 27, 2021

Dear colleagues,

I want to thank you all for your hard work so far this term. It is satisfying to see our campus slowly returning to life, with faculty members, students and staff alike walking our halls once again. We hit an important milestone a few weeks ago, reaching the Thanksgiving holiday and Fall break without any significant disruption to our operations.

Thus far, Brock's vaccine mandate is doing what it was intended to do. While we have managed a small number of isolated cases on campus, spread has been very limited. We expect the situation to improve further as those who are partially vaccinated become fully vaccinated, especially as the fourth wave of infections shows early signs of receding in Ontario.

We now have a good understanding of Niagara Region Public Health's expectations with respect to self-isolation, and these were communicated broadly to the University community via the Provost's Office website in early September as soon as we learned of them. Generally, those who are fully vaccinated and show no symptoms after exposure to a confirmed COVID-19 case can continue to attend campus and go about their business normally, while those who are partially vaccinated would be asked to self-isolate. This seems to rule out in many cases the need for whole classes or even large numbers of students within classes to self-isolate, allowing on-campus instruction to continue as planned.

The focus of our activities with respect to the vaccine requirement thus shifts in the coming weeks to ensuring that those who are partially vaccinated become fully vaccinated as soon as they are eligible, and to preparing for the Winter term and ensuring that any new students on campus are compliant with the policy. For the moment, it remains unknown how long the vaccine requirement will remain in place. We see no signs from government that they would lift the requirement for the Winter term.

Academic plan (see Appendices A and B)

Discussions have begun with PPBAC to inform the development of an academic plan, which will supplement the current Institutional Strategic Plan, which runs until 2025, by defining Brock's academic priorities in areas such as program development, international, graduate studies, and strategic enrolment management. I attach for Senators' benefit the documents submitted to the October PPBAC meeting, including the project overview (Appendix A) and the initial engagement plan (Appendix B).

Consistent with the latter, I am preparing a short survey that will be brought to the next PPBAC meeting and released shortly thereafter to understand some of the community's priorities to inform the plan. Drafts of the academic plan would then be iterated in the Winter term, with a document coming to Senate for discussion in May.

Burlington

On October 6, Brock announced that it would be rescheduling the relocation of its Hamilton campus to Burlington for September 2023. This change in plans is not a reflection of the commitment to the project on the part of either the University or the City of Burlington, but rather became necessary given the protracted nature of the public procurement process in which the City is engaged as it seeks to buy Robert Bateman High School from the Halton District School Board. While the first phase of the procurement process closed in late September, a number of other steps must be completed before the City can officially take possession of the building and begin renovations.

Brock has reached an agreement with the new owner of its Hamilton site to continue activities there as needed up to September 2023.

Scarborough Charter on Anti-Black Racism and Black Inclusion (see Appendix C)

Brock has been invited by colleague institutions to sign onto the Scarborough National Charter on Anti-Black Racism and Black Inclusion, which I include for Senators' benefit in Appendix C to this report.

The Charter represents a collaborative effort on a national scale, with input provided by various members of the post-secondary sector and other partners. It signals signatories' commitment to take concrete steps to eliminate anti-Black racism at their institutions. The efforts were led by Professor Wisdom Tettey, Principal of the University of Toronto Scarborough, and included leaders from across the Canadian post-secondary sector, including McGill, UBC, the University of Montreal, and others. Former Brock President Fearon also participated in the drafting of the document.

I participated in a discussion of the document through the Council of Ontario Universities, where feedback was generally positive. Many of our colleague institutions have signed onto the document or have indicated their intention to do so shortly. Following the process adopted by others, I thought it was important to discuss the document at Senate and have this body's support before moving forward with signature and implementation. I would note that broad consultation on the document also occurred last Spring through the Human Rights & Equity Office, and that this feedback was provided to the document's steering committee as they made revisions towards this final version.

Removal of FHB 4.2.2

Section 4.2.2 of the Faculty Handbook provides for an external review of the academic and administrative functions of a Faculty in the fifth year of a Dean's term. I understand that this passage dates back to 2015 and is within the purview of the President. I also understand that this type of review has never taken place despite the language in the Handbook.

I have reviewed minutes from the Governance Committee meetings in August and October 2015, in which a number of concerns were raised about the proposed wording. Given these, as well as current practice, I am requesting that the Secretariat remove section 4.2.2 of the FHB. I wanted to ensure that Senate was aware of this change.

Revisions to the program viability review process (FHB 3.C.15) (see Appendix D)

MOTION (Wells/)

THAT the proposed revisions to the program viability review process as outlined in FHB 3.C.15 be approved as described in Appendix D to this document.

As Senators will recall, last Winter term brought us our first experience with the program viability review process as outlined in FHB 3.C.15. While the goal of the process itself is an important one, our first deployment of the process highlighted a number of areas for improvement. Based on these experiences, I bring to the group today proposed revisions. I have discussed the proposed changes extensively with UPC and SGSC, both of which would have significant roles to play in the process.

The proposed changes achieve three important objectives. First, they increase the transparency of the process by clarifying some of the metrics used to identify programs for review, for example by translating FTE enrolment counts in the original version into headcount enrolments, which are more easily understood. The threshold enrolment values for review are then adjusted accordingly. Second, the changes transition the program viability review from being an administrative process to one that is led by two Senate committees, UPC for undergraduate programs and SGSC for graduate programs. Finally, the revised process now includes a 'probationary period', during which programs that have been identified for review can make adjustments to increase their enrolment.

I believe that these revisions, which were supported by both UPC and SGSC, represent an important step forward and I look to Senators for their support so that we might implement the revised procedures for this year's viability review.

Consultation on the proposed Policy and Procedures on the Appointment of Academic Administrators

On September 8, I announced a community-wide consultation on section 4 of the Faculty Handbook, which is within the purview of the President and outlines the process for appointing senior academic administrators such as Deans and Vice-Provosts. The revisions would see this section removed from the FHB and transitioned to a stand-alone Policy and Procedures on the Appointment of Academic Administrators.

The consultation was hosted using the new consultation tool on the Provost's Office website and sought to collect further feedback from Brock students, staff and faculty on the proposed document. The consultation closed on October 15, with a reminder about the process sent to the University community prior to closing on October 3. A number of community members were approached directly about contributing to the consultation, including Senators and our student associations. This consultation is the latest step in a project that has been ongoing since last Winter and that has engaged many part of the University community in conversation.

I will now be working with my team to consider the comments received and make revisions as appropriate, before finalizing the document.

Sincerely,

Professor Lynn Wells
Provost & Vice-President, Academic
Interim President & Vice-Chancellor

Academic plan project outline
PPBAC submission for October 6, 2021

Purpose

The primary purpose of Brock's new academic plan will be to outline the University's institutional priorities with respect to its academic operations. In doing so, the plan expands on the priorities in the first pillar of the Institutional Strategic Plan to "offer a transformational and accessible University experience." The plan will cover the period of 2022-2027, taking effect in September 2022 and spanning beyond the current Institutional Strategic Plan, thereby providing a foundation for the next institutional strategic planning exercise.

Some examples

Academic planning exercises are common at Canadian post-secondary institutions, with some examples listed below:

- [Lakehead University Academic Plan, 2019-2024](#)
- [OCAD University Academic Plan, 2017-2022](#)
- [Ryerson University Academic Plan, 2020-2025](#)
- [University of Calgary Academic Plan, 2018-2023](#)
- [York University Academic Plan, 2020-2025](#)

Documents can vary significantly in length, from 10-50 pages.

Based on these examples, academic plans might typically include the following elements or address the following topics:

- Academic vision or foundational academic commitments – 'What do we want to be?'
- Perspective on or commitment to student academic experience – 'What do we want to provide our students at Brock?'
- Commitment to student values or skills – 'What do we want students to learn at Brock or become as a result of their time here?'
- Strategies, tactics, and plans for fulfilling the commitments above – 'What will we do to get to where we want to be?'

This last section is usually the longest, touching on specific priority areas such as:

- Student experience and supports
- Indigenous learning and decolonization
- Interdisciplinarity
- Academic programming priorities
- Access and removing barriers to education
- Lifelong learning
- Innovation

Proposed role of PPBAC

Academic planning projects are typically led by the Provost or their delegate and are highly consultative by nature, including the perspectives of students, staff, faculty members and librarians.

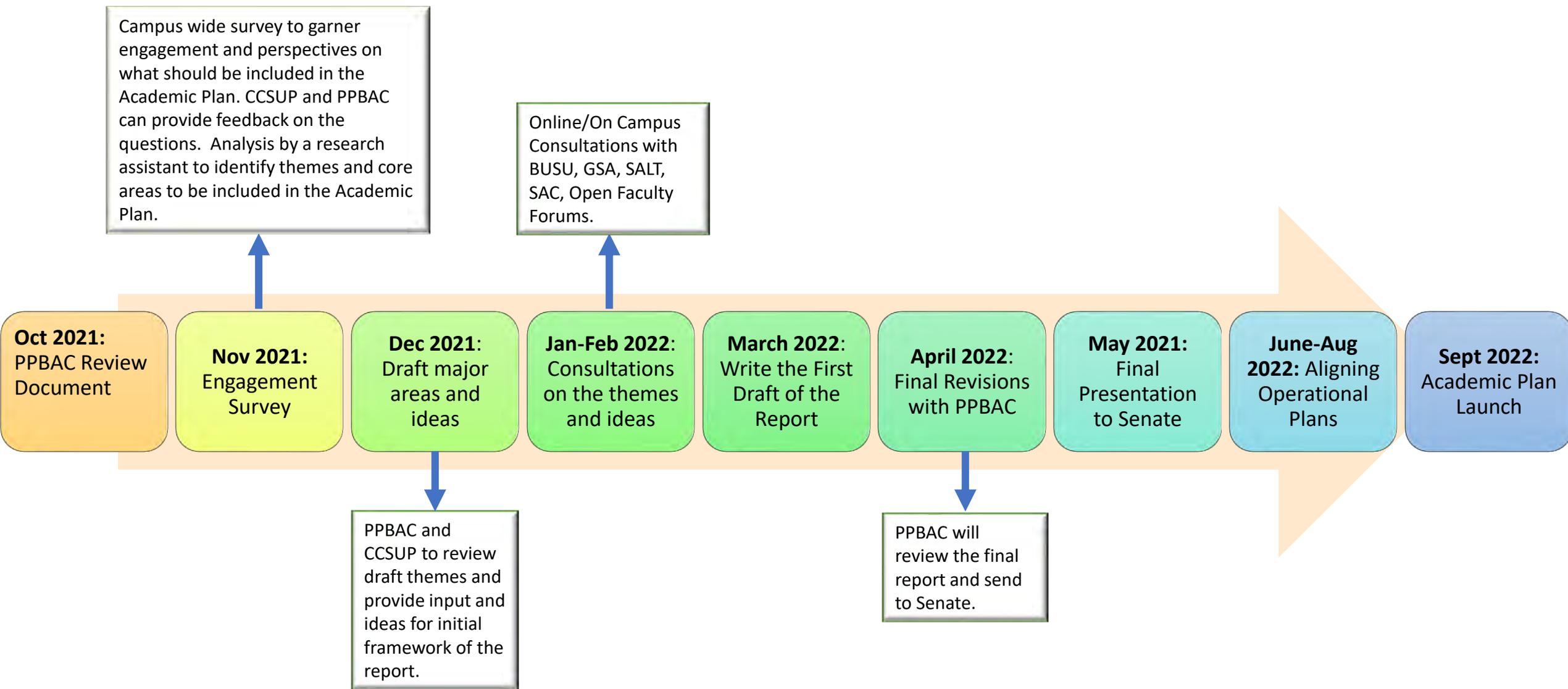
In Brock's case, the project would be managed by Associate Professor Madelyn Law, Associate Vice-Provost, Teaching & Learning, and Nicholas Dion, Chief of Staff, working in close collaboration with the Provost.

The Committee for the Coordination of the University's Strategic Plan (CCUSP), which includes representation from a number of administrative departments, will provide regular input on project management direction, including informing content for the plan.

PPBAC would play an oversight role, receiving regular progress updates and providing input. It would also review drafts of the plan for comment.

The Provost would also provide project updates to Senate in her regular report.

Academic Plan Development Process Draft for input (Oct, 2021)



Advance Copy for Institutional Partners
Not for Further Distribution

*Scarborough Charter on Anti-Black Racism and Black
Inclusion in Canadian Higher Education:
Principles, Actions, and Accountabilities*

August 2021

Scarborough Charter on Anti-Black Racism and Black Inclusion in Canadian Higher Education: Principles, Actions, and Accountabilities

Date: 6 August 2021

Drafting Sub-Committee of the Inter-institutional Advisory Committee for the National Dialogues and Action for Inclusive Higher Education and Communities:

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- Marie-Claude Rigaud, Special Advisor and Associate Secretary General, Equity, Diversity and Inclusion and Indigenous Relations, Université de Montréal (participated until May 2021);
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- Craig Stephenson, President & CEO, Centennial College,
- Robert Summerby-Murray, President and Vice-Chancellor, Saint Mary's University
- Annette Trimbee, President and Vice-Chancellor, MacEwan University
- Barrington Walker, Associate Vice-President, Equity, Diversity and Inclusion, Wilfrid Laurier University

Preamble:

Affirming the fundamental importance for universities and colleges – as institutions uniquely well placed to inspire deep learning in the search for truth, research excellence and community engagement for the benefit of world society - to take up the call to foster pan-Canadian communities of learning that build practices of ongoing dialogue and action yielding inclusion, substantive equality and societal transformation;

Recalling the distinct, complex historical legacy of Black peoples since the first known arrival of interpreter Mathieu da Costa in 1608, including the enslavement of Black people in Canada, Black participation in the defence of British North America in the War of 1812, the establishment of Black communities from the Loyalist Era through the Underground Railroad, Black settlement on the Prairies at the turn of the twentieth century, contributions of people of African descent to the diversification and strengthening of this country, and the specificity of the relationship of descendants of enslaved Africans to settler colonial policies and to the first caretakers of Turtle Island;

Considering that the urgent reckoning with the persistence of anti-Black racism, the depths of Black underrepresentation, and the systemic loss of creative contribution compels bold, decisive, and transformative action;

Acknowledging the role that institutions of higher education have played in constructing the bodies of knowledge about historically excluded groups and acknowledging the ethical responsibility to give voice to alternative ways of knowing while supporting community capacity building;

Responding to the United Nations' International Decade for Peoples of African Descent, from 2015 – 2024, which has been formally recognized by the government of Canada, alongside the Permanent Forum of Peoples of African Descent, which recognize the legacies of the centuries' long, global institution of slavery and centre the themes of recognition, justice and development in the promotion and protection of the human rights of people of African descent;

Recalling the Universal Declaration of Human Rights, 1948, and leading human rights treaties on equality ratified by Canada, including the International Covenants on Civil and Political Rights, and Economic Social and Cultural Rights, 1966, the International Convention on the Elimination of Racial Discrimination, 1965 and the International Labour Organization's Discrimination in Employment and Occupation Convention, 1958 (No. 111), as well as the Durban Declaration and Program of Action of the World Conference against Racism, Racial Discrimination and Related Intolerance, 2001, and the United Nations Sustainable Development Goals;

Embracing the constitutional and quasi-constitutional frameworks for redressing systemic discrimination and promoting substantive equality that flow through the Canadian Charter of Rights and Freedoms, federal and provincial human rights codes and charters, and employment equity, pay equity and pay transparency legislation;

Respecting the historic significance of the Truth and Reconciliation Commission and the power of its calls to action to elicit transformative reflection and action in societies generally and universities and colleges specifically;

Appreciating the importance of the public policy ecosystem in which universities and colleges are situated, the historic relationship of universities and colleges with the communities in which they are embedded, locally, regionally, nationally and internationally, and the ethical responsibility of universities to contribute sustainably to cultural, social and economic life;

Welcoming the adoption of Inclusive Excellence Principles by Universities Canada, 2017; Report on Equity, Diversity, and Inclusion by Universities Canada, 2019; Principles on Indigenous Education by Universities Canada, 2015; Statement on Equity, Diversity and Inclusion by Colleges and Institutes Canada, 2021, and related work that is ongoing in various institutions;

Saluting initiatives taken by select institutions of higher education to investigate their relationship to histories of enslavement and commit to reparative justice measures for the future;

Acknowledging the galvanizing role that generations of Black students have played in redressing anti-Black racism, decolonizing curricular offerings, and representing Black traditions of excellence.

Applauding the emergence of caucuses of Black faculty, librarians and staff across university and college campuses in Canada and the importance of supporting their distinct role in guiding the development and implementation of policies, plans and action within their universities and across universities on inclusive excellence;

Recognizing that redressing anti-Black racism and supporting Black inclusion, in its fulness and with careful attention to intersectionality, are crucial to promoting equality and an inclusive higher education for all;

Transcending any suggestion that to redress anti-Black racism and foster Black inclusion is a zero-sum proposition by underscoring the complementarity of commitments to Indigenous communities and other equity groups;

Underscoring the need to move beyond the notion of equity seeking groups to recognize that equity is deserved, as an incarnation of the principles of human dignity, substantive equality, and restorative justice;

The Scarborough Charter on Anti-Black Racism and Black Inclusion in Canadian Higher Education: Principles, Actions and Accountability (Scarborough Charter) sets out the following principles, actions and accountability measures that should guide the letter and spirit of the academic mission, across institutional levels within universities and colleges and at the sectoral level across Canada:

Principles:

Signatories of the Scarborough Charter commit to redressing anti-Black racism and fostering Black inclusion in universities and colleges across Canada.

The following four overarching principles should apply to any initiative to redress anti-Black racism and foster Black inclusion in our universities and colleges, and across the sector. The principles should guide the letter and spirit of all university, college, and sector-wide policy making and action:

1. ***Black Flourishing.*** Universities and colleges are central to enabling the just, fulsome realization of human potential and thriving. They play a pivotal role in redressing anti-Black racism by removing structural barriers to equity, inclusion and social justice, with full recognition of our intersectional identities, while advancing the innovative research, critical thinking and engaged dissemination of knowledge that foster substantive equality, human dignity, and sustainability.
2. ***Inclusive Excellence.*** Inclusive excellence embodies the recognition that not only is post-secondary education enriched by equity, diversity and inclusion; equitable inclusion is critical to excellence. Excellence encompasses the ability of universities and colleges to educate and to innovate; to be alive to complexity and proactive in the face of crisis; to foster fundamental questioning through rigorous, respectful engagements across difference; and to enable societal transformation.
3. ***Mutuality.*** Universities and colleges are embedded in communities locally, as well as nationally, regionally and internationally. By recognizing a responsibility to foster mutuality, universities and colleges acknowledge the multiple social relations and modes of societal action upon which universities and colleges depend and for which they are accountable. The positive, interactive relationship with Black communities entailed by mutuality includes the special role universities and colleges can assume in Black community economic development, notably as anchor institutions and local employers.
4. ***Accountability.*** Accountability involves a commitment both to ongoing education - including self-education - and to courageous action built on deeply consultative processes. Accountability includes acknowledging, respecting, and acting responsively in the face of Black life, in its full complexity and intersectionality. Universities and colleges must move beyond mere representation and take responsibility for supporting fulsome, transformative inclusion across university and college structures, policies and procedures. By signing the Scarborough Charter, universities and colleges commit to a process of continuous improvement through ongoing, sustained implementing of the Scarborough Charter's principles-based commitments to action, and to be answerable for concrete outcomes, including to their respective Boards, communities and other stakeholders.

Action:

With full regard and respect for the rich tapestry of institutional contexts in which universities and colleges are situated, signatories of the Scarborough Charter will be guided by each of the four principles as they prepare their contextually-appropriate, best-efforts-based, individual institutional action plan. Action plans should convey institutions' spirit of good faith in embracing and enabling meaningful, measurable and continuous improvement in the implementation of the following commitments to action. These principles-based commitments to action apply to *governance* in decision-making processes and structures at all levels of the institution, to *research*, to *teaching and learning*, and to *community engagement*.

1. Universities and Colleges commit to promoting intersectional **Black flourishing**
 - 1.1. in *governance* by
 - 1.1.1. ensuring that leadership on equity
 - 1.1.1.1. permeates governance structures across all university and college levels;
 - 1.1.1.2. is individually championed throughout senior administration as it progressively diversifies its own representation through mentorship, encouragement and sponsorship of Black faculty and staff;
 - 1.1.1.3. sustains inclusive, deliberative processes that acknowledge, redress and report on anti-Black racism;
 - 1.1.1.4. enlists faculty, staff and student associations as pivotal contributors to achieving equity, as they also bear a responsibility to be inclusive and to work constructively with organizations of Black faculty, staff and students;
 - 1.1.2. reviewing and revising dispute resolution processes, including disciplinary measures and protections against reprisals, to secure their responsiveness to redressing anti-Black racism and promoting inclusive, balanced representation, with special regard to the position of non-unionized Black staff and untenured Black faculty;
 - 1.2. in *research* by
 - 1.2.1. engaging proactively - including externally with research bodies such as the tri-council of federal funding agencies - to redress Black underrepresentation and build equitable practices into research grant selection and research recognition processes;
 - 1.2.2. building concrete research support practices, including mentorship and sponsorship, to encourage Black faculty thriving through the academic ranks and into positions of research leadership, accompanied by recognition practices for members of historically underrepresented communities bearing disproportionate burdens of the labour;
 - 1.3. in *teaching and learning* by
 - 1.3.1. constructing affirming, accessible spaces and cultivating naming practices that foster Black belonging, knowledge development and sharing;
 - 1.3.2. enabling, supporting and acknowledging
 - 1.3.2.1. Black student leadership, insights, energy and actions throughout academic programs, curricular and co-curricular development and other aspects of university and college teaching, learning and student development;
 - 1.3.2.2. Black staff members' co-curricular and other contributions to student well-being and success;
 - 1.4. in *community engagement* by

- 1.4.1. commissioning academically rigorous and community inclusive task forces to conduct independent studies of the histories of slavery, colonialism and racial injustice, with a mandate to include recommendations that promote inclusive higher education and community flourishing into the future;
 - 1.4.2. supporting dedicated research, teaching and community engagement in keeping with the themes of the United Nations’ International Decade for Peoples of African Descent and the Permanent Forum of Peoples of African Descent.
2. Universities and colleges commit to fostering **inclusive excellence**
- 2.1. in *governance* by
 - 2.1.1. identifying the extent of (under)representation through baseline data compilation and analysis, to provide demographic knowledge of Black faculty, staff and students within their institutions – with suitable disaggregation of data to reflect domestic and international student populations – starting with recruitment at each university and college as an initial focus for action to foster inclusion;
 - 2.1.2. establishing comprehensive strategies where gaps exist, including targets, timetables and transparency mechanisms, and providing sustained resource commitments to
 - 2.1.2.1. recruit faculty, wherever feasible in cluster/cohort hires across academic disciplines; to support their promotion through the ranks; and otherwise equitably employ best practices, including on spousal hiring, to attract and to retain Black professors;
 - 2.1.2.2. recruit, support career progression and retain Black managerial, administrative and support staff across university and college units;
 - 2.1.2.3. recruit Black students and support their successful program completion;
 - 2.1.2.4. identify and redress wage discrimination and occupational segregation, with careful attention to preventing discrimination on intersecting grounds;
 - 2.2. in *research* by
 - 2.2.1. recognizing, engaging critically with and celebrating traditions of Black intellectual excellence across the academy, including by supporting research clusters that enable plural communities of knowledge to flourish;
 - 2.2.2. increasing equitable and inclusive participation by
 - 2.2.2.1. Black academics in research teams, research chairs and fellowships, university-wide visiting keynote lectureships and other forms of research recognition that celebrate excellence;
 - 2.2.2.2. Black staff in the support of research development, management, implementation, and recognitions of excellence;
 - 2.3. in *teaching and learning* by
 - 2.3.1. encouraging the emergence of Black and Black Canadian studies programs while promoting curricular development across academic disciplines that decentres epistemic Eurocentrism, that holds open space for expansive, world-inspired learning that broadens disciplinary canons to include Black expertise and knowledges;
 - 2.3.2. providing scholarships, bursaries, fellowships and related, dedicated support including increased research opportunities, mentorship and alumni engagement to support
 - 2.3.2.1. Black admission to universities and colleges;
 - 2.3.2.2. Black enrollment in graduate and post-doctoral studies;
 - 2.3.2.3. Black thriving through to program completion;
 - 2.4. in *community engagement* by

- 2.4.1. developing pathways for access to higher education for Black students, including promoting student outreach with local, regional, national and international communities and providing robust “wrap-around” support;
 - 2.4.2. building mechanisms for ongoing outreach and sponsors for broader Black communities, including Black staff among career advisors and advancement professionals, as well as alumni mentors from Black communities.
3. Universities and colleges commit to enabling **mutuality**
- 3.1. In *governance* by
 - 3.1.1. reassessing the existing campus security and safety infrastructure and protocols with a view to protecting the human dignity, equality and safety of Black people on campus;
 - 3.1.2. undertaking periodic climate surveys that consider local community relations, to assess and guide initiatives to build inclusive campuses in a manner that is responsive to the specific needs of Black faculty, staff and students;
 - 3.2. In *research* by
 - 3.2.1. confirming that research about Black communities or that is likely to affect the welfare of Black communities respects principles of co-construction, including sustained outreach to relevant communities on inputs and the interpretation of research results;
 - 3.2.2. collaborating on the development of Tri-Agency Canada (Canadian Institutes of Health Research, National Sciences and Engineering Research Council of Canada, and the Social Sciences and Humanities Research Council) guidelines on research affecting Black communities, fostering community-engaged research principles and advancing representation of Black community members and respect for their lived experiences;
 - 3.3. in *teaching and learning* by
 - 3.3.1. building grade school through university and college outreach programs;
 - 3.3.2. adopting policies, educational sessions and practices of inclusion that sustain harassment-free classrooms and other learning environments in which rigorous study can occur;
 - 3.4. in *community engagement* by
 - 3.4.1. requiring Black community prior-impact assessments as part of procurement processes, to move equity initiatives away from risk mitigation toward proactive, sustainable opportunity creation and integrating Black community impact assessments into any restructuring initiatives;
 - 3.4.2. building robust community partnerships with Black-led organizations.
4. Universities and Colleges commit to ensuring **accountability**
- 4.1. in *governance* by
 - 4.1.1. establishing ethical data co-creation and governance practices, notably by
 - 4.1.1.1. confirming that the collection of data is undertaken as a means to foster inclusive, just, equitable post-secondary environments that are enabled by rigorous, evidence-based decision-making;
 - 4.1.1.2. exercising caution in the face of the systemic inequalities and racial biases that may be perpetuated within artificial intelligence, big data, surveillance and other technological advances, while deepening the understanding of technological inequities;
 - 4.1.1.3. mapping, retrieving, maintaining and to the extent permitted by law sharing reliable, disaggregated data on Black representation over defined periods of time,

- and partnering with Statistics Canada and other relevant external institutions in this respect;
- 4.1.1.4. benchmarking data to enable comparisons over time and between signatories to the Scarborough Charter and promoting transparency about the reasons that any identified categories of data may not be collected;
- 4.1.2. establishing a suitably staffed office in senior administration dedicated in whole or in part to redressing racism across the university or college with responsibility for academic affairs, human resources and student life and learning, led by a senior administrator, wherever possible reporting to the university or college president or principal;
- 4.2. in *research* by
 - 4.2.1. collecting specific data on the representation of Black researchers on research teams, in research grant awards, in research chairs and fellowships;
 - 4.2.2. building robust reporting mechanisms and reward systems that assess and recognize research contributions to intersectional Black flourishing, inclusive excellence and mutuality;
- 4.3. in *teaching and learning* by
 - 4.3.1. providing anti-Black racism education for all members of the university or college while developing performance expectations for faculty and staff that build capacity on anti-racism and Black inclusion;
 - 4.3.2. building robust reporting mechanisms that assess and recognize teaching and learning contributions to intersectional Black flourishing, inclusive excellence and mutuality;
- 4.4. in *community engagement* by
 - 4.4.1. enabling and reporting on co-creation in the data collection process by communities most concerned;
 - 4.4.2. retaining contact with professional orders and related regulatory bodies where they exist (including doctors, dentists, nurses, engineers, lawyers, social workers, teachers, skilled tradespeople) to be able to assess the admission and career progression of Black university and college graduates.

Cross-Sector Inter-Institutional Commitments and Accountability

- 5. To promote ongoing sector-wide collaboration, mutual learning, sustained commitment, and sharing of resources among Canadian universities, colleges and related bodies and agencies to redress anti-Black racism and to promote Black inclusion, signatories to the Scarborough Charter agree to
 - 5.1. establish the **Inter-institutional Forum on Inclusive Higher Education (Inter-institutional Forum)**.
 - 5.1.1. Signatories of the Scarborough Charter are members of the Inter-institutional Forum.
 - 5.1.2. The Scarborough Charter will be hosted on the websites of Universities Canada and Colleges and Institutes Canada, along with a list of signatories.
 - 5.1.3. Each member of Universities Canada or Colleges and Institutes Canada should determine its internal requirements for signing the Scarborough Charter.
 - 5.1.4. Each member should communicate signature of the Scarborough Charter to the Inter-institutional Steering Committee on Inclusive Higher Education.

- 5.1.5. On an alternating basis, meetings of the Inter-institutional Forum will be convened every two years in partnership with the following institutions:
 - 5.1.5.1. Universities Canada;
 - 5.1.5.2. Colleges and Institutes Canada.
 - 5.1.6. Other meetings of the Inter-institutional Forum, during the intervening years, may be convened on a rotating basis by selected universities and colleges in the Inter-institutional Forum.
 - 5.1.7. The meetings should provide the basis to
 - 5.1.7.1. share insights and good practices on the principles-based commitments, foregrounding at least one of the four principles and related action per meeting;
 - 5.1.7.2. strengthen the inter-institutional communities of practice; and
 - 5.1.7.3. discuss data-driven reports on progressive implementation of the Scarborough Charter.
 - 5.1.8. Meetings of the Inter-institutional Forum will show due regard for bilingualism, regional and institutional diversity, and the representation of universities and colleges, their national organizations, and other relevant agencies in the Inter-institutional Forum.
 - 5.1.9. The archives of the National Dialogues and Action for Inclusive Higher Education and Communities, the Scarborough Charter and the Inter-institutional Forum will be housed and preserved by the University of Toronto Scarborough.
- 5.2. support the **Inter-institutional Steering Committee on Inclusive Higher Education**.
- 5.2.1. The Inter-institutional Steering Committee on Inclusive Higher Education (Inter-institutional Steering Committee) is the steering committee for the Inter-institutional Forum.
 - 5.2.2. The Inter-institutional Steering Committee will assume responsibility for
 - 5.2.2.1. receiving membership in the Inter-institutional Forum;
 - 5.2.2.2. encouraging the development of communities of practice within the Inter-institutional Forum, where good practices are shared and on-going learning is supported;
 - 5.2.2.3. fostering implementation and accountability by member institutions of the Scarborough Charter, including through
 - 5.2.2.3.1. data collection from member institutions and the encouragement of consistency in data governance and data sharing;
 - 5.2.2.3.2. periodic reporting, both within the Inter-institutional Forum and publicly;
 - 5.2.2.3.3. commissioning studies and otherwise serving as a clearinghouse for the sharing of core knowledge on redressing anti-Black racism and promoting Black inclusion by fostering Black flourishing, inclusive excellence, mutuality and accountability; and
 - 5.2.2.4. interfacing with relevant governments, institutions, organizations, communities and other actors on behalf of the Inter-institutional Forum to secure implementation of the Scarborough Charter, and in particular encouraging

collaboration with a range of Black community organizations as well as other key stakeholders including

- 5.2.2.4.1. Tri-Agency Canada; Canada Research Chairs Program; and the Royal Society of Canada;
 - 5.2.2.4.2. The Canadian Association of University Teachers;
 - 5.2.2.4.3. The Parliamentary Black Caucus;
 - 5.2.2.4.4. Statistics Canada;
 - 5.2.2.4.5. The Permanent Forum of People of African Descent.
- 5.2.3. The Inter-institutional Steering Committee's founding membership comprises the current membership of the Inter-institutional Advisory Committee for the National Dialogues and Action for Inclusive Higher Education and Communities.
- 5.2.4. Members serve in their personal capacity.
- 5.2.5. Membership terms range from 2 – 4 years, and will be renewed on a staggered basis.
- 5.2.6. Within its first year of operation, the Inter-institutional Steering Committee will establish terms of reference to govern its work, including criteria for membership, composition, size, nominations by members of the Inter-institutional Forum, appointments; decision-making on behalf of the Inter-institutional Forum; and membership fees.
- 5.2.7. The Inter-institutional Steering Committee will periodically review and recommend the schedule of contributions for member institutions.

5.3. implement the **Scarborough Charter** and support the work of the **Inter-institutional Forum**.

- 5.3.1. Member institutions undertake to make the Scarborough Charter a core resource guiding policy creation and implementation, across university and college governance, in research, teaching and learning, and in community engagement.
- 5.3.2. Member institutions commit to co-creating and adopting a contextually-appropriate, best-efforts-based, individual institutional action plan to redress anti-Black racism, separately or as part of a larger commitment to redressing racism and promoting equity, diversity and inclusion at their institutions.
- 5.3.3. Member institutions' action plans should convey a commitment to meaningful, measurable and continuous improvement in the implementation of the Scarborough Charter.
- 5.3.4. Member institutions commit to adopting accountability mechanisms to sustain stable, long-term and enduring inclusion, while cultivating a culture of accountability that extends beyond reporting exercises to embody the spirit of the guiding principles of the Scarborough Charter.
- 5.3.5. Member institutions commit to fostering communities of learning to galvanize continuous improvement on inclusion.
- 5.3.6. Member institutions commit to establishing membership dues to provide the requisite financial and human resources to support the Inter-institutional Forum no later than the first six (6) months after the launch of the Scarborough Charter, to considering periodic adjustments recommended by the Inter-institutional Steering Committee, and to ensuring that the requisite financial and human resources will be available within their own institutions to implement the Scarborough Charter.
- 5.3.7. Member institutions commit to sharing data, to the extent permitted by law, with each other, within the Inter-institutional Forum and under the guidance of the Inter-institutional Steering Committee on Inclusive Higher Education.

FHB 3.C.15 – Program review and discontinuation

15.1 Undergraduate and master's degree program viability review

~~15.1.1~~ Based on the November 1 enrolment data, programs that have 10 or fewer Full time Equivalent enrolments for three successive years shall undergo an internal review to determine viability by a Committee appointed and chaired by the Provost. The Committee will include the Provost, Vice Provosts and a Dean external to the Faculty in which the program resides. In addition to enrolment viability, reviews will consider consistency with the University's academic priorities, changing disciplinary landscape, student demand, adequacy of the applicant pool, societal need for program graduates, and an assessment of the measures taken to improve enrolment. This calculation shall commence with the November 1, 2017 enrolment report.

~~15.1.2~~ Each year, with the release of the November 1 enrolment data, the Provost will report to Senate the list of programs identified to undergo a viability review. The program will be asked by the Provost to submit a report to the Provostial Committee addressing the viability criteria. Upon consideration of the report, the Provostial Committee will make a recommendation to ARC on whether to discontinue the program. If ARC and Senate approves a recommendation to discontinue the program, the program will submit a termination plan to ARC (IQAP 6.1).

Senate 680, 688

15.1.1 Every year, the Provost & Vice-President, Academic or the Vice-Provost & Associate Vice-President, Academic shall bring to the Undergraduate Program Committee (UPC) a report identifying those undergraduate programs that have had 20 or fewer headcount enrolments (including co-majors) for three successive years, and to the Senate Graduate Studies Committee a report identifying those graduate programs that have had 8 or fewer headcount enrolments for three successive years. This calculation shall commence with the November 1, 2017 enrolment report. These programs shall be considered eligible to undergo an internal review to determine viability.

Following the presentation of the report, as well as discussions with the relevant Deans and/or Department Chairs and/or Centre Directors or Graduate Program Directors, UPC or SGSC shall determine which of the programs identified in the report shall be recommended to Senate to undergo the review. In addition to enrolment viability, UPC and SGSC will consider consistency with the University's academic priorities, changing disciplinary landscape, student demand, adequacy of the applicant pool, societal need for program graduates, and an assessment of the measures taken to improve enrolment. Programs identified for review by Senate shall begin a two-year probationary period.

The Provost & Vice-President, Academic shall report the list of programs identified for probationary status to the relevant Deans. The relevant Deans, working in collaboration with the Chair and faculty members of the academic unit(s) housing the program, will then be asked

to report back to UPC or SGSC before the end of the academic year with a two-year plan to address the challenges identified by UPC. UPC or SGSC will provide feedback as it sees fit and the plan shall be revised accordingly prior to implementation.

Following the end of the two-year probationary period, the relevant Dean shall work in collaboration with the Chair/Centre Director or Graduate Program Director and faculty members of the academic units(s) housing the program to prepare a brief progress report on the implementation of the two-year plan. This plan shall be presented to UPC or SGSC, which shall evaluate the progress made in achieving the objectives outlined in the plan. Recommendations will follow either a) to discontinue the programs; or b) that the program continue to operate.

UPC or SGSC shall consider the evidence presented and recommend to the Provost & Vice-President, Academic a list of undergraduate and graduate programs that should be discontinued. The Provost & Vice-President, Academic shall make a recommendation to ARC on the programs to be discontinued.

If ARC and Senate approve a recommendation to discontinue the program, the program will submit a termination plan to ARC (IQAP 6.1).

15.1.2 Programs that receive a rating of non-viable as a result of a cyclical academic review process will also be subjected to a viability review following Senate's approval of the Final Assessment Report, unless the Unit has already indicated that it intends to proceed with discontinuation in its response to the review.

15.1.3 This measure of program viability will not apply to new programs that have yet to reach a steady state of enrolment (achieved when the number of admission cycles equal years of program length) nor to new programs that have yet to undergo an initial cyclical program review.

15.1.4 Programs scheduled to complete a cyclical review before the end of the following academic year shall not be eligible for the internal viability review process. In such cases, program viability will instead be identified as a consideration for the external reviewers.

15.1.5 A Request for Program Discontinuation can be submitted at any time to ARC as per Section 6.0 of the IQAP (FHB III.C.11).

15.1.6 All recommendations for program discontinuation must be approved by Senate.
[Senate 660]

15.1.7 Certificates and micro-certificates shall be excluded from the program viability review process.

(Senate 688)

VPR Report to Senate #693 - October 27, 2021

1. Funding news

Three Brock University researchers have received funding for [community partnership research projects](#), under Partnership Engage Grant program of the Social Sciences and Humanities Research Council. Teams led by Dr. Charles Conteh (Political Science), Dr. Monique Somma (Educational Studies), and Dr. David Fennell (Geography and Tourism Studies) received more than \$55,000 in total, to support community-engaged research on Indigenous “smart tourism” capacity, safe and affordable housing for women, and well-being for students, all with local partner organizations. This represented a 100% success rate for Brock proposals in this SSHRC-PEG application round.

2. Brock University in national research events

The Canada Foundation for Innovation Annual Board meeting will be co-hosted in November by Brock University and Niagara College. Held virtually this year, the meeting will feature video presentations of Brock CFI-based research, facilities, students, and partners.

Also in November, Brock University is a major sponsor of the Entomological Society of Canada and Entomological Society of Ontario’s Joint Annual Meeting (theme: Strength in Diversity). Notionally scheduled to be held in Niagara Falls, the [ESC-ESO conference](#) will be held online this year.

In December, Brock University will virtually host this year’s CARA conference, the annual meeting for the Canadian Association of Research Administrators. Brock research staff, many of whom are CARA members, are taking a leadership role organizing the program.

3. Omni consortium print access system

University Librarian Mark Robertson contributes the following wonderful news: “In 2019 Brock Library implemented Omni, a new discovery tool for library collections. Omni is collaborative infrastructure shared with 16 Ontario academic libraries through the Ontario Council of University Libraries (OCUL). One of the promises of Omni is in deeper sharing of library collections across participating OCUL members. We are now seeing the benefits of this collaboration coming to fruition. In late summer, the Library turned on a new feature that allows Brock researchers to automatically see and request print collections across 16 Ontario university libraries. This means that nearly 23.5 million print library resources are now at the fingertips of the Brock community. More information on this initiative is available in [this Brock News article](#).”

4. AVPR on COU Space Group

Associate Vice-President Research Michelle McGinn has been confirmed as the OCUR representative on the Council of Ontario Universities’ Task Force on Space Transformation. This task force was struck to review new approaches to space and capital planning on

campus. It is a cross-functional group that takes an institution-level view of space planning to incorporate the perspective and needs of different user groups, including research functions in university space.

5. Intellectual property discussions with Province

Discussions continue between representatives of Ontario's universities and the provincial government regarding the Ontario Health Data Platform's anticipated IP handling, and the broader Ontario IP/commercialization strategy. The province hopes to ensure that research data and innovations supported by Ontario have commercial or economic impact that benefits Ontarians. The university sector is working with the province to ensure that any measures introduced with the intention of bringing about those results are consistent with existing intellectual property provisions, and principles of fairness and sound operation. Universities continue to press for an open, nimble approach to sponsored research and commercialization, avoiding needless red tape and encumbrances apt to discourage innovation.

T. Kenyon, Vice-President, Research



To: Chabriol Colebatch, University Secretariat

From: Don Cyr, Senate Chair

Date: Oct 21, 2021

Re: **GENERATIVE DISCUSSION: REPORTING REQUIREMENTS – Senate 693**

Introduction

In the past few years we have seen reporting and administrative tasks required of faculty/staff/departments increase. In many cases this has resulted from the increased reporting requirements (SMA metrics) required of universities by the Ministry. In other cases these requirements are an attempt to provide additional student information/services, or related to increased information required by funding agencies. Often Senate is involved or co-related in terms of setting these requirements. Examples include program review/institutional quality assurance process/course information. In addition, accredited programs have seen increased reporting requirements on the part of accrediting bodies.

There is a definite sense of increased reporting requirements on the part of faculty/staff/departments which is resulting in some concern.

What are some of the possible synergistic solutions to alleviating the strain of these reporting requirements that can be investigated?

Are there recommendations in terms of administrative solutions (technology/staff) that can alleviate the pressure of these requirements that are potentially hindering the teaching and research function of the institution?

Are there reporting requirements that could be discontinued?

What actions could be taken or suggested by Senate? A review of reporting requirements?



(Circulated Prior to Approval)

Senate

MINUTES OF MEETING #692 (2021-22)

SENATE

WEDNESDAY, SEPTEMBER 15, 2021, 4:00 PM

REMOTE PARTICIPATION VIA MICROSOFT TEAMS

PRESENT: *Chair:* Senator Don Cyr, *Vice-Chair:* Senator Larry Savage

Ex-officio Members: Senators Ejaz Ahmed, Mark Arthur, Robyn Bourgeois, Suzanne Curtin, Andrew Gaudes, Austin Hurley, Geraldine Jones, Tim Kenyon, Anna Lathrop, Ingrid Makus, Carol Merriam, Hayley Myatt, Michael Owen, Brian Power, Mark Robertson, Camille Rutherford, Peter Tiidus, Lynn Wells, Thomas Winger

Elected Members: Senators Lynn Arner, Michael Ashton, Kate Bezanson, Irene Blayer, Alison Braley-Rattai, Christene Carpenter-Cleland, Rai Choksi, Rosemary Condillac, Maureen Connolly, Jens Coorssen, Andrew Dane, Tim Dun, Joan Dundas, Fayez Elayan, Bareket Falk, Arti Freeman, Amy Friend, Dawn Good, Ash Grover, Omer Gul, Nicholas Hauck, Yasmine Hejazi, David Hutchison, Ben Johnson, Daniel Krowchuk, Kelli-an Lawrance, Jingyu Li, Francine McCarthy, Cheryl McCormick, Richard Mitchell, Tim Murphy, Syed Nawal, Roberto Nickel, Unyong Pyo, Monica Rettig, Tim Ribaric, Ian Ritchie, Kirsty Spence, Tek Thongpapanl, Francine Vachon, Terrance Wade, Michelle Webber, Shannon Welbourn

REGRETS: Senators Michael Bidochka, Ken Chan, Sheng Deng, James O'Brien, Hilary Pearson, Moksh Sharma, Debbie Zimmerman

RESOURCE: Chabriol Colebatch (University Secretary and General Legal Counsel), Margaret Thompson (Associate Secretary to the University), Stacey Duncan (Assistant Secretary to the University)

ALSO

PRESENT: Other members of the Brock University community

1. Call to Order

The Chair called the meeting to order and provided a land acknowledgement.

2. Approval of Agenda

The Chair referred members to the Agenda and confirmed that there were no items to be lifted from the consent portion.

MOVED (Murphy/Dundas)

THAT the Agenda, including consent items, be approved.

CARRIED

3. Business Arising from the Minutes - None

4. Reports of Standing Committees

4.1 *Governance Committee*

[The Report of the Governance Committee dated September 15, 2021 had been posted with the meeting materials.]

Senator Coorsen, Chair of the Governance Committee presented the Report.

a) Scrutineers and Elections Sub-Committee for 2021-22 Term

MOVED (Coorsen/Blayer)

THAT the following two Senators, who are not standing for election for the 2022-2023 term, be appointed to serve as scrutineers for elections held during the 2021-2022 term:

David Hutchison
Jennifer Li

CARRIED

Senator Coorsen noted a correction regarding the second decision item contained within the Report regarding the appointment of members of the election subcommittee. The motion has been approved by the Governance Committee as the matter is within its purview and is being reported to Senate for information only.

4.2 *Research and Scholarship Policy Committee*

[The Report of the Research and Scholarship Policy Committee dated September 10, 2021 had been posted with the meeting materials.]

Senator Ashton, Chair of the Research and Scholarship Policy Committee presented the Report.

a) Appointment to the Research Ethics Board - Health Science Research Ethics Board 2021-2023

MOVED (Ashton/Coorsen)

THAT Senate approve the appointment of Stephen Cheung as the new Chair of the Health Science Research Ethics Board 2021-2023.

CARRIED

5. Convocation - Fall 2021

[A memo from the Registrar and Associate Vice-President Enrolment Services dated September 8, 2021 had been posted with the meeting materials together with a summary of the convocation totals.]

The Registrar and Associate Vice-President Enrolment Services presented the Report to Senate. The Chair offered congratulations to the graduates on behalf of Senate.

MOVED (Spence/Krowchuk)

THAT the Fall 2021 Convocation Degrees and Certificates be approved as submitted.

CARRIED

6. Report of the Chair

[The Report of the Chair dated September 10, 2021 had been posted with the meeting materials.]

The Chair presented his Report and provided highlights for the information of Senate.

7. Report of the President and Vice-Chancellor

[The Report of the Interim President and Vice-Chancellor / Provost and Vice-President Academic dated September 15, 2021 had been posted with the meeting materials together with the Brock University - Performance and Overview Indicators - September 2021.]

Dr. Wells referred members to her Report and highlighted several items for the information of Senate. Of note, Dr. Wells expanded on the processes developed and utilized in the transition back to a safe campus and provided an oral update on the reporting of vaccinations. During discussion, Dr. Wells responded to questions raised regarding the vaccine mandate, medical exemptions, student accommodations, compliance of masking in the classroom by both instructors and students, and masking in other areas on campus.

With respect to the Performance and Overview Indicators appended to the Report, a concern was raised regarding certain institutional performance indicators and the manner in which they are being measured. Recognizing that the indicators had been previously approved by the Board and Senate, Dr. Wells noted that there will be further opportunity over the next year to further review and define some of the indicators and measurements.

8. Report of the Provost and Vice-President, Academic

The Report had been included within the Report of the President & Vice-Chancellor (Agenda Item 7).

9. Report of the Vice-President, Research

[The Report of the Vice-President, Research dated September 15, 2021 had been posted with the meeting materials.]

The Vice-President, Research presented the Report and expanded on several items for the information of Senate. Dr. Kenyon provided oral updates and, of note, advised that the application deadline for the Canada Foundation for Innovation - Innovation Fund has been extended to the end of September.

10. Two Row Council - N/A

11. Generative Discussion - N/A

12. Communications

Senate received a deputation from Professor Ron Thomson regarding his concerns with certain aspects of the Governance Committee's procedures of recommending members of Advisory Committees as currently outlined in Faculty Handbook, Section II: 9.5.1 j. Areas of concern raised by Professor Thomson included, but were not limited to, the inability to no longer acclaim a member to a position when there is a single nominee; the discussions held in camera regarding nominees, lack of feedback to nominees when a negative vote is made, and lack of opportunity for nominees to defend any allegations made against their nomination.

MOVED (Savage/Connolly)

THAT Senate refer these matters to the Governance Committee for consideration with instruction to report back to Senate by January 2022.

CARRIED

It was suggested, and Professor Thomson agreed, that he would provide his concerns in writing to the Governance Committee following today's meeting.

13. Other Business - None

14. Adjournment

The meeting adjourned at 5:14 p.m.

CONSENT ITEMS

The following items had been received and/or approved by consent:

15. Minutes of Previous Meetings

[The Minutes of the meeting of Senate-Elect held on May 26, 2021, the 691st meeting of Senate held on May 26, 2021, and the special meeting of Senate held on August 25, 2021 had been posted with the meeting materials.]

By consent, Senate approved the Minutes of the meeting of Senate-Elect held on May 26,

2021, the 691st meeting of Senate held on May 26, 2021, and the special meeting of Senate held on August 25, 2021.

16. Approval Over the Summer Months

[A Report to Senate from the University Secretary and General Legal Counsel dated September 15, 2021 had been posted with the meeting materials.]

Senate received the Report that informed of the decisions made by the Chair and Vice-Chair of Senate over the summer months, in accordance with the summer decision making provisions in the Faculty Handbook. Of note, Senate did not rescind any decision made by the Chair and Vice-Chair over the summer months.

17. Report of the Academic Colleague - N/A

18. Report of the Actions of the Board of Trustees

[The Report of the Actions of the Board of Trustees from the meeting of the Board held on June 24, 2021 had been posted with the meeting materials.]

Senate received the Report by consent.

19. Reports of Standing Committees

19.1 Academic Review Committee

[The Report of the Academic Review Committee dated September 15, 2021 had been posted with the meeting materials.]

Senate approved the following motion by consent:

THAT the Final Assessment Report for the cyclical review of the graduate and undergraduate programs in the Department of History be approved.

19.2 Undergraduate Program Committee

[The Report of the Undergraduate Program Committee dated September 15, 2021 had been posted with the meeting materials.]

Senate approved the following motions by consent:

THAT Senate approve the addition of the Program note in Biological Sciences 2021-2022 undergraduate calendar to reflect recommendation to complete Lab Links in year 1, year 2, and Fall of year 3 for Biological Science Co-op students as outlined in Appendix 1.

THAT Senate approve the revision of the *Certificate in Canadian Culture and Diversity* program requirement in the Canadian Studies 2021-2022 undergraduate calendar as outlined in Appendix 2.

19.3 Information Technology and Infrastructure Committee

[The Report of the Information Technology and Infrastructure Committee dated

September 15, 2021 had been posted with the meeting materials.]

Senate received the Report by consent.

19.4 Planning, Priorities and Budget Advisory Committee

[The Report of the Planning, Priorities and Budget Advisory Committee dated September 9, 2021 had been posted with the meeting materials.]

Senate received the Report by consent.

19.5 Teaching and Learning Policy Committee

[The Report of the Teaching and Learning Policy Committee dated September 9, 2021 had been posted with the meeting materials.]

Senate received the Report by consent.

20.0 Schedule of Academic Dates for 2022-23

[A Report from the University Registrar and Associate Vice-President, Enrolment Services dated September 8, 2021 had been posted with the meeting materials together with the proposed schedule of Academic Dates for the 2022-23 Academic Session and draft schedules for 2023-24 and 2024-25 (key dates only).

Senate received the Report by consent.

COU Update for Academic Colleagues – October 13-20, 2021

2021-22 Provincial Advocacy

COU is currently finalizing a comprehensive advocacy campaign in support of key sector interests. This work is ongoing and captures work intended to influence the Spring Budget and the Provincial election currently scheduled for June 2, 2022.

COU's advocacy is taking place within the context of a provincial election in less than a year, and a government that is primarily focused on ensuring a successful school year, and avoiding another major economic shutdown. These factors, paired with the growing concern regarding the Delta variant have created a challenging environment for advocacy with much of the political "bandwidth" occupied with these drivers.

The strategy for advocacy is to advance the sector's recommendations by following a two-pronged approach that leverages both internal and external advocacy. Internally, COU will engage the government to discuss options for revenue flexibility that can ensure the financial sustainability and competitiveness of Ontario universities. Externally, COU will develop a public-facing advocacy campaign to help build consensus in the public about the role universities play in developing a skilled workforce, attracting investment and talent, and as drivers of the provincial and local economies.

The Financial Sustainability and Competition Working Group (FSC WG) was struck to lead the sector's review and analysis of internal policy and advocacy recommendations linked to university funding and support. The WG met over the summer to consider government, student and institutional interests and priorities, and to develop sector-wide specific policy/advocacy options for consideration by Executive Heads.

COU will provide the sector with more information over the coming weeks.

Red Tape Bill: Supporting People and Businesses Act

On October 7, the provincial government released Bill 13, [Red Tape Bill: Supporting People and Businesses Act](#). The [corresponding announcement](#) outlines several new government-wide initiatives that will be included in the Bill and that directly or indirectly impact universities.

Of particular note are three key advocacy asks for the college sector:

- **Expansion of college degree-granting caps;**
- **Exploring options for expanding the degree-granting authority of colleges;** and
- **Exploring options to expand credentials in the public college system to include "applied" Master's degrees**

The Ministry is also exploring options to reduce the administrative burden associated with multiple transfer payment agreements to the same transfer payment recipient. The government is seeking, where possible, to include multiple grants into a consolidated transfer payment agreement. COU advocated for these changes in our red tape recommendations to the government.

Other announcements

- **Creating tuition fee transparency for university and college students:** The government is aiming to provide students with increased accountability, transparency and clarity by providing details of tuition fees at Ontario's postsecondary institutions.
- **Reducing duplication of reporting requirements for the Ontario Student Opportunity Trust Fund / Ontario Trust for Student Support:** The legislation will remove the online reporting requirements for endowments to reduce duplication and benefit colleges and universities by easing the administrative burden. The requirement for reporting through audited financial statements will remain in place to ensure adequate oversight and accountability.
- **Removing barriers to entrepreneurial activities for postsecondary educational institutions:** The government is seeking to simplify how Ontario's postsecondary institutions enrol international students, specifically for registered private career colleges and Indigenous institutes. These institutions will face less barriers in achieving designation as learning institutions under Ontario's International Student Program.
- **Reviewing the Ontario Student Assistance Program performance requirements for private postsecondary institutions:** The Ministry will review the performance requirements for private postsecondary institutions approved for the Ontario Student Assistance Program (OSAP) to ensure they continue to be "...*relevant and responsive to student needs within a growing and evolving sector.*" The Ministry anticipates this review will create new opportunities and reduce red tape for private postsecondary institutions approved for OSAP.
- **Supporting digital learning for private career colleges:** The Ministry is proposing changes to approvals for online delivery of training at private career colleges to support continued flexible delivery options to students.

COU has raised concerns about specific items in the bill with the government and will be consulting with members on a path forward. We will also undertake a deeper analysis for additional impacts in the coming days.

Strategic Management Agreements

During the early stages of the pandemic, the ministry announced the de-coupling of funding from performance for the first two years of SMA3 to mitigate the impact of COVID on SMA3 performance evaluations. Reporting and evaluation of performance continue as normal.

The ministry is starting the Year 2 performance evaluation process. Once that is finished, there will be an opportunity for the sector to review Year 3 allowable performance targets and to amend institutions' weighting of metrics for future years.

The ministry has announced a technical engagement later this year to discuss the two reporting metrics that will be activated in Year 3: Skills and Competencies, and Faculty Activity.

COVID and Re-Opening

COU advocated throughout the summer for Public Health Directive/MCU mandate for vaccination for on-campus activities to permit a safe campus re-opening. On Aug. 24, the

Council of Ontario Medical Officers of Health wrote to University and College Presidents and Principals strongly recommending mandatory vaccination for all on-campus activities, as soon as operationally possible. On Aug. 31, MCU released their Postsecondary Education Health Measures Framework for Fall 2021, followed by a technical briefing on Sept. 2. The Ontario Medical Officer of Health's directives were included and formed the basis of the Framework. In the guidance, institutions with mandatory vaccination policies for on-campus activities are no longer required to enforce a two-meters distance within their instructional spaces. Masks are still required indoors. Institutions continue to develop employment policies and Medical and Human Rights exemptions procedures.



Private Institutions and the Degree-Granting Landscape in Ontario

Briefing for Academic Colleagues

October 20, 2021





Legal Framework for Private Degree-Granting in Ontario

- Publicly-assisted universities in Ontario have authority to grant degrees established in their individual legislative acts.
- The *Post-Secondary Education Choice and Excellence Act, 2000* (PSECEA) provides authority for the minister responsible for postsecondary education to allow organizations, including publicly-assisted colleges, and offshore and private institutions, to provide degree-level education in Ontario.
- PSECEA allows use of university nomenclature and degree-granting only to institutions authorized by an Act of Legislature (a.k.a. publicly-assisted universities) or those which have received ministerial consent.
- PSECEA established the Postsecondary Accountability Quality Assessment Board (PEQAB), whose mandate is to develop recommendations to the minister regarding granting of consents.



Ministerial Consents to Private Universities (2008–present)

- Currently there are six private institutions which have been granted ministerial consent to use “university” in Ontario.
 - Two are **Canadian-based private institutions**:
 - Yorkville University
 - International Business University
 - Two are **US-based private institutions**:
 - Niagara University
 - Northeastern University
 - Two are **Canadian-based Christian institutions**:
 - Redeemer University
 - Tyndale University



Private University

Degree Offerings in Ontario

- **Yorkville University**
 - Bachelor of Business Administration
 - Bachelor of Interior Design
 - Bachelor of Creative Arts
- **International Business University**
 - Bachelor of Commerce
- **Niagara University**
 - Bachelor of Professional Studies in Education
 - Master of Science in Educational Leadership
 - Master of Business Administration
 - Master of Science (Finance; Information Security)
- **Northeastern University**
 - Master of Professional Studies (Analytics; Informatics)
 - Master of Science (Information Assurance; Project Management; Regulatory Affairs; Health Informatics)
- **Redeemer University**
 - Bachelor of Arts
 - Bachelor of Science
 - Bachelor of Education
- **Tyndale University**
 - Bachelor of Education
 - Bachelor of Arts (English; History; Linguistics; Music; Psychology; Philosophy, etc.)
 - Undergraduate and graduate certificates and degrees in divinity, theology and ministry.



Current PEQAB Applications of Note

- In May 2021, the **Humanities Digital Degree Project** submitted an application for use of “university” and to offer Bachelor degrees in History, Philosophy, English, and French.
- In June 2021, **Global University Systems Canada** submitted a series of applications to operate as “Niagara Falls University” and offer Bachelor and Master’s degrees in Digital Media, Business, Data Analytics, and Biomedical Sciences.
- OCAV submitted letters urging rejection of the two applications. Both applications are currently pending.



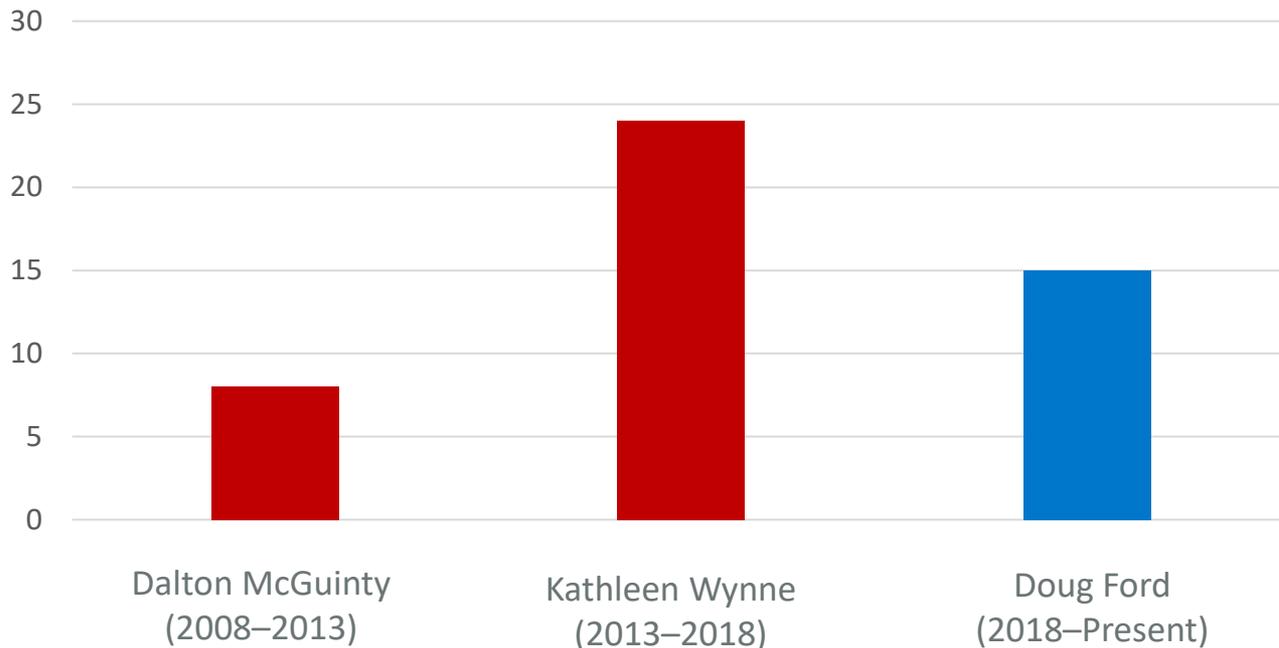
Denial of Ministerial Consent (since 2008)

- There have been seven cases of private organizations withdrawing their PEQAB applications.
- There has only been one instance where PEQAB recommended that the minister deny consent and the consent was denied.
 - Lawrence Technological University, Renewal of Consent for MBA (2016).
- There have been three instances where PEQAB recommended denying ministerial consent and the consent was granted:
 - Algoma University, Application for Honorary Degrees (2010).
 - Hearst College, Use of “University” (2014).
 - Pontifical Institute of Mediaeval Studies, Doctor of Mediaeval Studies (2013).



Ministerial Consents to Private Institutions by Government since 2008

Ministerial Consents to Private Institutions
by Government, 2008–Present





Private Universities: Tuition Fees

Institution and Program	Domestic Tuition	Ontario Average	International Tuition	Ontario Average
IBU, B. Comm.	\$11,000	\$9,500 [1]	\$17,000	\$34,000 [2]
Yorkville, B.B.A.	\$54,000 (program cost)	\$9,500	\$67,000 (program cost)	\$34,000
Tyndale, B.A.	\$16,000	\$6,000		
Tyndale, B.Ed.	\$30,000 (program cost)	\$6,500		
Redeemer (B.Ed.)	\$17,300	\$6,500		
Redeemer (other)	\$9,800	\$6,000	\$17,300	\$30,000
Niagara, B.Ed.	\$16,000	\$6,500		
Niagara, M.B.A.	\$24,000	\$27,000 [3]		
Northeastern M.PS & M.Sc. **	\$33,000–\$38,000 (program cost)	\$8,000–\$12,000	\$39,000–\$45,000 (program cost)	\$25,000–\$30,000

*All fees are per year, unless otherwise stated.

**All programs, two years.

[1] Average figure belies the significant disparity in Ontario institutions, ranging from \$5,800 (Algoma) to over \$15,000 (Queen's, Toronto, Waterloo, Western).

[2] Ranges from \$18,000 (Algoma) to \$64,000 (Western).

[3] Brock, Carleton, Lakehead, Laurentian, McMaster, Ryerson and Windsor charge less. Ottawa, Toronto, Western, Wilfrid Laurier and York charge significantly more.



Private Universities: Admission Requirements

Institution and Program	Entrance Requirement	Public Ontario Admissions
IBU, B. Comm.	70%	Low 70s–90%
Yorkville, B.B.A.	65%	70%+
Redeemer, B.Ed.	70%	Low-mid 70s
Tyndale, B.A.	65%	70%+
Tyndale, B.Ed.	70%	Low-mid 70s
Niagara, B.Ed.	3.0 GPA	Low-mid 70s
Niagara, M.B.A.	3.0 GPA	3.0 GPA
Northeastern M.PS & M.Sc.	Unspecified	75%+



Appeal of Private Universities

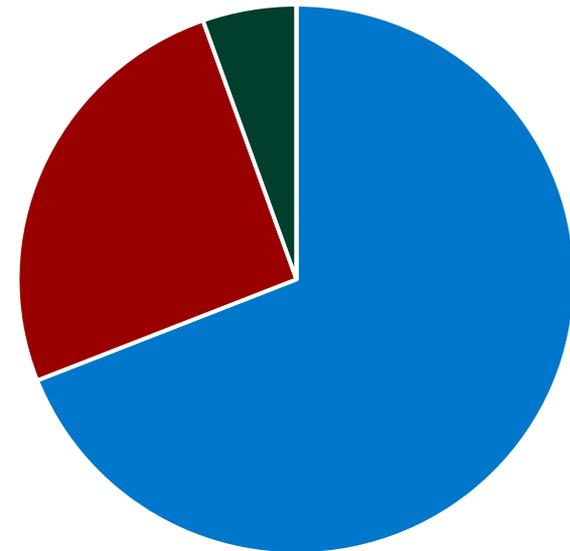
- Lower admission averages for programs with capped enrolment and high student demand (e.g., education).
 - Niagara, Redeemer and Tyndale are recognized by the Ontario College of Teachers (OCT).
- High domestic tuition but lower international tuition.
- Studying in Canada is appealing to many international students as it is a route to immigration.
- Post-Graduation Work Permit (PGWP)-eligible institutions include:
 - A public post-secondary institution, such as a college, trade or technical school, university, or CEGEP; and
 - A Canadian, private institution authorized by provincial statute to confer degrees, such as an associate, bachelor's, master's or doctoral degree, but only if the student is enrolled in a program of study leading to a degree, as authorized by the province, which may not include all programs of study offered by the private institution.
- The following Ontario private universities have PGWP-eligible programs:
 - Yorkville, Niagara, Northeastern, Redeemer, Tyndale.



Private University Enrolment

- Private university enrolment data is not publicly available.
 - Redeemer (789)
 - Tyndale (1,361)
 - Niagara (ca. 3,000 – all)
 - Northeastern (ca. 27,000 – all)
- Compare to:
 - Universities (570,000)
 - Colleges (211,000)
 - Private career colleges (45,000)

Institutional Enrolment
in Ontario



- Universities
- Colleges
- Private Career Colleges
- Private Universities (known)



Degree-Level Programming in Ontario (Offshore Public & Ontario Colleges)

- 8 public universities from other jurisdictions:
 - 5 from other Canadian provinces:
 - Athabasca; Cape Breton; Dalhousie; Mount Saint Vincent; UNB.
 - 3 from other countries:
 - Central Michigan University (US); Institute of Technology Sligo (Ireland); and University of Mannheim (Germany).
- 17 of 24 of Ontario's publicly-assisted colleges:
 - 60% of college degree programs are concentrated within 4 colleges in the Toronto–Waterloo corridor (Conestoga, Humber, Seneca, Sheridan).
 - Enrolment: ~23,000 in 2018-19 (fall term FT headcounts).
 - This represents less than 10% of total college enrolment.
 - Compare to ~394,000 university bachelor enrolment for the same year (fall term FT headcounts).



Offshore and College Degrees: Tuition

	Institution and Program	Domestic Tuition	Ontario Average	International Tuition	Ontario Average
CAN	Cape Breton, B.B.A.	\$9,500	\$9,500	\$18,500	\$34,000
	Dalhousie, M.B.A.	\$19,000	\$27,000		
	MSVU, M. Ed.	\$6,000	\$8,000	\$13,000	\$23,000
	UNB, B. Nursing	\$8,800	\$6,000	\$13,000	\$31,700
USA	Central Michigan, M. Ed.	\$22,500 (program cost)	\$8,000		
ON Colleges	Conestoga, B. Eng.	\$6,800	\$10,800	\$14,700	\$40,000
	Humber, B.Sc. Nursing	\$8,000	\$6,000	\$20,000	\$31,700
	Seneca, B. Comm.	\$7,000	\$9,500	\$19,000	\$34,000
	Sheridan, B. Comp. Sci.	\$7,900	\$7,900	\$20,900	\$31,000



Offshore and College Degrees: Admission Requirements

Institution and Program	Entrance Requirement	Vs. Ontario
Cape Breton, B.B.A.	65%+	70%+
Dalhousie, M.B.A.	3.0 GPA	3.0 GPA
MSVU, M. Ed.	3.0 GPA	Mid-70s
UNB, B.Sc. Nursing	70%+	75–90s+
Central Michigan, M. Ed.	2.7 GPA (67%)	Mid-70s
Conestoga, B. Eng.	65%	75–Mid-80s+
Humber, B. Nursing	75%	75–90s+
Seneca, B. Comm.	65%	Low 70s–90+%
Sheridan, B. Comp. Sci.	65%	Low 70s–90+%



Private Career Colleges in Ontario

- There are over 500 private career colleges (PCCs) in Ontario. The sector consists of approximately 45,000 students and annually produces more than 33,000 graduates.
- PCCs are governed by the [Private Career Colleges Act, 2005](#), and their vocational programs must be approved by the Superintendent of Private Career Colleges.
- Approximately 150 PCCs (with 240 campuses in 80 communities) are members of [Career Colleges Ontario](#) (CCO).



What Do Private Career Colleges Offer?

- According to the [Government of Ontario](#), PCCs often appeal to people who:
 - Need specific job skills to join the workforce.
 - Have academic qualifications and want to add to their practical skills to become more competitive in the job market.
- PCCs work with small groups rather than large classes and offer:
 - Flexible learning schedules.
 - Enrolment at many different times during the year.
 - Compressed programs that deliver training over a short time.



Discussion



Katarina Todic
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Council of Ontario Universities

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Board of Trustees

BOARD BRIEF to SENATE Senate Meeting #693 - October 27, 2021

The [Board of Trustees held its first meeting of the 2021-22 academic year on September 30, 2021](#). During the meeting, the Board of Trustees undertook the following actions:

- observed the National Day of Truth and Reconciliation
- welcomed new Trustees Greg Berti, Ava Hill, Rafay Rehan, JoAnna Roberto, and Stephanie Thompson
- received the Report of the Chair of the Board
- received the Report of the Interim President and Vice-Chancellor and Provost and Vice-President, Academic
- received the Report of the Vice-President, Research
- received the Report of the Audit Committee, and
 - approved the audited financial statements of the Brock University Pension Plan for the year ended June 30, 2021
- received the Report of the Capital Infrastructure Committee, and
 - approved the construction/renovation project associated with the expanded nursing program as a major capital project with a budget of up to \$1,500,000 and that the President and Vice-President, Administration be authorized to execute the related contracts, including construction contracts associated with this project
- received the Report of the Financial Planning and Investment Committee
- received the Report of the Human Resources Committee
- received the Report of the University Community and Experience Committee
- received the Report of the Governance/Nominating Committee, and
 - approved that Anne McCourt, Chair of the Human Resources Committee, be appointed to serve as a community member of the Board on the Advisory Committee on the Presidency to fill a vacancy
 - approved that Stephanie Thompson and Sophia Aggelonitis be recommended to the Interim President and Vice-Chancellor as the two community members of the Board to serve on the Advisory Committee on the Vice-President, Research
- received an enrolment update

BOARD ACTIONS TAKEN VIA CONSENT AGENDA:

- approved the Minutes of previous meetings held on June 24, 2021
- received the Report of the Actions of the University Senate from the 692nd meeting held September 15, 2021
- approved the following appointments to the Pension Committee:
 1. Professor Tatyana Sokolyk, nominated by BUFA, for a four-year term effective October 1, 2021 (replacing Professor Felice Martinello)
 2. Professor Lianxi Zhou, nominated by BUFA, for a four-year term effective October 1, 2021 (replacing Professor Samir Trabeisi)

THIS SUMMARY CONSTITUTES AN UNOFFICIAL RECORD UNTIL SUCH TIME AS THE MINUTES OF THE MEETING ARE APPROVED. Additional information is available on the University Secretariat website at <https://www.brocku.ca/university-secretariat/board-of-trustees>



TO: Chabriol Colebatch, Secretary to the University and General Counsel
Brock University

FROM: Brian Power
Vice-Chair, Senate Academic Review Committee

DATE: October 20, 2021

REPORT TO SENATE 693, October 27, 2021

ACTION ITEMS (N/A)

DISCUSSION ITEMS (N/A)

CONSENT ITEMS - FOR APPROVAL

1. Program Proposal Brief for new BAsC in Earth and Planetary Science Communication

THAT the Program Proposal Brief for the BAsC in Earth and Planetary Science Communication, to be offered by the Department of Earth Sciences, be approved for submission to the Quality Council.

Rationale: ARC has considered a Program Proposal Brief for a BAsC in Earth and Planetary Science Communication, to be offered by the Department of Earth Sciences, and herewith submits the proposal (see Appendix A- Volume I & II) for the approval of Senate. Revisions to the Program Proposal Brief, as a result of the external review, are tracked on the document. Please note that confidential materials related to the external review of the program have been made available via the Brock Senators confidential materials folder.

2. Program Proposal Brief for new BSc in Psychology

THAT the Program Proposal Brief for the BSc in Psychology, to be offered by the Department of Psychology, be approved for submission to the Quality Council.

Rationale: ARC has considered a Program Proposal Brief for a BSc in Psychology, to be offered by the Department of Psychology, and herewith submits the proposal (see Appendix B- Volume I & II) for the approval of Senate. Revisions to the Program Proposal Brief, as a result of the external review, are tracked on the document. Please note that confidential materials related to the external review of the program have been made available via the Brock Senators confidential materials folder.

3. Final Assessment Report for Interactive Arts and Science

THAT the Final Assessment Report for the cyclical review of the undergraduate programs in Interactive Arts and Science be approved.

Rationale: ARC has completed the cyclical review of the undergraduate programs in Interactive Arts and Science and herewith submits the Final Assessment Report (see Appendix C) for the approval of Senate. Please note that confidential materials related to the external review of the programs have been made available via the Brock Senators confidential materials folder.

4. Final Assessment Report for MA in Studies in Comparative Literatures and Arts

THAT the Final Assessment Report for the cyclical review of the MA in Comparative Literatures and Arts program, offered by the Faculty of Humanities, be approved.

Rationale: ARC has completed the cyclical review of the MA program in Studies in Comparative Literatures and Arts, offered by the Faculty of Humanities, and herewith submits the Final Assessment Report (see Appendix D) for the approval of Senate. Please note that confidential materials related to the external review of the programs have been made available via the Brock Senators confidential materials folder.

5. BSc in Computing & Solid State Device Technology / Co-op Program Discontinuation

THAT the Request to Discontinue the BSc in Computing and Solid State Device Technology and BSc in Computing and Solid State Device Technology Co-op, offered by the Department of Physics, be approved.

Rationale: ARC has considered the proposed request to discontinue the BSc in Computing and Solid State Device Technology / Co-op and herewith submits the Request (see Appendix E) for the approval of Senate.

CONSENT ITEMS - FOR INFORMATION

1. Statement of Intent for New Program: Master in Media, Communication, Culture

ARC has approved a Statement of Intent for a Master in Media, Communication, Culture, to be offered by the Department of Communication, Popular Culture and Film (see Appendix F). The proponents for the program have been invited to move to the next step and prepare a Program Proposal Brief.

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APPENDICES (Part 2)

The following appendices are provided in volume II

APPENDIX A -Course Level Learning Outcomes

APPENDIX B - Course Outlines

APPENDIX C - Program Governance & Unit Rules and Regulations

APPENDIX D - Draft Calendar Entry

APPENDIX E - CVs

Appendix F - Library letter of support

1.0: Unit Background

1.1: Introduction and Background

Introduce the program being proposed; clearly articulate the program goals and objectives; describe the development process.

The Department of **Earth Sciences (ERSC)** proposes a new **BASc** program in Earth and Planetary Science Communication (**EPSC**). The goal of the program is to provide students with a solid understanding of the geologic processes operating on the Earth and other planets, as well as developments in planetary exploration. In addition, students will be provided with a strong background in Communication.

This program will differ from existing ERSC programs in that its aim is **NOT** to prepare students for careers as practicing Professional Geoscientists. Instead, the aim is to provide graduates with the knowledge about Earth and Planetary Science concepts, coupled with strong communication skills which will enable them to pursue **in-careers in Communication for government agencies, NGOs, private companies, and journalism** ~~rather than reporting to Communication for government agencies, NGOs and companies~~. The proposal sees graduates receiving a **BASc** degree rather than a BSc degree because it will not prepare graduates for a “career in science,” rather it prepares them for a “career about science”.

~~This program aims to train graduates to function as participants in discourses surrounding science and to increase the level of scientific literacy in Canada by training graduates who can take on a number of roles in the public communication of science to facilitate relationships between citizens and organizations, develop policy, and improve public~~ ~~This program aims to increase the level of scientific literacy in Canada by training graduates who are both scientifically literate and are able to contribute toward increasing scientific literacy in society by applying their knowledge.~~

~~As documented within this proposal, there is evidence for both, a societal need for such a program and a range of career paths for graduates. Development of this program is partially motivated by topical issues that are of major national and global interest.~~ [KT1] The recent “Canada’s Changing Climate Report” (<https://www.nrcan.gc.ca/environment/impacts-adaptation/21177>) makes it clear that Canadians will have to deal with an increasing number of changes as a result of climate change.

Another recent report by the Council of Canadian Academies (CCA) “Greater Than the Sum of Its Parts: Toward Integrated Natural Resource Management in Canada” summarizes the need for cross-disciplinary consideration and communication of issues involving natural resources, land use, and conservation (<https://cca-reports.ca/reports/the-state-of-knowledge-and-practice-of-integrated-approaches-to-natural-resource-management-in-canada/>). In addition, UNESCO has highlighted the need for increased scientific literacy to **better improve** natural disaster preparedness (<https://unesdoc.unesco.org/ark:/48223/pf0000189050>). With increased Canadian participation in planetary missions, including OSIRIS-Rex asteroid sample return, and the Mars Science Laboratory (MSL) **and Mars 2020 Perseverance** rover missions, there is a need for science communication in order to fulfill one of the Canadian Space Agency’s central pillar of “inspiring Canadians” (<http://www.asc-csa.gc.ca/pdf/eng/publications/space-strategy-for-canada.pdf>). ~~There is also a call for more~~

science communicators who are not only disseminating information but are playing key roles in facilitating engagement with stakeholder groups, like the kind of work done by public relations practitioners in any field or industry
<https://www.sciencedirect.com/science/article/pii/S0012825217301125>).

Fortunately, the existing level of scientific literacy is already at reasonable levels (<https://www.cbc.ca/news/technology/canadians-science-literacy-ranks-1st-among-35-countries-1.2749413>; full report: <https://cca-reports.ca/reports/science-culture-where-canada-stands/>), and there is a strong desire amongst the populace to be scientifically literate. A 2018 Leger survey (https://www.ontariosciencecentre.ca/Uploads/AboutUs/documents/Ontario_Science_Centre-Science_Literacy_Report.pdf) indicated that 82% of respondents “would like to know more about science and how it affects our world” (report, page 10).

The BASc program development process was strongly influenced by a desire to increase our enrollment by opening a market that is more than three times the size of a traditional BSc. In addition, we have observed two historical facts regarding students in our programs:

1) Feedback from non-ERSC majors taking our courses has traditionally indicated that students found the subject matter very interesting and that they learned something of value. This interest can be quantified by examining the course evaluations of the Department’s two service courses, ERSC 1P92, Extreme Earth and ERSC 1P94, Planetary Sciences, as these courses are primarily taken by non-ERSC and non-Science majors. Results for the first three questions on the survey which gauge interest in the subject matter tend to be consistent and the table below illustrates those responses.

	ERSC 1P92 Extreme Earth, Summer 2017 Course Audience: 538, Responses: 161		ERSC 1P94 Planetary Science, Winter 2018 Course Audience: 1081, Responses: 381	
	Very Positive	Positive	Very positive	Positive
I found the course intellectually challenging and stimulating	21 %	54%	25%	51%
I have learned something I consider valuable	28%	53%	26%	46%
My interest in the subject has increased	30%	40%	27%	37%

because of this course				
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It is worth pointing out that the vast majority of students in these two service courses have not completed the grade 12 high school course in the discipline (i.e. Earth and Space Science, SES4U) because it is rarely offered. Hence, these two courses are often taken by students as a first course in the discipline, but they do so in part out of interest and enthusiasm for the subject matter. We would certainly welcome students from these service courses who are interested in becoming majors in currently existing ERSC programs, but many of these students lack the science background (i.e., 4U courses) that is required. The proposed BASc program will provide such students an opportunity to satisfy their interest and enthusiasm by allowing them to become majors without the science background that is demanded of our BSc students. To reiterate, the proposed BA-Sc program is not meant to prepare its graduates for a “career in science,” rather it is meant to prepare them for a “career about science”. We believe that this can be achieved with students who have some science at the high school level, but less science background than is needed for students in our BSc programs.

2) Some of our graduates find the demands of an Earth Science career, which often requires spending significant amount of time in remote locations, too demanding after several years and decide to pursue other rewarding careers. Anecdotal evidence indicates that these students are still very happy to have graduated as Earth Science Majors.

The goals of the proposed BASc in Earth and Planetary Science Communication are:

- 1) To prepare graduates with high level of scientific knowledge literacy in the Earth and planetary sciences who will be able to effectively communicate, create relationships between organizations and stakeholders, and engage effectively in various roles and positions within science policy debates and developments in a wide range of settings, including governments, NGGOs and private companies, thereby contributing toward the scientific literacy of the general population.
- 2) To create a pathway for students with an interest in Earth and planetary sciences, but that lack the background to complete a BSc.
- 3) To help Canadians understand significant issues facing our planet, such as climate change and decreasing natural resources and their potential solutions, by contributing toward the public scientific literacy.
- 4) To provide graduates with a proper understanding of the placement of the human species in the context of the solar system and the concept of deep geological time.
- 5) ~~To prepare graduates for a wide range of careers that require on a basic understanding of fundamental science as well as the skills to effectively communicate science-related information in a wide range of settings, including governments, NGGOs and companies.~~

The ongoing climate crisis and bright future of space exploration will see an increasing demand for individuals with the paired expertise to understand the of science involved in these issues and communication. These people will need and who have the expertise to not only explain them issues, or are able and/or communicate guidelines, policies, or viewpoints of stakeholders, but also appreciate how diverse audiences understand science and to develop strategies for the general public to get involved and feel what is at stake. As described in

more detail in section 8, we believe that there is a wide range of career opportunities for future graduates with a BASc in Earth and Planetary Science Communication.

In summary, there exists societal need for the proposed BASc program, and there is evidence of a demand for this program amongst the existing student population.

1.2: Consistency with the University's Mission and Academic Plan (IQAP 3.5.1)

Provide:

1. A description of how the program is consistent with the mission, aims, objectives and existing strengths of the University;
2. An explanation of how the proposed program fits with the University's current program offerings and a demonstration of the University's capacity to deliver the proposed program;
3. Evidence that the proposal is consistent with the government's strategic directions (e.g., enrolment caps); and
4. Additional or re-allocated resources that will be required for the proposed program. A more detailed description of the resource requirements for the proposed program will be presented in Section 5.

1. Consistency with Mission Aims:

The Brock University Strategic plan - 2018-2025 has the following guiding values:

The generation and mobilization of knowledge: Through dynamic teaching, learning, research and creative activity, we develop the intellectual potential of our students, thereby enriching the material, cultural and intellectual dimensions of the communities into which they graduate.

The goal of this program is to mobilize knowledge beyond the silos of academic research and make it widely available to society as a whole.

Innovation through disciplinary and transdisciplinary scholarly activities: We embrace innovation through disciplinary and transdisciplinary curricular offerings, pedagogy, e-learning, scholarship, research and service.

This program is a transdisciplinary offering which combines scholarship within the Department of Earth Sciences with those of the department of Geography and Tourism Studies as well as that within the Department of Communication, Popular Culture and Film. It involves two Faculties and three Departments, making it a fully transdisciplinary program. This revised proposal has been produced by a committee involving all three of these departments. We expect the program to be governed by a similar committee. Several members of our department have been active in developing e-courses and textbooks, including a Planetary Science course (ERSC 1P94; <http://brockearthsciences.ca/toc/index.html>) that will be part of the curriculum for incoming BASc students.

Sustainable, accountable stewardship: As stewards of public and private resources, we are accountable for our performance and must ensure we evaluate the impact of our actions on our human, financial and environmental resources to ensure the outcomes will be sustainable and form a solid academic foundation for our future scholarly endeavours.

The ability to exercise sustainable and accountable stewardship of the physical resources of this planet and within our solar system is dependent on an understanding of the processes that govern those resources. This program not only provides graduates with that understanding, it also enables them with abilities to effectively communicate that understanding.

Reconciliation and decolonization: We are committed to reconciliation with Indigenous

communities and decolonization of the academy through promoting awareness and understanding of Indigenous culture, history and ways of knowing across all University activities.

The program directly addresses this by requiring Introduction to Indigenous Studies (INDG 1F90) in year one to raise awareness of Indigenous cultures. Many of the environmental issues affecting indigenous communities, especially in Canada's north are directly addressed in a variety of ERSC courses throughout the curriculum, giving graduates a clear understanding of the science. Communications (COMM) courses, especially Science Communication and Citizen Science provide pathways for graduates to interact with indigenous communities, ~~should this be their choice as [MS3] a career path~~ which may be prioritized in their developing careers [KT4]. As pointed out by Lee et al (2020; A review of Citizen Science within the Earth Sciences: potential benefits and obstacles, Proc.Geol. Assoc. (2020), <https://doi.org/10.1016/j.pgeola.2020.07.010>), there is tremendous potential for citizen Science projects within eEarth Science. Such projects are ideally suited to interactions with indigenous communities.

2. An explanation of how the proposed program fits with the University's current program offerings and a demonstration of the University's capacity to deliver the proposed program;

The program fits well within the University's current program offerings because it takes advantage of the existing departmental expertise but offers that expertise to a new target audience.

3. Evidence that the proposal is consistent with the government's strategic directions

The fact that Canada has a government department entitled "Environment and Climate Change Canada" which issued a 444-page report on the multitude of environmental effect that Canada faces in the near future ~~in 2019~~ is a clear indication that action is urgently required. That action needs to be based on informed decisions, supported by an informed population. Graduates of this program will be informed and able to contribute directly to informed decision making.

4. Additional or re-allocated resources that will be required for the proposed program. A more detailed description of the resource requirements for the proposed program will be presented in Section 5.

~~In the initial stages~~ The program will not require significant re-allocation of resources at the initial stage of the program, as the expertise to offer the programs exist within the University. We do request one faculty position by year 3. There will be also be a requirement to replace retirements with faculty with the appropriate expertise.

1.3: Alignment with the Strategic Mandate Agreement

Provide a description of how the proposed program is consistent with the program areas of strength or growth included in the current SMA.

The Faculty of Mathematics and Science Chairs and Directors have identified the following key elements that form the unifying themes (in italics below) of the FMS contribution to the next SMA. These themes are consistent with the University's strategic plan.

Brock University seeks to prepare *21st century citizens*: engaged, informed, capable of making difficult value judgments, unafraid to face challenges they have not encountered before.

The proposed program fits this theme perfectly. This proposal identifies an important, yet largely overlooked, societal need that is about to rapidly grow in importance and proposes to meet that need with resources from an undersubscribed area of the University. We will provide students with a broad understanding of Earth and planetary science and Communication to increase help them engage in a wide range of career roles and positions to science literacy and ready citizens for addressing significant global challenges, including climate change, natural disasters, and planetary exploration.

Brock University aims to *maintain the focus on and support the research* of its faculty.

The proposal grows rather naturally out of the research interests of a core group of existing faculty members. This recognizes the integral relationship between teaching and research. Indeed "teaching" is the primary revenue-generating activity of most Canadian Universities and the funds from teaching are necessary to support the research infrastructure of the University, along with the expanding group of administrators who coexist symbiotically with academics who conduct the major functions of the University.

Brock University is a vigorous *member of its community, both local and global*.

The proposed program will make a very important contribution by preparing graduates who will play a key role in disseminating accurate and honest knowledge and information on scientific matters, at the community through to the global level.

1.4: Appropriateness of Degree Nomenclature (IQAP 3.5.1)

Indicate the specific degree to be awarded upon completion of the program, e.g. BA, BSc (honours). Indicate the program name to be included with the degree, e.g. BA (Honours) in Psychology.

Bachelor of Arts and Sciences, BAsc (honours) in Earth and Planetary Science Communication | [KTS]

2.0: Degree Level Expectations and Learning Outcomes

This section provides information on the degree level expectations (DLEs) and learning outcomes of the proposed program.

Brock DLEs and Faculty DLEs (where available) are included in Table 2.1. Both the overall program and the individual courses are assessed against these DLEs in terms of learning outcomes. The curricular content, admission requirements, mode of delivery, bases of evaluation of student performance, commitment of resources and overall quality of any academic program and its component courses are all related to its learning outcomes.

Proponents are advised that a curriculum map that links course learning outcomes to articulated program learning outcomes mapped to the DLEs shall be included in the PPB. As part of this process, proponents must also document and demonstrate the methods by which the performance level of students, based on the learning outcomes, will be assessed by the program.

Under the following headings, the proponents will provide a description of the program's learning outcomes and their consistency with Brock's and the Faculty's mission and degree level expectations [IQAP 3.5.1]. This will include an explanation of the ways in which the program assesses the extent to which students have achieved those outcomes.

2.1: Course Learning Outcomes (IQAP 3.5.1)

Course learning outcomes, which support the program learning outcomes, are reported in copies of Table A.1 for each course in the proposed program. Completed copies of Table A.1 are to be included in Appendix A. Provide comments on the range, variety and rationale of the course learning outcomes. Course learning outcomes will be summarized to the program level, with the latter reported in Table 2.1 in the next section.

Course learning outcomes are listed in Appendix A. Lectures and assigned readings are the primary means by which students are exposed to course content. Labs provide for experiential learning of practical skills as will field trips. Tests, seminars and presentations in class as well as projects will be used for assessment. In senior courses independent projects will be used to allow students to develop a broader range of methods to apply their knowledge and present it in a variety of formats.

2.2: Program Learning Outcomes (IQAP 3.5.1)

Table 2.1 presents the program learning outcomes linked to the Brock and Faculty DLEs. Address the clarity and appropriateness of the program requirements and associated learning outcomes in meeting the University's undergraduate DLEs.

Table 2.1 clearly indicates that the Program Learning Outcomes for this BAsC program are clearly consistent with Brock University's undergraduate DLEs.

2.3: Assessment of Teaching and Learning (IQAP 3.5.6)

Table 2.2 presents the program learning outcomes mapped to the modes of delivery and the methods of assessment for the proposed program.

a) With reference to Table 2.1 - 2.2, document the appropriateness of the proposed methods of assessment of the student achievement of the intended program learning outcomes and degree level expectations. Include a numbered list of all assessment methods employed in the program(s). [IQAP 3.5.6].

Assessment methods will largely follow the assessment methodology established within the department.

Courses at the lower levels will continue to utilize labs, assignments, essays and scheduled examinations. Presentations will play an increasing role to enable students to hone their skills in the analysis and summarizing of data and presentation of their work. Presentations accompanied by written reports or power point presentations enable the students to develop skills at oral communication and become comfortable with addressing groups of people. Participation within discussion groups, which allows students to further their debating skills, will also be assessed. The attached course outlines for the courses provide detailed information on the assessment.

Group assignments will take advantage of the specialization of the two cohorts in senior ERSC courses. ERSC majors will be primarily responsible for the scientific content of the assignment while EPSC majors will focus on the communication aspects. Both groups will benefit from such a collaborative effort without creating a dual assessment standard which would most likely create resentment between the two cohorts. As pointed out by the reviewers, creating a two-tiered class could have deleterious consequences.

As prescribed in the faculty handbook, students will be able to provide feedback on the course and the assessment methods used within the course. This will enable us to continue to improve assessment methods within each course.

Numbered list of assessments:

- 1) Laboratories
- 2) Test/exams
- 3) Assignments
- 4) Essays
- 5) Presentations (Power point. Posters, videos)
- 6) Participation

b) Outline the plan for documenting and demonstrating the level of performance of students, and the consistency of the plan with the University's statement of its degree level expectations.

Students within the BASc program will be taking some of the same ERSC courses as the BSc cohort. Similarly, they will be in the same Communication courses as Communication, Popular Culture and Film (CPCF) majors. In both cases this means that there is a second group of students readily available to serve as a standard for comparison. These comparison groups are well established, and their post-graduation success is clear evidence that they meet all reasonable degree level expectations. We will compare course grades between BASc and BSc majors in the same courses to document the performance of the separate cohorts. This will allow us to accurately gauge the level of performance of the students and enable us to take action if unforeseen systemic problems arise.

2.4: Program Curriculum Map (IQAP 3.5.1)

Table 2.3 presents a curriculum map that links the program learning outcomes with the methods of assessment employed and the degree of implementation for each course in the program. Based on the curriculum map provide an analysis of and describe plans to address duplication, gaps and areas for improvement in the program.

The program curriculum map indicates greater student autonomy as they progress through the program. This is an expected and desired outcome that ensures that students have the ability and confidence to work independently following their graduation. However, there is no doubt that there is a challenge to providing eing the proper balance, especially for the initial cohort. In addition to providing feedback on a course-by-course basis via course evaluations, the department will seek personal feedback from students by a variety of methods. Following each academic year, we will email a survey to the students s to provide feedback. Another forum will be to engage students ion on an informal basis will be at departmental functions (e.g. Fall Welcome, Christmas Party). Students often speak more freely with faculty when they are engaged in such informal settings.

Directions for including the Curriculum Map:

- 1) Download the curriculum map file (Table 2.3 - Curriculum Map) available here.
- 2) Follow the instructions on the first tab in the file and complete the table for the program being proposed.
- 3) Once completed, save and print the file as a PDF document.
- 4) Insert the PDF file as the final pages in the Program Proposal Brief.

2.5: Modes of Delivery (IQAP 3.5.5)

Discuss the formats (lecture, seminar, independent research, projects, etc.) by which the program will be delivered and the appropriateness of the proposed delivery mode(s) in meeting the program's intended learning outcomes and Undergraduate Degree Level Expectations (UDLEs). The Proponents will discuss the methods of delivery (face to face, online, blended, independent study, etc.) to be employed in delivering the program content and the rationale for the various delivery methods to be used.

As mentioned above, the formats for course structures provide the students the opportunity for more independent work as they progress throughout the program. In first year, students will take both lecture and online courses.

Beyond first year, courses aimed at fundamentals (e.g. Plate Tectonics, Earth History) will be primarily lecture-based, using labs, essays and some seminars to aid the learning process. This will ensure that students will be exposed to the full breadth of the subject matter.

Similarly, COMM courses in year 2 provide the foundation for senior courses in COMM.

At senior levels, both the choice of courses and the scope of projects within courses will provide the students with more autonomy and allow them to tailor the program more closely to their interests[KT6], which can include pertinent issues of global concern. While lectures may still be part of the course, a higher degree of independent study will be expected from the students. Seminars and project presentations will be a more significant component of the course and more ~~face to face~~face-to-face interaction between instructor and student will be expected. Guest lectures within courses by invited external speakers will be part of the curriculum to expose students to a broader range of views.

The culmination will be in the capstone courses, which will have no lecture component but will rely entirely on ~~face to face~~face-to-face interaction with the supervising faculty and presentation of the final project, both as a presentation and a report.

Table 2.1: Honours Bachelor’s Degree - Mapping Program Outcomes to the Undergraduate Degree Level Expectations Program:

<p>Brock University UDLEs A graduate of Brock University will be able to demonstrate:</p>	<p>Faculty specific UDLEs A graduate of the Faculty of Earth Sciences will be able to demonstrate:</p>	<p>Program Outcomes aligned with UDLEs At the end of this program, the successful student will be able to demonstrate:</p>
<p>1. Depth and Breadth of Knowledge: a) developed knowledge and critical understanding of key concepts b) developed understanding of many major fields c) developed ability to gather and interpret information and compare merits of alternate views d) detailed knowledge and experience in an area of the discipline e) developed critical thinking and analytical skills f) apply learning from outside discipline</p>	<p>Acquisition of a: (1) developed knowledge and critical understanding of the key concepts, methodologies, current advances, theoretical approaches and assumptions in a discipline overall, as well as in a specialized area of science, technology or mathematics; (2) developed broad understanding of many of the major fields in science, technology or mathematics, including, where appropriate, from an interdisciplinary perspective, and how the fields may intersect with fields in related disciplines; (3) developed ability to: a) gather, review, evaluate and interpret information; and b) compare the merits of alternate hypotheses or creative options, relevant to one or more of the major fields in science, technology or mathematics; (4) developed detailed knowledge of and experience in research in an area of science, technology or mathematics; (5) developed critical thinking and analytical skills inside and outside the discipline; (6) Ability to apply learning from one or more areas outside the discipline.</p>	<p>The ability to understand key concepts in Earth and Space Sciences, such as: the formation of the Solar System, Planetary Evolution, Plate Tectonics, Geological Time the History of the Earth.</p> <p>The ability to understand the role of the multiple broad fields within Earth and Space Sciences.</p> <p>Knowledge of the role of multiple theories that played a prominent role in the development of our current understanding of Earth and Space Sciences.</p> <p>The development of critical thinking skills and the ability to assess the limitations and flaws within scientific studies.</p> <p>The ability to utilize the above skills to areas outside the discipline.</p>

Table 2.1: Honours Bachelor's Degree - Mapping Program Outcomes to the Undergraduate Degree Level Expectations Program:

<p>Brock University UDLEs A graduate of Brock University will be able to demonstrate:</p>	<p>Faculty specific UDLEs A graduate of the Faculty of Earth Sciences will be able to demonstrate:</p>	<p>Program Outcomes aligned with UDLEs At the end of this program, the successful student will be able to demonstrate:</p>
<p>2. Knowledge of Methodologies Apply methods of inquiry to:</p> <ul style="list-style-type: none"> a) evaluate different approaches b) use these methods to devise and sustain arguments or solve problems c) comment on current research or advanced scholarship 	<p>Acquisition of an understanding of methods of enquiry or creative activity, or both, in their primary area of study that enables the student to:</p> <ul style="list-style-type: none"> (1) evaluate the appropriateness of different approaches to solving problems in science, technology or mathematics using well established ideas and techniques; (2) devise and sustain arguments or solve problems in science, technology or mathematics using these methods; and (3) describe and comment upon aspects of current research or equivalent advanced scholarship in science, technology or mathematics. 	<p>Ability to understand and evaluate the different approaches necessary to solve problems in Earth and Space Sciences.</p> <p>Ability to utilize existing methods of enquiry to develop arguments that increase the general public understanding of complex issues.</p> <p>Ability to utilize existing methods of enquiry to develop arguments that increase the general public understanding of the state of current research.</p>
<p>3. Application of Knowledge Review, present and critically evaluate information in order to:</p> <ul style="list-style-type: none"> a) develop lines of argument b) make sound judgments c) apply underlying concepts, principles d) use this knowledge in the creative process <p>Use techniques to:</p> <ul style="list-style-type: none"> e) critically evaluate f) propose solutions g) frame appropriate questions h) solve a problem or create new work i) make critical use of scholarly sources 	<p>Acquisition of:</p> <ul style="list-style-type: none"> (1) the ability to review, present and critically evaluate qualitative and quantitative information to: <ul style="list-style-type: none"> a) develop lines of argument; b) make sound judgments in accordance with the major theories, concepts and methods used in science, technology or mathematics; c) apply underlying concepts, principles, and techniques of analysis, both within and outside science, technology or mathematics; d) where appropriate use this knowledge in the creative process; 	<p>Ability to:</p> <ul style="list-style-type: none"> (1) find, (2) review and (3) summarize established and new knowledge in the Earth and Planetary Science field, (4) develop lines of argument accessible to the general public

Table 2.1: Honours Bachelor’s Degree - Mapping Program Outcomes to the Undergraduate Degree Level Expectations Program:

<p>Brock University UDLEs A graduate of Brock University will be able to demonstrate:</p>	<p>Faculty specific UDLEs A graduate of the Faculty of Earth Sciences will be able to demonstrate:</p>	<p>Program Outcomes aligned with UDLEs At the end of this program, the successful student will be able to demonstrate:</p>
	<p>(2) the ability to use a range of established techniques to: a) initiate and undertake critical evaluation of arguments, assumptions, abstract concepts and information; b) define problems; c) retrieve and evaluate information d) propose solutions; e) frame appropriate questions for the purpose of solving a problem; f) solve a problem or create a new work; and g) make critical use of scholarly reviews and primary sources. (3) Technical skills: a) to perform laboratory experiments accurately and safely; b) to solve scientific problems requiring the use of computing and information technology.</p>	
<p>4. Communication skills Communicate information, arguments and analyses accurately and reliably, orally and in writing to a range of audiences.</p>	<p>Acquisition of an <u>A creative</u> ability to communicate <u>science-based</u> information, arguments, and analyses accurately and reliably to a range of audiences (1) orally or in writing; (2) using information technology.</p>	<p>Ability to: present evidence and arguments in a variety of media formats, including (1) written, (2) visual graphic and (3) video formats (4) function in a variety of social media formats.</p>
<p>5. Awareness of Limits of Knowledge Understand limits to own knowledge, appreciate uncertainty, and how this might influence their analyses and interpretations.</p>	<p>Acquisition of an understanding of the limits to their own knowledge and how this might</p>	<p>Awareness of the limitations of: (1) scientific studies, (2) using geological time scales to apply to events occurring on the human time scale.</p>

Table 2.1: Honours Bachelor’s Degree - Mapping Program Outcomes to the Undergraduate Degree Level Expectations Program:

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Faculty specific UDLEs <i>A graduate of the Faculty of Earth Sciences will be able to demonstrate:</i>	Program Outcomes aligned with UDLEs <i>At the end of this program, the successful student will be able to demonstrate:</i>
	influence their analyses and interpretations.	
<p>6. Autonomy and Professional Capacity Qualities and transferrable skills for further use:</p> <ul style="list-style-type: none"> a) exercise of initiative, personal responsibility and accountability b) working effectively with others c) decision-making in complex contexts d) ability to manage learning within and outside discipline e) behaviour consistent with academic integrity and social responsibility. 	<p>Acquisition of qualities and transferable skills necessary for further study, employment, community involvement and other activities requiring:</p> <ul style="list-style-type: none"> (1) the exercise of initiative, personal responsibility and accountability in both personal and group contexts; (2) working effectively with others; (3) decision-making in complex contexts; (4) the ability to manage their own learning in changing circumstances, both within and outside the discipline and to select an appropriate program of further study; (5) the understanding of ethical and social responsibilities; and (6) a behaviour consistent with academic integrity and social responsibility. 	<p>Ability to:</p> <ul style="list-style-type: none"> (1) exercise of initiative, personal responsibility and accountability (2) work effectively within a team (3) propose a variety of ways of conveying information effectively (4) remain informed on latest development in the field of study (5) behave consistent with academic integrity and social responsibility.
<p>7. Other Include any program outcomes that may not be covered by the 6 DLES listed above</p>		

Table 2.2 - Honours Bachelor Degree, Mapping Program Learning Outcomes to Modes of Delivery and Methods of Assessment Program:

<p>Brock University UDLEs A graduate of Brock University will be able to demonstrate:</p>	<p>Program UDLEs/Learning Outcomes At the end of this program, the successful student will:</p>	<p>Modes of Delivery</p>	<p>Assessment of Method Students can demonstrate their knowledge/are assessed through the following methods:</p>
<p>1. Depth and Breadth of Knowledge</p> <p>a) developed knowledge and critical understanding of key concepts</p> <p>b) developed understanding of many major fields</p> <p>c) developed ability to gather and interpret information</p> <p>d) detailed knowledge and experience in an area of the discipline</p> <p>e) developed critical thinking and analytical skills</p> <p>f) apply learning from outside discipline</p>	<p>The ability to understand key concepts in Earth and Space Sciences, such as: the formation of the Solar System, Planetary Evolution, Plate Tectonics, Geological Time the History of the Earth.</p> <p>The ability to understand the role of the multiple broad fields within Earth and Space Sciences</p> <p>Knowledge of the role of multiple theories that played a prominent role in the development of our current understanding of Earth and Space Sciences</p> <p>The development of critical thinking skills and the ability to assess the limitations and flaws within scientific studies</p> <p>The ability to utilize the above skills to areas outside the discipline</p>	<p>i. Lectures</p> <p>ii. Laboratories</p> <p>iii. Seminars</p> <p>iv. Assignments</p> <p>v. Projects</p> <p>vi. Tutorial (possibly for Com course?)</p>	<p>Test or Quiz ^{i,ii,iii}</p> <p>Mid-Term ^{i,ii,iii}</p> <p>Exam ^{i,ii,iii}</p> <p>Seminar Participation ^{iv}</p> <p>Research Essays ^v</p> <p>Presentation involving different media (videos, web pages, social media posts) ^{vi}</p>
<p>2. Knowledge of Methodologies</p> <p>Apply methods of inquiry to:</p> <p>a) evaluate different approaches</p>	<p>Ability to understand and evaluate the different approaches necessary to solve</p>	<p>i. Lectures</p> <p>ii. Laboratories</p> <p>iii. Seminars</p> <p>iv. Assignments</p>	<p>Test or Quiz ^{i,ii,iii}</p> <p>Mid-Term ^{i,ii,iii}</p>

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<p>Brock University UDLEs A graduate of Brock University will be able to demonstrate:</p>	<p>Program UDLEs/Learning Outcomes At the end of this program, the successful student will:</p>	<p>Modes of Delivery</p>	<p>Assessment of Method Students can demonstrate their knowledge/are assessed through the following methods:</p>
<p>b) use these methods to devise and sustain arguments or solve problems c) comment on current research or advanced scholarship</p>	<p>problems in Earth and Space Sciences. Ability to utilize existing methods of enquiry to develop arguments that increase the general public understanding of complex issues. Ability to utilize existing methods of enquiry to develop arguments that increase the general public understanding of the state of current research.</p>	<p>v. Projects vi. Tutorial (possibly for Com course?)</p>	<p>Exam ^{i,ii,iii} Seminar Participation ^{iv} Research Essays ^v Presentation involving different media (videos, web pages, social media posts) ^{vi}</p>
<p>3. Application of Knowledge Review, present and interpret information in order to: a) develop lines of argument b) make sound judgements c) apply underlying concepts, principles d) use the knowledge in the creative process Use techniques to: a) critically evaluate b) propose solutions c) frame appropriate questions d) solve a problem or create new work</p>	<p>Ability to: (1) find, (2) review and (3) summarize established and new knowledge in the Earth and Planetary Science field. (4) develop lines of argument accessible to the general public</p>	<p>i. Assignments ii. Group projects iii. Seminars iv. Essays</p>	<p>Seminar Participation ^{i,ii,iii} Research Essays ^{iv} Literature reviews ^{iii,iv} Presentation involving different media (videos, web pages, social media posts) ^{ii,iii}</p>

Table 2.2 - Honours Bachelor Degree, Mapping Program Learning Outcomes to Modes of Delivery and Methods of Assessment
Program:

<p>Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i></p>	<p>Program UDLEs/Learning Outcomes <i>At the end of this program, the successful student will:</i></p>	<p>Modes of Delivery</p>	<p>Assessment of Method <i>Students can demonstrate their knowledge/are assessed through the following methods:</i></p>
<p>e) make critical use of scholarly sources</p>			
<p>4. Communication skills Communicate accurately and reliably, orally and in writing to a range of audiences.</p>	<p>Ability to: present evidence and arguments in a variety of media formats, including (1) written, (2) visual graphic and (3) video formats. (4) function in a variety of social media formats.</p>	<p>i. Assignments ii. Group projects iii. Seminars iv. Essays</p>	<p>Seminar Participation ^{i,ii,iii} Research Essays ^{iv} Literature reviews ^{iii,iv} Presentation involving different media (videos, web pages, social media posts) ^{ii,iii}</p>
<p>5. Awareness of Limits of Knowledge Understand limits to own knowledge and how this might influence their analyses and interpretations.</p>	<p>Awareness of the limitations of: (1) scientific studies, (2) using geological time scales to apply to events occurring on the human time scale.</p>	<p>i. Assignments ii. Group projects iii. Seminars iv. Essays</p>	<p>Seminar Participation ^{i,ii,iii} Research Essays ^{iv} Literature reviews ^{iii,iv} Presentation involving different media (videos, web pages, social media posts) ^{ii,iii}</p>
<p>6. Autonomy and Professional Capacity Qualities and transferrable skills for further use: a) exercise of initiative, personal responsibility and accountability. b) working effectively with others.</p>	<p>Ability to: (1) exercise of initiative, personal responsibility and accountability. (2) work effectively within a team.</p>	<p>i. Assignments ii. Group projects iii. Seminars iv. Essays</p>	<p>Seminar Participation ^{i,ii,iii} Research Essays ^{iv} Literature reviews ^{iii,iv} Presentation involving different media (videos,</p>

Table 2.2 - Honours Bachelor Degree, Mapping Program Learning Outcomes to Modes of Delivery and Methods of Assessment
Program:

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Program UDLEs/Learning Outcomes <i>At the end of this program, the successful student will:</i>	Modes of Delivery	Assessment of Method <i>Students can demonstrate their knowledge/are assessed through the following methods:</i>
c) decision-making in complex contexts. d) ability to manage learning within and outside discipline. e) behaviour consistent with academic integrity and social responsibility.	(3) propose a variety of ways of conveying information effectively. (4) remain informed on latest development in the field of study. (5) behave consistent with academic integrity and social responsibility.		web pages, social media posts) ^{ii,iii}
7. Other Include any program outcomes that may not be covered by the 6 DLES listed above			

3.0: The Program

3.1: Program Structure, Curriculum and Governance (IQAP 3.5.3)

3.1.1: Program Structure

Describe the program structure and include a breakdown of courses on a year-by-year or semester-by-semester basis. Explain how the proposed structure achieves the program learning outcomes and degree level expectations. In describing the structure, the Proponent will address the total number of credits or courses necessary for completion.

Year 1: Primarily focused on providing the student with fundamental background and introductory information. Because students will need the background to succeed in two departments, there are no electives in this year. Both, ERSC and COMM courses are introductions into the subject matter. ERSC 1P01 and 1P042 will provide common Earth Science background for both ERSC and EPSC cohorts. 94 is required as the Planetary Science course. COMM 1F90 and 1P96 will provide them with the COMM background they will need. INDG 1F90 is required and will provide students with a basic understanding of indigenous issues. GEOG 1F90, Introduction to Human Geography serves as a Social Science context credit and provides valuable background to aspects of human organization. For students who have not taken the grade 12 chemistry course in high school, CHEM 1P00 is required to provide students with a minimum of background in Chemistry. as mMany aspects of Earth Science do require a basic understanding of ~~that subject~~chemistry and the Chemistry department has successfully offered this to students who lack high school chemistry. Students are required to take their context credits; FILM 1F94 is appropriate as the Humanities credit for a program with significant Communication content. GEOG 1F90, Introduction to Human Geography, or one credit in Political Science are suggested for the Social Science context credit, which already provides some choice for the student. Students with sufficient chemistry background will take WRDS 1P06.

Year 2: ~~Comm~~COMM courses, as recommended by the department, provide the theoretical foundation for upper year courses. ERSC 1P94 is required as the Planetary Science course as is Geog/ERSC 2P08, Climate Crisis and ERSC 2P18, Plate Tectonics . ERSC courses provideThere is further a choice of second year ERSC courses, which gives the students an early choice to focus on some subjects of interest. For example, sstudents who wish to incorporate more technical knowledge (e.g. GIS) may opt for the introductory ERSC 2P07 while the other courses provide a foundation for a variety of subdisciplines that can be taken in upper years.

Year 3: Required courses include ERSC 2P9x , Mineralogy I: Minerals, Rocks and their Geologic Context, ERSC 3P04, Science Communication and ERSC 3P94 Planetary Science. COMM 3P18 and COMM 3P62 situate students in communities and help them develop their understanding of audiences and relationships between organizations and those communities. Courses in Planetary Science, Minerals and Rocks and Plate Tectonics provide more in-depth knowledge of Earth Science. Choices for other ERSC courses are based on choices students made in year 2. A new course on Science writing, with particular focus on Earth Science will require students to read discipline related science articles and to produce their own articles. COMM 2P91 introduces the students to the important topic of Social Media while COMM 3P15 introduces Media Analysis. COMM 3P18 and COMM 3P62 situate students in communities and help them develop their understanding of audiences and relationships between organizations and those communities.

Year 4: Only open to students with an average of 70%, who will take a mandatory 2-credit independent cap-stone course (ERSC 4F95), which will be the equivalent of a thesis option and will require an independent project. Also required is the new course ERSC 4PXX, Citizen Science. In the fourth-year COMM courses, students examine more specific concerns about the environment and media, film and ecology, and data science. Other courses chosen by the students will largely depend on choices they made in previous years. Student will have to apply to enter the honours year, the committee overseeing the program department will assess the applications.

3.1.2: Courses and Curriculum

Define the program length and provide a clear rationale that addresses the ability of students to complete the program requirements within the proposed time period. Clearly indicate required or core and elective courses for the program. Describe the contribution of any capstone experience to the program and the connection to the learning outcomes.

The normal duration of the program will be 4 years. The significant degree of free choice in the program, specifically in years 3 and 4, should allow the students to complete the degree in the allocated time. In addition, several of the courses (e.g. special topics, experiential learning), which rely on direct faculty supervision can, if faculty agree, be taken during the spring and summer terms. This also allows students to accumulate credits outside the normal fall and winter terms in which most courses are scheduled and will further alleviate scheduling problems.

Table 3.1: Summary of course information for Program in Earth and Planetary Science Communication, BA_{[FF7]Sc}

Course No.	Course Name	Core or Elective	Contact hrs/wk	Delivery Mode
ERSC 1P01	Planet Earth - Solid Earth	C	5	Lec/Lab/or FT
ERSC 1P02	Planet Earth - Surface Processes	C	5	Lec/Lab/or FT
<u>ERSC 1P94</u>	<u>Planetary Science</u>	<u>C</u>		<u>Online</u>
<u>COMM 1P96</u> <u>COMM 1P96</u>	<u>Professional Communication Professional Communication</u>	<u>C</u>	<u>3</u>	<u>Lec/seminars</u>
COMM 1F90	Introduction to Communication and Media Studies	C	3	Lec/ <u>S</u> seminars
INDG 1F90?	Introduction to Indigenous Studies	C	<u>3</u>	<u>Lec/Seminar</u>
GEOG 1F90	Introduction to Human Geography	C	<u>3</u>	<u>Lec/Seminar</u>
Chem 1P00	Intro to chem (if not taken in high school <u>SCH4U</u>)		<u>3</u>	<u>Lec/lab/tutorial</u>
WRDS 1P06	History and Future of Storytelling	<u>C</u>	<u>3</u>	<u>Lec/Seminar</u>
<u>ERSC 1P94</u>	<u>Planetary Science</u>	<u>C—2ndyr</u>		<u>Online</u>
COMM 2P15	Research Methods in Communication and Culture	C	4	Lec/Lab
<u>PCUL 2P20</u> <u>ERSC 2P18</u>	<u>Introduction to Plate Tectonics</u> <u>Theories of Popular Culture</u>	C	<u>45</u>	Lec/Sem/Lab
COMM 2P50	Communication Theory	C	3	Lec/Sem
WRDS 2P14	Technical Writing	C	3	Lec/Lab
<u>WRDS 2P18</u>	<u>Reporting and News Writing for Mass Media</u>	<u>CE</u>	<u>3</u>	<u>Lec/Lab</u>

ERSC 2P03	The History of the Earth	<u>EC</u>	3	Lec/Lab
ERSC 2P05	Earth Surface Processes	<u>EC</u>	5	Lec/Lab
ERSC 2P07	Introduction to Geospatial Technologies	<u>EC</u>	4	Lec/Lab
ERSC 2P08	Climate Crisis	C	3	Lec
ERSC 2P15	Introduction to Oceanography	<u>EC</u>	5	Lec/Lab
ERSC 2P61	Environmental Geoscience	<u>EC</u>	5	Lec/Lab
ERSC 3P94	Planetary Science	C	4	Lec/Sem
ERSC 2P9x (formerly 2P23)	Mineralogy I: Minerals, Rocks and their Geologic Context	C 3rd yr	6	Lec/Lab
ERSC 3P90 ERSC 2P9x (formerly 2P18)	Volcanology Introduction to Plate Tectonics	EC	5	Lec/Lab
3P04	Science writing Communication	C	4	Lec/Sem
ERSC 3P01	Structural Geology	E	5	Lec/Lab
ERSC 3P03	Paleontology and Paleobiology	E	5	Lec/Lab
ERSC 3P05	Geographic Information Systems	E	4	Lec/Lab
ERSC 3P07	Remote Sensing	E	7	Lec/Lab
ERSC 3P12	Stratigraphy	E	5	Lec/Lec
ERSC 3P24	Glacial Geomorphology/Geology	E	5	Lec/Lab
ERSC 3P25	Quaternary Geology	E	5	Lec/Lab
COMM 2P91	Social Media	C	3	Lec/Sem/Lab
COMM 3P185	Audience Studies Media Analysis	C	33	Lec/Sem Lec/Sem
COMM 3P62	Public Relations and Integrated Marketing Communication	C	3	Lec/Sem
COMM 2P91	Social Media	E	3	Lec/Sem
IASC 3P01	Media Transformations in the Creative Arts	E	3	Lec/Sem
COMM 4P58	Ecocinema: History, Theory and Practice	C	3	Seminar
COMM 4P18	Media and the Natural Environment	C	3	Seminar
COMM 4P35	Data and Society	C	3	Seminar
ERSC 3P90	Volcanology	E	5	Lec/Lab
ERSC 4Pxx	Citizen Science	C	3	Lec/Sem
ERSC 4P31	Watershed Study and Assessment	E	5	Lec/Lab
ERSC 4F95	Honours Project Capstone 1	C		Thesis
ERSC 4P85 ERSC 4F96	Ecosystems and Changing Disturbance Regimes Capstone 2	EC	3	Lec/Sem Thesis

3.1.3: Program Options

Include possible options available for program completion, e.g. full-time vs part time, course based, MRP, dissertation, practicum, fast track, research requirements, etc.

The program will be available for full- and part-time studies. The program is course based and follows the degree requirements listed within the Faculty handbook. At the end of year three, majors will have 67.5 ERSC credits, enough to obtain a Pass degree. They will also have 4 COMM credits, which will be sufficient for a minor degree.

The 4th year option will only be available to students with an average of 70% or above as it includes a mandatory 2 credit independent capstone course. Following fourth year, graduates will have 40-9 ERSC credits, which complies with the faculty handbook prescribing that a major program should consist of 9-12 credits from their core program. After year three, all

majors will have enough credits for a minor in Communication. They will also have had the opportunity to take 3.5 credits of free electives, 0.5 more than the minimum required by the Faculty handbook.

There are options for several independent study courses within the program. This might allow a student to accumulate some credits during the summer period, but it is unlikely that this can result in any significant fast-tracking.

While our initial focus is on the 4 year degree, we will be open to exploring a variety of alternative options if there is a demand for them. These may include a certificate, minor, co-op or options for secondary degrees.

3.1.4: Progression Requirements

Provide a description of the progression requirements for continuation in the program.

To remain within the program a student must maintain a 60% overall average (University regulation)

To remain in the BASc Honours program, a student is required to have a minimum 70 percent major average and a minimum 60 percent average in the remaining credits.

To take the year 4 option, a student must maintain a 70% average.

3.1.5: Governance

Describe the governance model to be established for oversight and monitoring of the program from an administrative and academic perspective. Document both University and program specific regulations. Examples or copies of related documents are to be included in Appendix C.

The program governance will follow the requirements of Article 16A of the Collective Agreement between Brock University and the Brock University Faculty Association. The program will be governed by a joint committee which will initially consist of members of the Department of Earth Sciences, with extensive consultations with the Departments of Geography and Tourism Studies and the Department of Communication, Popular Culture and Film. This Due to the extensive cross-listing of courses between ERSC and GEOG, a joint committee will be established that will discuss all issues relevant to the program. The faculty member elected or appointed as head of the committee will initially serve as Director coordinator of the of the program, as suggested in the review.

As indicated in the budget, we propose that a new faculty position be allocated to support this program in year 3. While the nature of this appointment will no doubt be subject to discussions in the upcoming years, we suggest that this is an opportunity to make a truly transdisciplinary appointment by homing it jointly in the Faculties of Social Sciences and Mathematics and Sciences. Such an appointment would very much be in line with several guiding values in Brock's strategic plan, in particular #5, "Innovation through disciplinary and transdisciplinary scholarly activities." A person with a strong background in a relevant science and science communications would be an asset to this program and to the University in general.

3.2: Program Content

3.2.1: Current State of the Discipline (IQAP 3.5.4)

Describe how the proposed curriculum of the program is positioned relative to the current state of the discipline or area of study.

While the proposed program arises from the Department of Earth Sciences, it has a truly transdisciplinary foundation that will help to build the strong culture of science in Canada. This is a unique and innovative program, which differs significantly from the Earth Science programs offered by Ontario universities.

Presently these offerings are aimed at training professionals for careers in a variety of Earth Science fields. That practice of professional geoscience is governed by professional bodies throughout Canada. In Ontario, that body is the Association of Professional Geoscientists of Ontario (PGO) (<https://www.pgo.ca/>). It “is a self-regulatory organization governing the practice of professional geoscience in Ontario and reporting to the Minister of Energy, Northern Development and Mines.” Their mission is to “protect the public by regulating geoscience in Ontario and advancing professional practice.” To become a PGO member, candidates must demonstrate that their education complies with the knowledge requirements set out by the PGO. These knowledge requirements (<https://www.pgo.ca/mpower/ktoolkit/public-requirements.action>) include series of science requirements (1st year Chemistry, Physics, Math) that can reasonably be expected from any BSc student. These requirements effectively prohibit high school students without high school sciences from applying to geoscience programs.

By contrast, the proposed program aims to train graduates to understand Earth and Space Science issues, who will be able to effectively communicate, to make connections between organizations and citizens, influence policymaking, and thereby contributing toward the scientific literacy of the general population. A need for this was identified by the Council of Canadian Academies. The Council of Canadian Academies (CCA), in their 2014 Expert Panel report entitled “Science Culture: Where Canada Stands” (<https://cca-reports.ca/reports/science-culture-where-canada-stands/>), recognizes that a strong science culture is reflected in a society when it “embraces discovery and supports the use of scientific knowledge and methodology”. Further, the existence of a strong science culture “encourages the education and training of a highly skilled workforce and the development of an innovative knowledge-based economy.” While the report shows that Canada ranks first out of 35 countries in terms of our “interest in new scientific discoveries” we rank 19th, out of 29 countries in terms of number of first university degrees in science and engineering. This means that while Canadians are interested in new developments in science they are not particularly well prepared to understand the science behind the developments and points to a weakness in our own culture of science that can benefit from programs like that proposed here.

The proposed program combines knowledge from Earth and Planetary Science with theory and practice in modern Communication to build a stronger culture of science in the general population. The program will do this by producing graduates who understand the science behind important modern issues such as global climate change and space exploration and exploitation and have AND have the skills to participate effectively and successfully in the discourses surrounding science in a variety of fields and industries. explain that science to those who lack the foundational science knowledge base.—The program will do this by

applying the five “strategies and practices” that CCA has identified (in bold below) as being crucial to the development of a strong science culture:

1. **Support Lifelong Science Learning** - The program will prepare students for a lifetime of learning in general and a breadth and depth of understanding issues surrounding space exploration and exploitation that will flourish over the current century and beyond;
2. **Make Science Inclusive** - The program will make science more inclusive to students, particularly those students who lack the secondary school prerequisites for traditional science programs; the core of the program will be “accessible science” meant to allow adequate understanding without specialization;
3. **Adapt to New Technologies** - The program will provide a basis of understanding new and future technologies which are required for a successful space program.
4. **Enhance Science Communication and Engagement** - The program includes courses that develop the ability of graduates to communicate and engage in science issues pertaining to Earth and Planetary Science. As the gap between the bulk of the population and science and technology broadens due to the increasing complexity of innovation required for future developments off-Earth, it will be particularly important for there to be people trained to understand and communicate in explaining the science and technology behind our future endeavors ~~to the population at large~~.
5. **Provide National or Regional Leadership** - The program will make Brock a leader among Canadian Universities by offering an undergraduate program that both values and rewards creativity and innovation in its students.

The proposed program will be the first such undergraduate program in Canada and will produce citizens who will be able to understand the science behind the major issues and to guide citizens, governments, and private organizations towards making the right decisions to protect everyone’s future.

3.2.2: Uniqueness of Innovations of the Program (IQAP 3.5.4)

Identify and describe any unique curriculum, innovations or creative components that contribute to the program and the achievement of its learning outcomes.

This program is unique for offering an undergraduate degree that combines training in both BA within an Earth Sciences and Communications discipline. We are not aware of any similar programs within Canada. As outlined in section 9, the only Canadian programs that combine science and communication are aimed at students with or working towards a BSc. By enabling non-science students to gain better insights into the complexity of Earth Sciences and combining that knowledge with a solid background in communication skills we are preparing students for a wide range of careers outside the traditional geosciences.

3.2.3: Experiential Learning (IQAP 3.5.11)

If the proposed program will contain an experiential learning component provide a description of the component, including:

- a) Requirements, credits, length;
- b) Integration/relation of this experience within the program of study;
- c) Who is responsible for arranging the experiential learning component;
- d) What placement opportunities exist for students; and,

e) Where experiential education is a program requirement, provide evidence that all students can be accommodated.

Opportunities for experiential learning already exist throughout the current ERSC curriculum, ranging from hand-on experiences in labs to participation in field trips to the opportunities to conduct independent research as part of Special Topics (ERSC 3V90-3V95) or their thesis (ERSC 4F91). Due to the inherent flexibility of the BA~~Sc~~ program, these opportunities will also be available to the BA-~~Sc~~ students, though the nature of the experience may well be aimed at producing media, rather than scientific research. Because experiential learning components are part of most ERSC courses, the following list will restrict itself to those courses which are primarily Experiential Experience courses:

a) ERSC 3P59, Experiential Learning in Earth and Environmental Sciences. Requirements: minimum 70 percent major average, a minimum of 10.0 overall credits and permission of the Department. Credits: 0.5 credit, Length: 1 term.

ERSC 3V90-3V95, Selected Topics in Earth Sciences. Requirements: No formal requirements listed. Students must find a willing supervisor. Credits: 0.5 credit, Length: 1 term.

ERSC 3P99, Field Camp-Solid Earth. Restriction: open to students with a minimum of 13.0 overall credits and permission of the Department. Prerequisite(s): ERSC 3P01, Length: 2 weeks

ERSC 3Q99, Field School-Quaternary Geology. Restriction: permission of the Department. Prerequisite(s): ERSC 2P17 or 2P18. Length: 2 weeks.

ERSC 4F91, Thesis. Requirements: Minimum of 13.5 overall credits and a minimum 75 percent major average. Students must find a willing supervisor. Credits: 1 credit, Length: 2 terms.

ERSC 4F95, 4F96 Capstone thesis course (New for BA~~Sc~~ program). Requirements: Minimum of 13.5 overall credits and a minimum ~~70~~5 percent major average. Students must find a willing supervisor. Credits: ~~2~~1 credits, Length: 2 terms.

ERSC 4PXX, Citizen Science (New for BA~~Sc~~ program). Requirements: Minimum of 13.5 overall credits and a minimum 70 percent major average. Credits: 0.5 credit, Length: 1 term.

b) Experiential learning courses are located in year 3 and 4 of the program because they rely on students having sufficient background in Earth Science and Communication to complete tasks that merit credit in senior courses. Because of the flexibility of the program, the background utilized will vary. Science Communications, Citizen Science and the Capstone project will each provide opportunities for experiential learning.

c) Students will be responsible for initiating contact with supervisory faculty and to discuss possible options. This follows established practice with ERSC where students with specific interests in a subject approach faculty with expertise in that subject.

d) There is no co-op option for this program in the initial stages. We do however anticipate that students will be able to find summer employment in a variety of fields that allow them to put their skills to use. In the past, ERSC students have, on occasion, found it possible to utilize some aspect of their summer employment as the basis for a thesis in the following year. In these cases, the employer is often involved in the thesis in a supervisory capacity. We anticipate that similar opportunities will arise for the BA~~Sc~~ students.

e) The only mandatory Experiential courses for the BA~~Sc~~ students ~~is~~ are the fourth-year capstone courses ERSC 4F95 and Citizen Science (4PXX), which ~~are~~is restricted to students with 70% or above. With an initial estimate of enrollment of 10 at the start

of the program, most likely fewer than 10 students will have to be accommodated for this course. This is well within the capability of existing faculty.

A draft copy of the calendar entry for the proposed program should be included as Appendix D

4.0: **Admissions** [FF8] and Enrollments

4.1: Admission Requirements (IQAP 3.5.2)

Clearly define the admission requirements for the proposed program. Proponents will address the appropriateness of the program's admission requirements for the learning outcomes established for completion of the program. Describe pathways to entry and how applications will be adjudicated.

Ontario secondary school students must present a minimum of six 4U or 4M courses and have completed the OSSD to be considered for admission. Prerequisite courses are used in the calculation of admission averages.

Required 4U Subject: English (ENG4U)

2 of:

Advanced Functions (MHF4U),

Calculus and Vectors (MCV4U),

Mathematics of Data Management (MDM4U),

Grade 12 Computer Science (ICS4U)

Biology (SBI4U),

Physics (SPH4U),

Chemistry (SCH4U).

Earth and Space Science (SES4U),

Environment and Resource Management (CGR4M),

Geomatics: Geotechnologies in Action (CGO4M)

Note: the admission requirement for ERSC is:

ENG4U; MCV4U or MHF4U. Two of SBI4U, SCH4U, SPH4U, SES4U, ICS4U, a second 4U math. Strongly recommended subjects for majors in Earth and Planetary Sciences BA: Earth and Space Science (SES4U), one from Advanced Functions (MHF4U), Calculus and Vectors (MCV4U), Mathematics of Data Management (MDM4U), one from Biology (SBI4U), Physics (SPH4U), Chemistry (SCH4U).

Feedback from secondary school students at open houses indicates a strong interest in the environment. We will advertise the new program by providing promotional material to secondary school administration guidance counselors prior to open houses. We will also make contact with school board curriculum personnel to arrange a presentation to guidance counselors on the new program. The initial plan is to target local school boards as these provide the majority of students to Brock.

Commentary: One of the stated goals of this degree is "To create a pathway for students with an interest in Earth and planetary sciences, but that lack the background to complete a BSc." To accomplish this goal the admission requirements cannot mirror those that are required for most University BSc degrees. Students will however have to be able to

understand some scientific concepts and quantitative data and should be required to have demonstrated that capacity in some form at high school. By requiring two out of 10 possible grade 12 courses we believe that we are targeting students who have not shied away from such topics but have not committed themselves to the full complement of courses required in preparation for a BSc program.

~~We do not require the full complement of grade 12 sciences, although one grade 12 Science and one Math course would be an asset. The current changes imposed upon high school curriculum potentially have a significant impact on the incoming student pool. Overall course offerings for high school students will decrease. On the other hand, the online requirements may end up being beneficial to this program. Earth and Space Science (SES4U) is rarely offered as a classroom option but is available as an online option. Over the last 4 years, only between 2 % and 7% of students in our ERSC 1P01/1P02 have taken SES4U in any form. A requirement for online credits may make this course more popular and could result in a larger percentage of high school students taking it. Hence in the future, SES4U may become a required pre-requisite, though this would require a significant shift in high school offerings.~~

4.2: Alternative or Additional Requirements

Describe any alternative or additional requirements for admission into a graduate, second-entry or undergraduate program, such as minimum grade point average, additional language requirements or portfolios. Describe how the program will assess and recognize prior work or learning experience (if applicable).

None

4.3: Enrollment Projections

The Department/Centre, in consultation with Institutional Analysis and Planning and the relevant Dean(s), is to provide the projected annual intake and enrollments for the program, including the desired level of steady state enrollment and how many years will be required to reach steady state levels.

Table 4.1: Projected Intake and Enrollments for Undergraduate Program in Earth and Planetary Science Communication, BASc

PROJECTED INTAKE AND ENROLLMENTS Undergraduate Programs					
YEAR	FULL-TIME		PART-TIME		TOTAL ENROLMENT
	Intake	Enrollments	Intake	Enrollments	
	A-B	C-D	E-F	G-H	
2024 <u>2/23</u>	10				10
2023 <u>2/24</u>	12				22
2023 <u>4/24</u>	15				37
2024 <u>5/26</u>	20				57
2026 <u>5/27</u>	22				69

Commentary: As a new unique program, our anticipated input is likely initially relatively low. Hence, we are suggesting a starting enrollment of 10.

5.0: Resources

In the following sections the Proponents will address the planned utilization of *existing* and *new* resources in support of the proposed program. Specifically, the proponents are to address the human (faculty and staff), physical (office, teaching and research space), financial, library, technology (ITS and CPI), Co-op and experiential learning, etc., resources required.

Where new or additional resources are required to deliver the proposed program, the Proponents will document the results of consultation with the appropriate University office/unit, (e.g. the relevant Dean(s), Library, ITS, etc.) in the appropriate section(s) below, including any institutional commitments to provide these new resources.

5.1: Resources for All Programs (IQAP 3.5.9)

5.1.1: Existing Resources

In the context of the proposed program indicate the planned utilization of any existing human, physical, fiscal and all other existing resources in the delivery of the program.

Because the new program is designed to minimize the number of initial new course offerings, the existing resources are adequate to offer the program at its initial stage with a new program target of 10 incoming students. Above that level, new resources in the form of faculty, support staff and space (primarily for labs) will likely be required. The Dean of the Faculty of Mathematics and Science has reviewed this program proposal and remains supportive of this initiative. We are confident that a successful program would be provided with resources within the natural constraints that the Dean faces.

5.1.2: Faculty Complement

Provide evidence of the participation of a sufficient number of faculty/instructors who are competent to teach and/or supervise in the program. When describing the faculty complement include the contributions of full time faculty, sessional instructors, adjunct appointments, professional/clinicians, etc. to the proposed program. Requests for any new faculty positions and the general area of expertise required for the program should be clearly identified along with the rationale for the positions reported.

Tables 5.1, 5.2 and 5.3 providing data on the existing faculty resources to be utilized in support of the proposed program. The CVs of all faculty/instructors contributing to the program are included as Appendix E.

a) Instructor Qualifications and Teaching Assignments within the Unit

Complete Table 5.1. Comment on the instructor qualifications and teaching assignments.

The current complement of faculty within ERSC is well qualified for their teaching assignments. In most cases faculty have a long-standing familiarity with the course subject matter.

b) Contributions by Instructors to Other Units

Complete Table 5.2. Comment on the contribution of instructors in the program(s) to other units.

None

c) Contributions by Instructors from Other Units

Complete Table 5.3. Comment on the contribution of instructors from other units to the program.

Courses cross-listed between the department of Earth Sciences and Geography and Tourism Studies that are part of this program are primarily offered by faculty that are also cross-appointed with the Earth Sciences department (Dr. Kevin Turner and Dr. Michael Pisaric).

d) Document the role of adjunct and part-time faculty in the delivery of the program.

Several of the courses within ERSC are offered by adjunct faculty or sessional instructors. ~~Of the courses mandatory for the BA program, only ERSC 2P11 (Oceanography) is regularly offered by the same sessional instructor. At present, none of the mandatory courses for the BAsc are only offered by sessional instructors.~~

e) Clearly identify and provide the rationale for any new faculty positions required to deliver the program. Include the results of consultation with the relevant Dean(s).

The initial offering of this program can ~~easily~~ be accommodated with the faculty complement. ~~We propose a new faculty position in year 3. Ideally, this position would bring combined expertise in a relevant science and in science communication and we suggest that this position may be homed in both faculties as a truly transdisciplinary position. Two of the key courses in this program in year 3 and 4, Science Communication and Citizen Science, are outside the current expertise of any of the departments involved.~~

~~However,~~ ~~t~~The age structure of the existing faculty makes it clear that opportunities for faculty renewal will arise in the foreseeable future. Reduction in the number of faculty within ERSC will jeopardise all programs ERSC offers, including this one. In fact, success of the proposed program will require some form of replacement for retiring faculty in strategic areas.

As mentioned above, the Dean of the Faculty of Mathematics and Science remains supportive of the Earth Sciences department and of this initiative. While the Dean can obviously not commit himself to any faculty replacement in any discipline several years in the future, we are confident that he will do ~~h~~is best to support the department and this program.

Table 5.1: Instructor Qualifications and Teaching Assignments Within the Program (Current + past four years)

Instructor Name	Area of Expertise	Demographics					Courses		Supervisions						Comments	
		Academic Year	Terminal Degree	Rank*	Tenure of Tenure Stream	Start Date	Undergraduate	Graduate	Core or Participating	Undergraduate Thesis	Major Research Paper	Graduate Thesis (Masters)	Graduate Thesis - Doctoral	Grad Committee Membership		Post-Doctoral Fellows
Brand, U	Carbonate Geochemistry	18/19	PhD	F	T	1981	1.5	0.5	C/P	2	2	2		2		
Brand, U	Carbonate Geochemistry	17/18	PhD	F	T		2	1	C/P		5	3	2	2	1	
Brand, U	Carbonate Geochemistry	16/17	PhD	F	T		2	1	C/P	1		3	3	2		
Brand, U	Carbonate Geochemistry	15/16	PhD	F	T		2	0.5	C/P	1	2	1	3	2		
Brand, U	Carbonate Geochemistry	14/15	PhD	F	T		2		C/P		1		1	2		
Cheel, R	Clastic sedimentology	19/20	PhD	F	T	1986	0	0	C	0	1	0	0	2		Sabbatical July 1, 2019 to June 30, 2020
Cheel, R	Clastic sedimentology	18/19	PhD	F	T	1986	1.5	0	C	0	1	0	0	3	0	UG load reduced by 0.5 for post-Chair year.
Cheel, R	Clastic sedimentology	17/18	PhD	F	T	1986	1	0	C	0	1	0	0	3		UG load reduced by 1.0 as Chair
Cheel, R	Clastic sedimentology	16/17	PhD	F	T	1986	1	0	C	0	0	0	0	3		UG load reduced by 1.0 as Chair
Cheel, R	Clastic sedimentology	15/16	PhD	F	T	1986	1	0	C	0	0	0	0	3		UG load reduced by 1.0 as Chair

Table 5.1: Instructor Qualifications and Teaching Assignments Within the Program (Current + past four years)

Instructor Name	Area of Expertise	Demographics					Courses		Supervisions						Comments	
		Academic Year	Terminal Degree	Rank*	Tenure of Tenure Stream	Start Date	Undergraduate	Graduate	Core or Participating	Undergraduate Thesis	Major Research Paper	Graduate Thesis (Masters)	Graduate Thesis - Doctoral	Grad Committee Membership		Post-Doctoral Fellows
Fueten, F	Structural Geology Planetary Science	19/20	PhD	F	T	1989	1	0	C	0	0	1	0		0	Course reduction Chair
Fueten, F	Structural Geology Planetary Science	18/19	PhD	F	T	1989	2	0	C	0	1	2	0		0	Course reduction Chair +overload
Fueten, F	Structural Geology Planetary Science	17/18	PhD	F	T	1989	3	0	C	0	2	3	0		0	
Fueten, F	Structural Geology Planetary Science	16/17	PhD	F	T	1989	3	0	C	0	1	2	0	4	0	
Fueten, F	Structural Geology Planetary Science	15/16	PhD	F	T	1989	2	0	C	0	2	3	0	4	0	
Head, MJ	Palynology, stratigraphy	19/20	PhD	F	T	2005	1	1	C	0	0	3. 5	0	2	0	6-month sabbatical
Head, MJ	Palynology, stratigraphy	18/19	PhD	F	T	2005	2	1	C	0	0	2. 75	0	2	0	
Head, MJ	Palynology, stratigraphy	17/18	PhD	F	T	2005	2	1	C	0	0	3. 75	0	1	0	
Head, MJ	Palynology, stratigraphy	16/17	PhD	F	T	2005	2	1	C	0	0	4	0	1	0	
Head, MJ	Palynology, stratigraphy	15/16	PhD	F	T	2005	1	1	C	0	0	4	0	1	0	6-month sabbatical
McCarthy, D.P.	Lichen ecology Alpine Geomorphology	19/20	PhD	AC	T	1995	2	0	C	0	1	0	0	0	0	

Table 5.1: Instructor Qualifications and Teaching Assignments Within the Program (Current + past four years)

Instructor Name	Area of Expertise	Demographics					Courses		Supervisions						Comments	
		Academic Year	Terminal Degree	Rank*	Tenure of Tenure Stream	Start Date	Undergraduate	Graduate	Core or Participating	Undergraduate Thesis	Major Research Paper	Graduate Thesis (Masters)	Graduate Thesis - Doctoral	Grad Committee Membership		Post-Doctoral Fellows
McCarthy, D.P.	Lichen ecology Alpine Geomorphology	18/19	PhD	AC	T	1995	2	0	C	0	1	0	0	1	0	
McCarthy, D.P.	Lichen ecology Alpine Geomorphology	17/18	PhD	AC	T	1995	2	0	C	0	0	0	0	0	0	
McCarthy, D.P.	Lichen ecology Alpine Geomorphology	16/17	PhD	AC	T	1995	2	0	C	0	0	0	0	0	0	
McCarthy, D.P.	Lichen ecology Alpine Geomorphology	15/16	PhD	AC	T	1995	2.5	0.5	C	1	0	2	0	0	0	
McCarthy, M	Palynology/ paleolimnology	19/20	PhD	F	T	1991	1.0	0.5	C	0	0	3	1	2	0	
McCarthy, M	Palynology/ paleolimnology	18/19	PhD	F	T	1991	1.5	0.5	C	0	0	3	1	4	0	1 special topics, 1 mentorship
McCarthy, M	Palynology/ paleolimnology	17/18	PhD	F	T	1991	0	0.5	C	0	0	1	1	4	0	4 special topics
McCarthy, M	Palynology/ paleolimnology	16/17	PhD	F	T	1991	0	0	C	0	0	1	1	3	0	6-month sabbatical leave
McCarthy, M	Palynology/ paleolimnology	15/16	PhD	F	T	1991	1.0	1.0	C	0	0	1	1	5	0	1 USRA, 2 special topics

Table 5.1: Instructor Qualifications and Teaching Assignments Within the Program (Current + past four years)

Instructor Name	Area of Expertise	Demographics					Courses		Supervisions						Comments	
		Academic Year	Terminal Degree	Rank*	Tenure of Tenure Stream	Start Date	Undergraduate	Graduate	Core or Participating	Undergraduate Thesis	Major Research Paper	Graduate Thesis (Masters)	Graduate Thesis - Doctoral	Grad Committee Membership		Post-Doctoral Fellows
Menzies, J	Geomorphology Glacial Geology	19/20	PhD	F	T	1977	4	1	C	0	0		0	2	0	
Menzies, J	Geomorphology Glacial Geology	18/19	PhD	F	T	1977	4	1	C	2	2		0	1	0	
Menzies, J	Geomorphology Glacial Geology	17/18	PhD	F	T	1977	4	1	C	0	1	1		1	0	
Menzies, J	Geomorphology Glacial Geology	16/17	PhD	F	T	1977	4	1	C	1	4		0	1	0	
Menzies, J	Geomorphology Glacial Geology	15/16	PhD	F	T	1977	4	1	C	0	2		1	0	0	
Pisaric, M	Climate Change	19/20	PhD	F	T	2012	2	0	C			5		2		Course reduction Chair
Pisaric, M	Climate Change	18/19	PhD	F	T	2012	2	1	C			5		2	1	Course reduction Chair + Directed reading course for 3 grad students
Pisaric, M	Climate Change	17/18	PhD	F	T	2012	3	1	C	1		4		2	1	
Pisaric, M	Climate Change	16/17	PhD	F	T	2012	4	0	C			4		2	1	
Pisaric, M	Climate Change	15/16	PhD	F	T	2012	4	0	C	1		1		2		
Schmidt, M	Petrology / Volcanology	19/20	PhD	AC	T	2009	2.5	0	C	0	0	1	0	1	0	

Table 5.1: Instructor Qualifications and Teaching Assignments Within the Program (Current + past four years)

Instructor Name	Demographics						Courses		Supervisions						Comments	
	Area of Expertise	Academic Year	Terminal Degree	Rank*	Tenure of Tenure Stream	Start Date	Undergraduate	Graduate	Core or Participating	Undergraduate Thesis	Major Research Paper	Graduate Thesis (Masters)	Graduate Thesis - Doctoral	Grad Committee Membership		Post-Doctoral Fellows
Schmidt, M	Petrology / Volcanology	18/19	PhD	AC	T	2009	0	0	C	0	0	3	0	3	0	Parental leave: February 1, 2018 to October 31, 2018 Sabbatical: November 1, 2018 to March 31, 2019
Schmidt, M	Petrology / Volcanology	17/18	PhD	AC	T	2009	0	0	C	2	0	3	0	3	0	Sabbatical: July 1, 2017 to January 31, 2018 Parental leave: February 1, 2018 to October 31, 2018
Schmidt, M	Petrology / Volcanology	16/17	PhD	AC	T	2009	2.5	1.0	C	1	0	3	0	3	0	
Schmidt, M	Petrology / Volcanology	15/16	PhD	AC	T	2009	2.0	0	C	1	0	2	0	2	1	
Turner, K	Hydrology, Geomatics	19/20	PhD	AC	T	2013	0	0	P	0	0	3	0	4	0	sabbatical
Turner, K	Hydrology, Geomatics	18/19	PhD	AC	T	2013	2	0	P	0	0	2	0	4	0	Taught two cross-listed courses in GEOG/ERSC (3P05 and 3P07)
Turner, K	Hydrology, Geomatics	17/18	PhD	AC	T	2013	1	0	P	1	0	2	0	4	0	

Table 5.1: Instructor Qualifications and Teaching Assignments Within the Program (Current + past four years)

Instructor Name	Area of Expertise	Demographics					Courses		Supervisions						Comments	
		Academic Year	Terminal Degree	Rank*	Tenure of Tenure Stream	Start Date	Undergraduate	Graduate	Core or Participating	Undergraduate Thesis	Major Research Paper	Graduate Thesis (Masters)	Graduate Thesis - Doctoral	Grad Committee Membership		Post-Doctoral Fellows
Turner, K	Hydrology, Geomatics	16/17	PhD	AC	T	2013	1	0	P	0	0	1	0	3	0	
Turner, K	Hydrology, Geomatics	15/16	PhD	AC	T	2013	1	1	P	0	0	1	0	3	0	Taught reading course

*F = Professor, AC = Associate, AT = Assistant, EM = Emeritus, AD = Adjunct, IN = Instructor, etc.

Table 5.2: Contributions by Instructors to Other Programs (Current + past four years)

Instructor Name	Area of Expertise	Year	Other Unit	Courses		Supervisions						Comments		
				Undergraduate	Graduate	Core or Participating	Undergraduate Thesis	Major Research Paper	Graduate Thesis - Masters	Graduate Thesis - Doctoral	Grad Committee Member		Post-Doctoral Fellow	
McCarthy, D.P.	Lichen Ecology	15/16	Biological Sciences	1	1	C	1		1		2			
McCarthy, D.P.		16/17		1		P								

Table 5.2: Contributions by Instructors to Other Programs (Current + past four years)

Instructor Name	Area of Expertise	Year	Other Unit	Courses		Supervisions						Comments	
				Undergraduate	Graduate	Core or Participating	Undergraduate Thesis	Major Research Paper	Graduate Thesis - Masters	Graduate Thesis - Doctoral	Grad Committee Member		Post-Doctoral Fellow
McCarthy, D.P.		17/18		1		P						1	
McCarthy, D.P.		18/19		1		P						2	
McCarthy, M		19/20	Earth Science, McMaster U	0.0	0.0	P	0	0	0	0	1	0	
McCarthy, M		18/19	Earth Science, McMaster U	0.0	0.0	P	0	0	0	0	1	0	
McCarthy, M		17/18	Earth Science, McMaster U	0.0	0.0	P	0	0	0	0	1	0	
McCarthy, M		16/17	Earth Science, McMaster U	0.0	0.0	P	0	0	0	0	1	0	
McCarthy, M		15/17	SSAS, Brock U	0.0	0.0	C	0	1	0	0	1	0	
Menzies, J	Glacial Geology	19/20	Physical geography	3		C							
Pisaric, M	Climate change	17/18	SASS		1	P			3	0	2	1	Course reduction Chair - Geography
Schmidt, M	Petrology / Volcanology	19/20	Earth Sciences, Univ. Western Ontario	0	0	0	0	0	0	1	0	0	
Schmidt, M	Petrology / Volcanology	18/19		0	0	0	0	0	0	0	0	0	Sabbatical and parental leaves
Schmidt, M	Petrology / Volcanology	17/18	Earth Sciences,	0	0	0	0	0	0	1	0	0	Sabbatical and parental leaves

Table 5.2: Contributions by Instructors to Other Programs (Current + past four years)

Instructor Name	Area of Expertise	Year	Other Unit	Courses		Supervisions						Comments	
				Undergraduate	Graduate	Core or Participating	Undergraduate Thesis	Major Research Paper	Graduate Thesis - Masters	Graduate Thesis - Doctoral	Grad Committee Member		Post-Doctoral Fellow
			Univ. Western Ontario										
Schmidt, M	Petrology / Volcanology	16/17	Physics, Univ. Guelph	0	0	0	0	0	0	0	1	0	
Schmidt, M	Petrology / Volcanology	15/16	Earth Sciences, Univ. Western Ontario	0	0	0	0	0	0	1	0	0	
Turner, K	Hydrology, Geomatics	19/20	Geog/Tour Studies	4	0	C	0	0	0	0	0		
Turner, K	Hydrology, Geomatics	18/19	Geog/Tour Studies	4	0	C	0	0	0	0	0		
Turner, K	Hydrology, Geomatics	17/18	Geog/Tour Studies	4	0	C	1	0	0	0	0		
Turner, K	Hydrology, Geomatics	16/17	Geog/Tour Studies	4	0	C	1	0	0	0	0		
Turner, K	Hydrology, Geomatics	16/17	Sustainability Science (ESRC)		0.5	P			2	0	3		Taught half of a half course (SSAS5P11) - overload
Turner, K	Hydrology, Geomatics	15/16	Geog/Tour Studies	4	1	C	0	1	0	0	0		Taught graduate reading course (GEOG5V11/ERSC5 P96) - overload
Turner, K	Hydrology, Geomatics	15/16	Sustainability Science (ESRC)		0.33	P			1	0	2		Taught a third of a half course

Table 5.2: Contributions by Instructors to Other Programs (Current + past four years)

Instructor Name	Area of Expertise	Year	Other Unit	Courses		Supervisions						Comments	
				Undergraduate	Graduate	Core or Participating	Undergraduate Thesis	Major Research Paper	Graduate Thesis - Masters	Graduate Thesis - Doctoral	Grad Committee Member		Post-Doctoral Fellow
													(SSA5P11) - overload

5.1.3: Staff Complement

Indicate the availability of sufficient staff (technical and administrative) to support the proposed program, providing information on permanent staff that will have teaching responsibilities (Table 5.4) and all administrative staff (Table 5.5), directly associated with the program. Requests for any new staff positions required for the program should be clearly identified and the rationale for the positions reported.

Table 5.4: Permanent Staff with Teaching Responsibilities Associated with the Program (Current + past four years)

Name	Academic Year	Start Date	Position	Contribution
Astride Sillis	19/20	July/03	Senior Laboratory Co-ordinator	Instructor 1P92 - 2018/19 <u>Instructor 1P94 - 2020/21</u>

Table 5.5: All other Administrative Support Staff directly associated with the Program (Current + past four years)

Name	Academic Year	Start Date	Position	Comment
<u>Caroline RomeroTassia Gabbidon</u>	19/20	<u>JanAug/19</u> <u>7</u>	Administrative Assistant	
Mike Lozon	19/20	Aug/88	Cartographer	
Martin Ouellette	19/20	Jan/08	Technician	

Comment on the adequacy of the staff complement to support delivery of the proposed program.

As stated in section 5.1.2 e, the initial offering of this program can easily be accommodated with the existing staff. Success of the proposed program will require commitment to hire additional support staff, especially staff that can contribute to teaching components. This will most likely be another senior lab demonstrator who will also be able to contribute to online and media components.

Clearly identify and provide the rationale for any new staff positions required to support delivery of the program. Include the results of consultation with the relevant Dean(s).

No additional staff positions are required for the proposed program for the first 5 years.

5.1.4: Fiscal Resources

With respect to financial resources, Proponents will provide a business plan for the proposed program for the first five (5) years of operation that includes the utilization of existing resources and clearly identifies required new resources. (Table 5.6 is in development and will be posted when ready.)

Existing resources to the Department will suffice for the first 5-2 years of operation. No permanent faculty or staff are required, merely overload stipends. These stipends will enable us to offer all new courses without having to compromise the existing ERSC programs. Beyond year 1 we suggest that the equivalent of 1 overload stipend be allocated to the Directorcoordinator of the program who will also serve as the head of the committee overseeing the program.

As noted above, we suggest that by year 3 a new faculty position be created to both strengthen the interdisciplinary nature of this degree and to solidify the unique nature of the program. This person could potentially teach several of the new courses, all of which are located in years 3 and 4 of this program.

-Please note that we anticipate the new courses, especially the 3rd yr Planetary Science and Science writing Communication to be popular with existing ERSC majors as well. Hence costs for these courses cannot be solely attributed to the BASc program.

The table below is based on the following assumptions:

- 1) Some attrition from year to year, possibly due to switching majors
- 2) Domestic students only initially (we aim to advertise locally and it is simpler)
- 3) Constant Tuition at current rate \$6,089.40
- 4) Constant overload stipend of \$7141000

Additional Explanations:

Stipends Year 1 none

Stipends Year 2 1 Unspecified 2yr ERSC(Directorcoordinator?)

Stipends Year 3 1 Unspecified ERSC, ERSC 3P04, ERSC 3P94+ New faculty position (estimated starting salary \$100,000)

Stipends Year 4 3 Unspecified + ERSC, ERSC 3P04, ERSC 3P94, ERSC 4F95 (2), ERSC 4F96(2)Continuation of faculty position

Stipends Year 5 4 Unspecified + Continuation of faculty positionERSC, ERSC 3P04, ERSC 3P94, ERSC 4F95(2), ERSC 4F96(2) |

[FF9]

The increased number of stipends in years 4 and 5 are designed to address increased demand for upper year courses, which are designed as low enrollment courses. The added stipends will allow for additional sections of those course. This is anticipated to be an issue in CPCF but may also apply to the other departments.

In addition, we have added extra funds for markers and Tas under "Other Expenses" in years 4 and 5 to handle the additional needs due to increased enrollments.

Marketing costs: production of brochure, addition to website. Cost to increase as initial marketing targets local sources only as outlined in section 4.1.

Equipment: Possible purchase of video equipment, computers with specialized software (e.g. Adobe)

Experiential Education: Primarily Field trips, which will benefit both BSc and BA majors.

Table 5.6: Proposed Budget for New Program in BAsc Earth and Planetary Science Communication

	Year 1 Forecast	Year 2 Forecast	Year 3 Forecast	Year 4 Forecast	Year 5 Forecast
<i>Insert Academic Year ==></i>	<u>22/23</u>	<u>23/24</u>	<u>24/25</u>	<u>25/26</u>	<u>26/27</u>
ENROLLMENT (Headcount)					
<u>Intake</u>	<u>10</u>	<u>12</u>	<u>15</u>	<u>20</u>	<u>22</u>
<u>Returning Students Year 2</u>		<u>9</u>	<u>11</u>	<u>13</u>	<u>18</u>
<u>Returning Students Year 3</u>			<u>9</u>	<u>11</u>	<u>13</u>
<u>Returning Students Year 4</u>				<u>9</u>	<u>11</u>
<u>Returning Students Year 5</u>					<u>1</u>
Total Enrollment	10	21	35	53	65
Domestic vs International Enrollment					
<u>Domestic</u>	<u>10</u>	<u>21</u>	<u>35</u>	<u>53</u>	<u>72</u>
<u>International</u>					
Total Enrollment	10	21	35	53	72
Annualized Tuition Rate					
<u>Domestic Tuition</u>	<u>\$6,089.40</u>	<u>\$6,089.40</u>	<u>\$6,089.40</u>	<u>\$6,089.40</u>	<u>\$6,089.40</u>
<u>International Tuition</u>					
REVENUE					
Domestic					
<u>Tuition</u>	<u>\$6,089.40</u>	<u>\$6,089.40</u>	<u>\$6,089.40</u>	<u>\$6,089.40</u>	<u>\$6,089.40</u>
<u>Ancillary Fees</u>					
Total Domestic	\$6,089.40	\$6,089.40	\$6,089.40	\$6,089.40	\$6,089.40
International					
<u>Tuition</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
<u>Ancillary Fees</u>					
Total International	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Revenue					
<u>Tuition Revenue</u>	<u>\$60,894.00</u>	<u>\$127,877.40</u>	<u>\$213,129.00</u>	<u>\$322,738.20</u>	<u>\$438,436.80</u>
<u>Ancillary Revenue</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>

Special Purpose Funding (if applicable)					
TOTAL REVENUE	\$60,894.0 0	\$127,877. 40	\$213,129. 00	\$322,738. 20	\$438,436. 80
EXPENSES					
New Faculty Positions (Number)			1.00	1.00	1.00
Salaries (salary rate*number)			\$100,000. 00	\$105,000. 00	\$110,250. 00
Benefits (17% of salary)			\$17,000.0 0	\$17,850.0 0	\$18,742.5 0
New Staff Positions (Number)					
Salaries (salary rate*number)					
Benefits (23% of salary)					
Stipends (Number)	0	1	1	3	4
Salaries (salary rate * number)	\$0.00	\$7,141.00	\$7,141.00	\$21,423.0 0	\$28,564.0 0
Benefits (XX% of Salary)					
TOTAL STAFFING COSTS	\$0.00	\$7,141.00	\$124,141. 00	\$144,273. 00	\$157,556. 50
ITS Costs					
Library Costs					
Operating Costs					
Equipment (new and replacement)	\$0.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00
Marketing	\$5,000.00	\$5,000.00	\$7,500.00	\$7,500.00	\$7,500.00
Scholarships and Bursaries					
Experiential Education		\$2,000.00	\$4,000.00	\$10,000.0 0	\$10,000.0 0
Indirect Costs (RATE?)					
Other Expenses (additional TA/markers)				\$5,000	\$10,000
TOTAL EXPENSES	\$5,000.00	\$19,141.0 0	\$140,641. 00	\$171,773. 00	\$190,056. 50
GROSS REVENUE	\$55,894.0 0	\$108,736. 40	\$72,488.0 0	\$150,965. 20	\$248,380. 30
Weighted Grant Units					
To be Negotiated Negotiated					

5.1.5: Space

Provide evidence that adequate physical space (office, teaching space, research, etc.) exists to accommodate participants (faculty, staff and students) in the program.

Identify and provide the rationale for any new space required for the program. Evidence that the Proponents have consulted with the University Committee on Space regarding the program's space requirements must be included.

The program does not request new faculty or staff ~~a-until year 3t the onset~~, hence existing office space is adequate. Because multiple courses within the program have labs, lab space is a requirement. Labs within ERSC generally do not require water or chemicals, hence wet lab space is not needed. There is however a requirement for open table space, to lay out samples and maps. The department current has 3 labs that are well suited to this activity (D308, D309, 319). Occupancy with these room is limited to 40 students per lab session. When enrollment has exceeded this number in the past, the solution has been to offer multiple lab sections. This would be the most feasible solution again if the need arose.

Renovations for D208 are currently in progress. A portion of this room will host specialized photographic and computer equipment for ERSC 3P92 and ERSC 4P92 while the rest of the room will have flexible workspace ideally suited for experiential student projects.

5.1.6: Support Services

Provide evidence that there are adequate support services (library, information technology, CPI, Co-op, etc.) for both teaching and research, to sustain the quality of scholarship and research activity produced by undergraduate students. Evidence for such support services will document consultation and include a report, from all appropriate units, detailing the impact of the proposed program on existing resources.

For each specific support service, identify and provide the rationale for any new resources required to support delivery of the program.

Library

Provide information about the library holdings, availability of and access to the library resources relevant to support the proposed program.

The library has been consulted regarding resources and has provided a letter of support. That letter has been attached as Appendix F.

Clearly identify and provide the rationale for any new library resources required to support delivery of the program. Include evidence of consultation with the Library.

No new resources are required.

Information Technology Services (ITS)

Provide information regarding the hardware, software/internet, audio-visual, and other ITS resources relevant to support delivery of the proposed program.

No specialized hardware is required. Specialized AV equipment (e.g cameras) for student projects in 3rd an 4th year exist within the department. In addition, the maker space in the library will have additional equipment and resources available.

Clearly identify and provide the rationale for any new ITS resources required to support delivery of the program. Include evidence of the consultation with ITS.

No new hard or software is required specifically to support this program. There was no need to consult with ITS.

Co-op, Career and Experiential Education (CCEE)

Provide information regarding the CCEE resource implications for existing resources relevant to support delivery of the proposed program.

At the initial stages of the program, no co-op option is available, though this might be an attractive option as the program matures. This means that existing CCEE resources will be adequate. The department has a strong relationship with the Experiential Education Coordinator of Faculty of Mathematics and Science. We have ongoing discussions with that office regarding experiential learning options available and will continue to do so for this program.

Clearly identify and provide the rationale for any new CCEE resources required to deliver the program. Include evidence of the consultation with CCEE.

No new CCEE resources are required in the initial stages of the program.

Additional Resources

Provide information regarding additional resources relevant to support delivery of the proposed program.

No additional resources are required for the start of the proposed program. Additional resources required as the program matures in years 3 and beyond are clearly outlined in sections 5.1.1.1e and 5.1.4.

Clearly identify and provide the rationale for any additional resources required to deliver the program. Include evidence of the consultation where appropriate.

None required.

5.2: Resources for Undergraduate Programs (IQAP 3.5.11)

Provide evidence of and document planning related to:

The availability and qualifications of adequate numbers of faculty and staff to achieve the goals of the program; or

As stated above, the ERSC department has the adequate complement to achieve the goals for the program. The long-term survival of a successful program will require commitment to replace retiring faculty in strategic areas and to the availability of support staff. In the CPCF department, there are adequate faculty numbers—the department has hired a number of new full-time, tenure-track faculty in recent years.

Established plans as well as commitments from the appropriate individuals/units to provide the necessary resources for implementation of the program;

The anticipated student numbers are well within the range that the Department of Communication, Popular Culture and Film can accommodate.

Planned/anticipated class sizes;

The current cohort of ERSC Science majors is in the range of 10-20 students per year. A similar sized cohort, at least initially, of BAsSc students will result in 2nd to 4th year class sizes in the range of ~40 students. These class sizes are well suited for pedagogical needs and can be arranged in our current primary lecture rooms, which also hold required teaching material.

6.0: Quality and Other Indicators (IQAP 3.5.12)

6.1: Quality of the Faculty

Provide appropriate indicators (e.g., qualifications, research, innovation and scholarly record) that document evidence of the quality of the faculty. The expertise of the faculty will be documented through the completion and inclusion of: Table 6.1 - Intellectual Contributions; Table 6.2 - External Research Grants and Contracts; and, Table 6.3 - Internal Research Grants and Contracts.

Comment on how the expertise and quality of faculty, as judged by the intellectual contributions and research grants and contracts received, will contribute to the success of the proposed program.

Please see attached tables. Faculty within ERSC are generally active researchers, with most of them having research grants and supporting graduate students.

Table 6.1: Intellectual Contributions (Past Eight Years)

Faculty Name	A. Publication of books and monographs	B. Contributions to edited books	C. Papers in peer refereed journals	D. Peer reviewed abstracts	E. Papers delivered at conferences and professional meetings	F. Contributions to panels, workshops, and clinics	G. Invited Presentations	H. Consulting (government, related professionals and agencies)	I. Preparation of instructional, clinical, curriculum or policy materials for such agencies	J. Editorial and refereeing duties	K. Creation, performance, direction, programming, design and staging of creative works for the public	L. Curation of juried exhibitions	M. Festivals and competitions adjudicated, master classes offered	N. Professional residencies	O. Development of software, hardware or equipment	P. Scholarly contributions to pedagogy	Q. Other scholarly contributions to agencies, communities, governments or organizations	R. Other publications (non-refereed) with significant public impact
Brand, U (18/19)			7	19	19	1	2			R							1	
Brand, U (17/18)			2	20	20	1				R							1	
Brand, U (16/17)			5	1	1		2			R			1					
Brand, U (15/16)			3	10	10		1			R			1				1	
Brand, U (14/15)			6	2	2					R			1					
Brand, U (13/14)			3	2	2					E&R			1					
Brand, U (12/13)			4	3	3					E&R			1					
Cheel, R	0	0	0	2	3	0	0	2		2							1	
Fueten, F	0	0	10	24	4	0	0	0	0	16	0	0	0	0	0	0	0	0
Head, H	1	9	59	82	82	3	27			7								
McCarthy, D.P.		1	4		2	2	1	2							1			1
McCarthy, M	1	2	21	58	21	1	6	4		30							1	9
Menzies, J	1	1	3		1	2	1			4								

Table 6.1: Intellectual Contributions (Past Eight Years)

Faculty Name	A. Publication of books and monographs	B. Contributions to edited books	C. Papers in peer refereed journals	D. Peer reviewed abstracts	E. Papers delivered at conferences and professional meetings	F. Contributions to panels, workshops, and clinics	G. Invited Presentations	H. Consulting (government, related professionals and agencies)	I. Preparation of instructional, clinical, curriculum or policy materials for such agencies	J. Editorial and refereeing duties	K. Creation, performance, direction, programming, design and staging of creative works for the public	L. Curation of juried exhibitions	M. Festivals and competitions adjudicated, master classes offered	N. Professional residencies	O. Development of software, hardware or equipment	P. Scholarly contributions to pedagogy	Q. Other scholarly contributions to agencies, communities, governments or organizations	R. Other publications (non-refereed) with significant public impact
Pisaric, M	1	2	37		113		8			15								
Schmidt, M	0	0	33	75	16	8	21	0	0	24	0	0	0	0	0	0	0	2
Turner, K	0	0	12	0	42	18	6	3	0	9	0	0	0	0	0	0	0	
Insert or remove rows as necessary																		

Table 6.2: Research Grants and Contracts - External Sources (past eight years)

Name	Year	CFI		CIHR		NSERC		SSHRC		Other Major Granting Agencies		Other Grants & Contracts		Year Total	Individual Total
		#	Amount	#	Amount	#	Amount	#	Amount	#	Amount	#	Amount		
Brand, U	19/20					1	27,000							0	
Brand, U	18/19					1	27,000			1	1.76 mil			0	
Brand, U	17/18					1	27,000			1	1.76			0	
Brand, U	16/17					1	27,000			1	1.76			0	
Brand, U	15/16					1	27,000							0	
Brand, U	14/15					0	0							0	
Brand, U	13/14					1	27,000							0	
Brand, U	12/13					1	27,000							0	
Fueten, F	19/20	0		0		1	25000	0		0		0		25000	
Fueten, F	18/19	0		0		1	25000	0		0		0		25000	
Fueten, F	17/18	0		0		1	27000	0		0		0		27000	
Fueten, F	16/17	0		0		1	27000	0		0		0		27000	
Fueten, F	15/16	0		0		1	27000	0		0		0		27000	
Fueten, F	14/15	0		0		1	27000	0		0		0		27000	
Fueten, F	13/14	0		0		1	27000	0		0		0		27000	
Fueten, F	12/13	0		0		1	30000	0		0		0		30000	215000
Head, M	10/11					1	28000							28000	
Head, M	11/12					1	28000							28000	
Head, M	12/13					1	28000							28000	
Head, M	13/14					1	28000							28000	
Head, M	14/15					1	28000							28000	
Head, M	15/16					1	33000							33000	
Head, M	16/17					1	33000							33000	
Head, M	17/18					1	33000							33000	
Head, M	18/19					1	33000							33000	
McCarthy, D.P.	11/12											3	98,800	98,800	98,800
McCarthy, D.P.	12/13													0	
McCarthy, D.P.	13/14													0	

Table 6.2: Research Grants and Contracts - External Sources (past eight years)

Name	Year	CFI		CIHR		NSERC		SSHRC		Other Major Granting Agencies		Other Grants & Contracts		Year Total	Individual Total
		#	Amount	#	Amount	#	Amount	#	Amount	#	Amount	#	Amount		
McCarthy, D.P.	14/15													0	
McCarthy, D.P.	15/16											1	19,000	19,000	19,000
McCarthy, D.P.	16/17													0	
McCarthy, D.P.	17/18													0	
McCarthy, D.P.	18/19											1	16,000	16,000	16,000
McCarthy, F	12/13	0	0	0	0	0	0	0	0	0	0	1	6000		
McCarthy, F	13/14	0	0	0	0	0	0	0	0	0	0	1	6000		12,000
McCarthy, F	14/15	0	0	0	0	0	0	0	0	0	0	1	10,000	0	22,000
McCarthy, F	15/16	0	0	0	0	1	10,000	0	0	0	0	1	20,000	0	52,000
McCarthy, F	16/17	0	0	0	0	1	14,500	0	0	0	0	2	21,550	0	80,050
McCarthy, F	17/18	0	0	0	0	0	0	0	0	0	0	1	4550	0	92,600
McCarthy, F	18/19	0	0	0	0	1	23,000	0	0	0	0	0	0	0	115,600
McCarthy, F	19/20	0	0	0	0	1	23,000	0	0	0	0	1	50000 est. (pending)	0	188,600
Menzies, J	10/15									1	3000 eu/y				15,000
Menzies, J	10/14									1	3000 eu/y				12,000
Menzies, J	18/20								10,000						10,000
Pisarcic, M	19/20					4	114,000.00	1	3000.00	1	50,000.00			167,000.00	
Pisarcic, M	18/19					4	114,000.00	1	3000.00	2	104,538.00			221,538.00	
Pisarcic, M	17/18					3	94,000.00			1	222,436.00			316,436.00	
Pisarcic, M	16/17					3	62,600.00			3	129,500.00			192,100.00	
Pisarcic, M	15/16					2	37,600.00			2	65,550.00			103,150.00	
Pisarcic, M	14/15					2	37,600.00			2	33,850.00			71,450.00	
Pisarcic, M	13/14					2	37,600.00			3	51,950.00			89,550.00	
Pisarcic, M	12/13					3	97,350.00			4	76,900.00			174,250.00	1,335,474.00

Table 6.2: Research Grants and Contracts - External Sources (past eight years)

Name	Year	CFI		CIHR		NSERC		SSHRC		Other Major Granting Agencies		Other Grants & Contracts		Year Total	Individual Total
		#	Amount	#	Amount	#	Amount	#	Amount	#	Amount	#	Amount		
Schmidt, M	19/20	0	0	0	0	1	27,000	0	0	2	70,000	0	0	97,000	
Schmidt, M	18/19	0	0	0	0	1	27,000	0	0	2	70,000	0	0	97,000	
Schmidt, M	17/18	0	0	0	0	1	27,000	0	0	2	70,000	0	0	97,000	
Schmidt, M	16/17	0	0	0	0	1	27,000	0	0	2	70,000	0	0	97,000	
Schmidt, M	15/16	0	0	0	0	1	27,000	0	0	1	50,000	0	0	77,000	
Schmidt, M	14/15	0	0	0	0	1	27,000	0	0	1	50,000	0	0	77,000	
Schmidt, M	13/14	0	0	0	0	1	27,000	0	0	1	50,000	0	0	77,000	
Schmidt, M	12/13	0	0	0	0	1	27,000	0	0	1	50,000	0	0	77,000	696,000

Insert or remove rows as necessary

Table 6.3: Research Grants and Contracts - Internal Sources (past eight years)

Instructor Name	Year	BUAF		CIHR Internal		SSRC Internal		Dean/Faculty		Department		Other		Year Total	Individual Total
		#	Amount	#	Amount	#	Amount	#	Amount	#	Amount	#	Amount		
Brand, U	16/17											1	4000	0	
Brand, U	15/16											1	4000	0	
Brand, U	14/15											1	2200	0	
Head, M	12/13	1	1000											1000	
McCarthy, F	12/13			0	0	0	0						6500	6500	6500
McCarthy, F	13/14		0	0	0	0	0		500				7000	7500	14000
McCarthy, F	14/15												2500	2500	16500
McCarthy, F	15/16								500				10,000	10,500	27000
McCarthy, F	16/17												10,000	10,000	37000
McCarthy, F	17/18								500				7260	7760	44760
McCarthy, F	18/19													0	44760
McCarthy, F	19/20													0	44760

Table 6.3: Research Grants and Contracts - Internal Sources (past eight years)

Instructor Name	Year	BUAF		CIHR Internal		SSRC Internal		Dean/Faculty		Department		Other		Year Total	Individual Total
		#	Amount	#	Amount	#	Amount	#	Amount	#	Amount	#	Amount		
Menzies, J	18/20								10,000					0	20,000
Pisarcic, M.	18/19							1	3000.00					3000.00	
Pisarcic, M.	17/18							1	3000.00					3000.00	
Pisarcic, M.	16/17											1	20,000.00	20,000.00	
Pisarcic, M.	15/16											1	20,000.00	20,000.00	
Pisarcic, M.	14/15											1	20,000.00	20,000.00	66,000.00
Schmidt, M	19/20	0	0	0	0	0	0	0	0	0	0	0	0	0	
Schmidt, M	18/19	0	0	0	0	0	0	0	0	0	0	0	0	0	
Schmidt, M	17/18	0	0	0	0	0	0	0	0	0	0	0	0	0	
Schmidt, M	16/17	0	0	0	0	0	0	0	0	0	0	0	0	0	
Schmidt, M	15/16	0	0	0	0	0	0	0	0	0	0	0	0	0	
Schmidt, M	14/15	0	0	0	0	0	0	0	0	0	0	0	0	0	
Schmidt, M	13/14	0	0	0	0	0	0	0	0	0	0	0	0	0	
Schmidt, M	12/13	0	0	0	0	0	0	0	0	0	0	0	0	0	
Insert or remove rows as necessary															

6.2: Faculty Expertise Linked to the Program Structure

With reference to the program structure outlined in Section 3 explain how the faculty expertise will contribute to ensuring the intellectual quality of the student experience.

Several professors study how Earth Surface Processes have changed the planet. Dr. Rick Cheel studies structures that are preserved in sediment and sedimentary rocks to provide a basis for interpreting the history of changing environments on Earth and other planets in the solar system. Dr. John Menzies is a glacial sedimentologist working on glaciers and glacial sediments in many parts of the world. He recently published a major international book on Past Glacial Environments. Dr. Uwe Brand is an Isotope Carbonate-hydrogeochemist interested in stable and radiogenic isotopes and their application to climate/environmental change in epeiric seas and oceans of the geologic past, and the evaluation of the ecologic health of modern watersheds.

Several professors focus their research on the more immediate geological history, the time that humans have played an active role in shaping the planet. Dr. Martin Head's research includes refining the geological time scale for the past 2.6 million years and is helping to formulate a new geological epoch, the Anthropocene. That is the geological period during which human activity has been the dominant influence on the climate and the environment. This work also involves Dr. Francine McCarthy. Dr. Francine McCarthy works on the sediment record of freshwater lakes to interpret changes in the quantity and quality of freshwater resources in response to climate change and human impact on watersheds. And Dr. Kevin Turner is working in identifying how changing climate in the Canadian north is impacting sensitive landscapes and downstream lakes and rivers. Dr. Dan McCarthy is an ecologist with interests in lichenometry, alpine environmental change and the use of lichens in biomonitoring. Dr. Mike Pisaric employs a number of paleoecological techniques to carry out his research, including lake-sediment analysis (fossil pollen, stomata and charcoal) and dendrochronology. He has carried out research in a number of regions throughout the world, including Siberia, western Canada and Montana (USA) and has ongoing research projects in Northwest Territories and southeast British Columbia.

Two professors use methods and knowledge from terrestrial geology to investigate the planet Mars in preparation for future missions that will ultimately include human visits to Mars. Dr. Mariek Schmidt is an igneous petrologist and volcanologist, and a member of NASA's Mars Science Lab mission that controls the rover Curiosity as it explores Gale Crater. [She is also a participating scientist with NASA's Perseverance rover, which touched down on Mars Feb. 18, 2021.](#) Dr. Frank Fueten has worked with the European Space Agency for the past fifteen years to interpret the history of Mars based on high-resolution satellite imagery.

Many of these faculty members have extensive experience in a variety of forms of outreach, including from school visits, public lectures, media interviews and contributing to museum displays.

7.0: Student Demand (IQAP 3.5.7)

Provide evidence of the existence of a population of potential students to whom this program would be of interest by providing data documenting the demand for the new degree/program on the part of potential students including:

a) *The origin of the student demand (local, regional, domestic and/or international);*

Given that the proposed program is unique, it is not possible to draw enrollment figures for comparative programs. However, the program aims to increase the students understanding of the Earth and the Planetary system and provide them with good communication skills. There is a direct link between an understanding of the Earth and an understanding of environmental and climate change issues as well as a direct correlation with scientific literacy. Scientific literacy is an important issue and a 2017 Leger survey commissioned by the Ontario Science Centre (<https://www.ontariosciencecentre.ca/Media/Details/457/>) indicated that “82% of Canadians want to know more about science and how it affects the world.” That the majority of Canadians want to know more about science, while a minority of University applicants actually apply to STEM programs is a clear indication that the specific requirements of a STEM are an obstacle to many students. Interestingly there appears to be an increase in the proportion of students enrolling in STEM (<http://higherstrategy.com/application-statistics/>) over the last several years. We would argue that this also suggests that a large pool would take advantage of the new program.

b) *Evidence of basis for the projected five (5) year enrollment presented in Section 4.3;*

Statistics from the Registrar’s office for a 5 yr trend of student having taken Earth and Space Science (SES4U) show no significant trends in the percentage of students who have taken this course. Unfortunately, the availability of this optional course is not directly linked the popularity of the subject. Even worse, the significant changes to the current curriculum will impact that trend in as yet unknown ways.

c) *Expected duration for the student demand;*

The issues that underly the proposed program (Earth, Climate change, Solar system exploration) will be amongst the major news drivers in our Society in the foreseeable future. Even in a year where the covid pandemic has reasonably dominated all forms of news, the large number of climate events, environmental issues and the landing of a new Martian rover have continued to make headlines. Similarly, the role of media and the range of media are destined to increase in the foreseeable future. Hence it is safe to assume that the expected student demand will remain and increase in the future.

d) *Evidence of the level of professional interest, if applicable and,*

In both 2018 and 2019, Brock’s departmental representative presented the concept for our BASc program at the annual meeting of the Council of Chairs of Canadian Earth Science Departments.

To gauge interest amongst professionals in the science Communication field we also contacted a number of scientific blogger as well as staffers at Gizmodo and Ars Technica, who specialize in Earth Science related subjects. Most did not respond, though we received comments from Dr. Erik Klemetti, Associate Professor, Department of Geosciences, Department of Narrative Journalism, Denison University and George Dvorsky, Senior Staff Reporter, Gizmodo Media Group. We were also able to discuss this proposal with Jay Ingram, CM, the well know Canadian author, broadcaster and science communicator. Their responses are presented in section 9.

NOTE: the Ministry of Advanced Education and Skills Development will consider enrollment in competing and comparable programs at other institutions when evaluating potential demand for the proposed program.

8.0: Societal Need (IQAP 3.5.8)

Provide evidence of a societal need for students who have successfully completed the proposed program. Proponents will describe the demand for graduates of the proposed degree/major on the part of society by addressing the following:

- a) Various dimensions of societal need for graduates (socio-cultural, economic, scientific, technological, etc.), with examples of career paths for graduates;

The fact that Canada's government issued a 444 page report (https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/energy/Climate-change/pdf/CCCR_FULLREPORT-EN-FINAL.pdf) which is the first report in a series entitled "Canada in a Changing Climate: Advancing our Knowledge for Action" is a clear indication that there is need for individuals who understand the consequences and are able to communicate them. A proper understanding of science is required to be able to communicate it. In terms of career paths for graduates there are numerous options.

~~Presenting science to the public has traditionally been the task of scientific journalists, which in the best-case scenario, have background training in science. With the rise of social and digital media, traditional outlets such as newspapers have been partially replaced by digital media site. Older digital media sites such as ArsTechnica (<https://arstechnica.com/>), Space.com (<https://www.space.com/>) frequently feature stories on topics which are well suited to the educational background of graduates from this program. In 2017, the popular Gizmodo (<https://gizmodo.com/>) family of media sites actually created a specific sub-site entitled Earther (<https://earther.gizmodo.com/about-earther-1818814545>), which covers Earth and Environmental science stories, presented by contributors who have a science background. In short there is a pathway for graduates who want to work in a digital media environment. However, t~~
The largest number of graduates will most likely find jobs in a variety of capacities within industry. ECO Canada Labour Market Research (<https://www.eco.ca/>) conducts research on many of aspects of the environmental labour market and publishes their results in reports (<https://www.eco.ca/research/catalogue/>). Their research is "funded by the

Government of Canada's Sectorial Initiatives program and adheres to strict guidelines." In a 2017 report entitled: Selected Environmental Sub-Sectors: Current Job Trends and Future Growth (<https://www.eco.ca/research/report/careers-selected-environmental-sub-sectors/>), they investigated the job trends in several environmental sub-sectors. The sub-sector most relevant to this program proposal was entitled "Communication and Public Awareness (CPA)". CPA members were defined as follows "CPA professionals communicate environmental information, promote environmental programs, and assure compliance with regulations. They are trained in disciplines such as Communication, physical sciences, engineering, and marketing." Areas in which CPA professionals practised included 10 distinctive areas: Public Engagement, Planning, Indigenous Communication, Media & Public Relations, Project & Program Management, Environmental Management, Communication Specialists, Community-Based Stewardship, Public Health Communication, Marketing & Promotion (Report, Fig 4). For a full description of each of these areas, please see page 9 of the above reference report. CPA work is divided into two broad areas of internal Communication and external Communication. Internal Communication is defined as "gathering external information and disseminating it to internal audiences, often with the goals of assuring compliance with regulations and/or promoting environmental and corporate social responsibility programs. External Communication focusses on simplifying complex information for general audiences, and is needed in all audience sectors (government, private, and public)." (CPA report, page 9). In 2015, 20,943 professionals were working in these capacities in the environmental sector. In a 2016 survey of employers, ECO Canada found that 22% of employers had difficulties finding individuals, often related to a lack of adequate work experience. In addition to industry and public relations roles, presenting science to the public has traditionally been the task of scientific journalists who, preferably, have background training in science. With the rise of social and digital media, traditional outlets such as newspapers have been partially replaced by digital media sites. Older digital media sites such as ArsTechnica (<https://arstechnica.com/>), Space.com (<https://www.space.com/>) frequently feature stories on topics which are well suited to the educational background of graduates from this program. In 2017, the popular Gizmodo (<https://gizmodo.com/>) family of media sites actually created a specific sub-site entitled Earther (<https://earther.gizmodo.com/about-earther-1818814545>), which covers Earth and Environmental science stories, presented by contributors who have a science background. In short there is a pathway for graduates who want to work in a digital media environment.

b) Geographic scope of the societal need for graduates (local, regional provincial, national, international); and,

In addition to the CPA subsector, which we deem to be the most appropriate for this program, the report also included the Education and Training (ET), Research and Development (RD), and Policy and Legislation (PL) environmental sub-sectors. For the investigation of the regional demand, the report did not separate the demand by sub-sectors, but merely reported the demand for professionals of all

three sub-categories is most significant in Ontario and British Columbia. The report does not provide a break-down for individuals in the CPA category, but overall demand for was strongest in Ontario, with 52% of jobs posted in Canada, while British Columbia employed 33% of professionals in these fields. Manitoba accounted for the lowest overall demand for jobs in 2015 (ECO report, Fig 3)

c) *Duration of the societal need;*

The ECO report clearly states will be an increase in the need for CPA professionals: “The CPA sub-sector is expected to see steady growth in demand for professionals, driven by strengthening of interest in environmental issues and a large volume of new environmental legislation and regulations. As well, the CPA sub-sector is seeing steady growth in the skill requirements for professionals, driven by the exploding mix of social and digital media and a trend towards science-based measurement of outcomes.” (ECO report, page22). The ECO report further suggests that employment in the CPA sector “is projected to grow b-y 4 .5% to 5 .1% annually”. (ECO report, page 26) Their projection suggests that demand for the CPA sector will grow to 31,785 professionals by 2024 (CPA report, page 27).

Evidence in support of the above may include:

The probable availability of positions upon graduation (e.g., include external letters of support from potential employers or governmental agencies). Describe and document career opportunities including non-academic positions for graduate degrees;

Graduates will have a solid background in Earth and Planetary Science and will be adapted at communicating ~~concepts~~ in a variety of formats. We expect graduates to be able to pursue a variety of careers:

~~Science reporting newspapers, web-publications, blogs
Careers will range from freelance contributor to staff contributor/editor in a variety of organizations (e.g. <https://arstechnica.com/>, <https://earth.gizmodo.com/>)~~

2)1) _____ Communication for government and NGOs

Governments at all levels as well as NGOs rely on communication of environmentally important information. That communication needs to be accurate and must include explanations of complex scientific issues that are accessible to the general public, particularly for policymaking.

(Note: Canadian Directory for Environmental Groups lists a large number of groups in a variety of environmental fields

(<https://managingearth.com/canadian-directory-for-environmental-groups/>.

Ontario alone has: 36 Conservation Authorities

(<https://conservationontario.ca/>), over 700 environmental groups addressing a range of issues (<http://rcen.ca/affiliate/oen>). the Ontario Environment

Network (<https://www.oen.ca/>) lists 107 environment groups)

3)2) _____ Communication for companies in environmental fields or in geologically sensitive areas.

Companies involved in larger sensitive projects will have a need to manage Communication.

(Note: Ontario alone has over 3,000 environment companies (<http://www.oneia.ca/page-694672>), the Canadian Directory for Environmental Groups (link above) has listings for many large companies and (<https://www.goodwork.ca/>) lists jobs in a variety of fields and includes “[Environmental education jobs](#)” and “[Science jobs](#), science education” amongst its many job filters.

4)3) _____ Communication for companies in traditional resource fields
Resource companies will increasingly have to address environmental issues and build bridges to the local population. This requires sensitivity, but also understanding of both mining and environmental issues and the ability to communicate effectively. An illustration that the industry is aware of this is this feature: <https://www.mining.com/mining-for-millennials/>, which is highlight this commentary (<https://www.linkedin.com/pulse/mining-industry-millennials-perspective-rutendo-munatsirei/>) written by a Communication major and intern at mining.com.

5)4) _____ Communication for companies taking part in space exploration and communication
While this is clearly a small sector at present, commercialization of space will increase in the near future. In addition to the well-publicized efforts of SpaxeX (<https://www.spacex.com/>) and Blue Origin (<https://www.blueorigin.com/>) there are multiple companies interesting in mining asteroids (https://en.wikipedia.org/wiki/Asteroid_mining see list of companies).

5) [Science reporting newspapers, web-publications, blogs](#)
[Careers will range from freelance contributor to staff contributor/editor in a variety of organizations \(e.g. <https://arstechnica.com/>, <https://earther.gizmodo.com/>\).](#)

In the case of professional programs, an assessment of the congruence of the proposed program with the regulatory requirements of the profession;

This is not a professional program.

Employment rates for graduates of existing and related programs; and

Because this program is unique there are no direct comparators available. Graduates of this program will, by design, not be qualified for careers in traditional Earth Science fields as they will lack the knowledge requirements specified by the multiple professional Geological Associations throughout the country. They will however also have significantly more science background than most graduates of

Communication degrees. The skills of being an excellent communicator is important in many careers and having a solid science background would also be considered an asset. Hence, while we suggest a number of employers that require a background in Earth and Planetary Science and include Media, Government agencies and NGOs and companies in a wide range of fields, the best estimates of employment are those for generalised science communicators. In Canada this data come from the ECO Canada Labour Market Research for the Communication and Public Awareness (CPA) sector. As stated above, in 2016 22% of employers had difficulties finding individuals and the strongest demand was for employers from Ontario. The ECO sector is expected to grow by 4-5% annually and was expected to grow until the end of their projection period of 2024. The closest comparator sector in the US for which we were able to locate data was that of technical writers for which the Bureau of Labor Statistics projected an increase of 8% until the end of their projection period. Hence, we suggest that there is a market for graduates with a background in Earth and Planetary Science and that an even larger market already exists for the transferable communication skills.

Employment outlook based on federal, provincial or sector reports, where available.

As stated above, the Canadian ECO report further suggests that employment in the CPA sector “is projected to grow by 4.5% to 5.1% annually”.

More evidence of growth in a field of scientifically literate graduates with good communication skills is available from the US. The Bureau of Labor Statistics (<https://www.bls.gov/ooh/media-and-communication/technical-writers.htm>) provides information on technical writers. While we recognize that this is not exactly equivalent to the training of our graduates, we would argue that the scientific literacy of our graduates is equivalent and also requires a good understanding of technical issues. The bureau identifies these jobs as: “*Technical writers, also called technical communicators, prepare instruction manuals, how-to guides, journal articles, and other supporting documents to communicate complex and technical information more easily. They also develop, gather, and disseminate technical information through an organization’s Communication channels.*” This falls within the skills set developed in our program. The bureau has the following outlook for such individuals: “*Employment of technical writers is projected to grow 8 percent from 2018 to 2028, faster than the average for all occupations. Employment growth will be driven by the continuing expansion of scientific and technical products. An increase in Web-based product support should also increase demand for technical writers. Job opportunities, especially for applicants with technical skills, are expected to be good*[XX10].”

The same site also includes projections for Public Relations Specialists (<https://www.bls.gov/ooh/media-and-communication/public-relations-specialists.htm>). This job is defined as “Public relations specialists create and maintain a favorable public image for the organization they represent.” The background for this profession, as listed here is: “Public relations specialists

typically need a bachelor's degree in public relations, journalism, communications, English, or business.” We note that *ist* does not require a background in science, but it does mention business. It is reasonable to assume that if an organization is involved in an aspect of the sciences, that background in science is desirable. The outlook for this job category is also favourable: “Employment of public relations specialists is projected to grow 7 percent from 2019 to 2029, faster than the average for all occupations. The need for organizations to maintain their public image will continue to drive employment growth. Candidates can expect strong competition for jobs at advertising and public relations firms and organizations with large media exposure.”

NOTE: the Ministry of Advanced Education and Skills Development may consider other sources of information related to societal and labour market need in evaluating the potential societal need for the proposed program.

9.0: Qualification for Public Funding (IQAP 3.5.13)

In providing the information in this section, proponents will consider:

Differences between the existing programs, including innovative and distinguishing aspects of the proposed program;

The only program that similarly combines science with Communication at the undergraduate level in Canada is a BSc in Science Communication with a focus on biology, chemistry or psychology. offered by Mount St. Vincent.

(http://www.msvu.ca/en/home/programsdepartments/professionalstudies/Department_of_Communication_Studies/Bachelor_of_Science_Science_Communication/default.aspx)

This program claims to be the first of its kind in Canada and has a goal ~~to~~ “to fill a gap in Canada’s need for well-qualified science communicators.” Students in this program must chose a focus in psychology, chemistry or biology. To be admitted into the program, students require: “Grade XII chemistry and a minimum of one other science, plus grade XI and XII academic or advanced mathematics. Applicants without the mathematics or chemistry requirements may be admitted conditionally and must acquire the prerequisites through elective or non-credit work before or during the first year of the program.” Hence this program has a more rigorous science requirement and is not focused on Earth and Planetary sciences. At the graduate level Laurentian University, in partnership with Science North, offers a 12-month Master’s in Science Communication or a 9-month graduate diploma in Science Communication. Entrance into ~~to the~~ program normally requires a “4-year Honours B.Sc. BAS, or B.Eng.” In summary, the only programs with some similarities are aimed at students who aim to receive or have already received a BSc degree. By contrast, our program aims to create a pathway for students ~~for students~~ with an interest in Earth and Planetary sciences, but who lack the background to complete a BSc. The other significant difference is that our program’s ~~is that the~~ focus is specifically on Earth and Planetary sciences.

Comments from other institutions regarding the proposed new program. Note: MAESD will seek input from other institutions regarding any new program proposals;

We report comments from the Council of Chairs of Canadian Earth Science Departments, representative of multiple Earth Science departments. In addition, we have also included comments from Dr, Klemetti, Denison University an academic, who is also a scientific blogger, from George Dvorsky, a senior staff reporter from Gizmodo and finally from Jay Ingram, CM, a well-known science communicator. While Mr. Dvorsky and Mr. Ingram do not represent academic institutions, we believe that their extensive experiences in science communication enabled them to provide relevant insights for this proposal.

Council of Chairs of Canadian Earth Science Departments:

Feedback from members of the Council of Chairs of Canadian Earth Science Departments was positive and supportive. The representative from Laurentian University pointed to similarities with the program they run in conjunction with Science North, even though the scope of that program is significantly different from the one proposed here. This immersive 9-12 month Science Communication program leads to an M.S.Com (or G.Dip) and is therefore not an undergraduate program.

Dr. Klemetti (<https://denison.edu/people/erik-klemetti>):

Dr. Erik Klemetti
Associate Professor
Department of Geosciences
Department of Narrative Journalism
Denison University

Based on your experiences, what are the potential merits of such a program?

Fundamentally, we need more scientifically literate people communicating to the public, communicating to politicians, developing policy for government, managing business interests and more. Clearly, a major like this would allow for graduates who understand the complexities of problems related to Earth Science like climate change, resource use and management and natural hazards.

Do you think there is a market for it? What do you think the potential career options for graduates of this program are?

There is and will be, especially regarding natural hazards, climate change and resources. The constantly evolving media communication environment is harder to predict, but there are many avenues graduates with such interest could follow in traditional and social media along with business and academic communication.

We would appreciate any thoughts or feedback you can provide and would be happy to address any questions you may have.

I think the key here is making sure to involve journalists or faculty who teach journalism in the program. Although you can train students in *understanding* how [\[to\]](#) communicate science, I have learned that it is invaluable to interact with people who have or continue to work in media. The skills in communicating *effectively and persuasively* are very challenging to master. On top of that, *repeated practice* in drafting and improving their communication skills is vital, especially in writing. This can be very time consuming for faculty as it involves detailed commenting on student writing and discussions with students about how to approach both their research for writing and the writing itself.

And if you don't mind, we would like to include quotes from your response in the proposal for the program.

Sure.

George Dvorsky, Senior Staff Reporter, Gizmodo Media Group:
george.dvorsky@gizmodo.com

Do you think there are potential merits to such a program?

Yes! This is an exciting field of inquiry, with discoveries both on Earth and elsewhere offering no shortage of relevant new data. The subject matter is inherently interesting and compelling, and students would find a program like this to be captivating.

Do you think there is a market for it?

Well, if our readership at Gizmodo is of any indication, absolutely yes—our readers love content having to do with Earth and planetary sciences.

What do you think the potential career options for graduates of this program are?

Huh, that's a tough one. Possibly, work at space agencies and geological institutions, both private and public. Perhaps overlap with atmospheric sciences and work having to do with climate change and communicating climate change to public and other stakeholders.

Hope that helps,
George

The following is a summary of comments made by Jay Ingram during a phone conversation on October 23, 2019. This summary has been reviewed and approved by Mr. Ingram:

Mr. Ingram had a number of thoughts on the subject matter. The first thought was that this was an interesting idea as he was not aware of any other programs that combined these two subjects. He suggested that it was important that these students would not just be thought of as Earth science communicators, but rather suggested that inherent in all science communication courses that there was value in simply being a good communicator. He stressed that the importance of being able to communicate clearly was important in a wide range of jobs. Many graduates would benefit from the communication skills in jobs outside the Earth Science field and that in fact the number of Earth Science specific jobs would be quite limited. Hence the communication skills should be able to stand on their own. He suggested that the program should include some social science courses (especially ~~P~~psychology) and possibly some other science courses, such as Biology, in order to provide more breadth.

Mr. Ingram expressed concern about the way science communication was taught in academia. He suggested that it was generally behind the times, citing as evidence that there was no sign that scientific literacy had actually increased over the last few decades. He suggested that the term science literacy should be abandoned because it was unclear what scientific literacy actually means and that it never achieved the goal that people set out for it several decades ago. One issue with science literacy is that it establishes a divide between those who know and those who don't. Good communication should be in the conversational mode, not in the teacher/pupil mode. The elimination of jargon is a pre-requisite of being a good science communicator. He stated that the issue is that the common elements of good communication among adult human beings, i.e. emotions, humor are often absent in scientific communication. To illustrate an example of good communication Mr. Ingram stated that he ran a national science communication workshop at the Banff Centre from 2005-2015 which recruited 20 young scientists for two weeks. The culmination of that workshop was to get the participants to design a new science communication website that included multiple layers of text, video and podcasts. Some of the most valuable aspects that resulted from the workshop came from the strong sense of collaboration as participants worked in groups. Participants became aware that collaboration is very important in communication. He suggested we encourage graduates to stay in touch post-graduation to engender a collegial sense of collaboration.

He also stated that one problem with science communication is that a percentage of the target audience will not be swayed by the evidence and referred to the Cultural Cognition project at Yale (<http://www.culturalcognition.net/>) as evidence.

Hence students embarking on a science career should be dissuaded of the notion that they will be able to change everybody's minds.

Coming back to the potential job market of graduates, Mr. Ingram suggested the undergrads should realize that the field they specialize in for their undergrad degree need not be the field in which they end up working. Students taking this program might be interested in science, but more interested in Communication. The science issues targeted in the program will be issues for the next several decades; hence the program is not badly situated. He did however state that he does not know what the specific market for graduates would be and suggested we do research to gauge the market for graduates. He pointed out that in Alberta APEGA (Association of Professional Engineers and Geoscientists of Alberta, <https://www.apega.ca/>) does a lot of outreach that might be helpful. Mr. Ingram's personal feeling was that there would be a need for graduates from such a program, but a problem lay in persuading potential employers that graduates from this new program was actually provide something they want.

Comments regarding health-related programs from the Ministry of Health and Long Term Care, if applicable;

This is not a health-related program.

Comments from other relevant stakeholders, as required; and

None required.

Comment on the impact of any proposed experiential learning components within the proposed program on experiential learning programs at other institutions, if applicable.

Not applicable.

10.0: Information Required by the Ministry for the Approval of New Programs

In addition to the above information required in the IQAP to satisfy the requirements of the Quality Assurance Framework, for the purposes of funding (i.e. grant allocation) for new programs the Ministry of Advanced Education and Skills Development (MAESD) requires that institutions specifically address the following in their request for program approval.

Describe how the proposed program is consistent with an area of strength and/or area of growth identified in the [Strategic Mandate Agreement](#) (SMA). If not aligned, describe how the program is consistent with the mission, aims, objectives and existing strengths of Brock.

As mentioned above, the program fits well with the 3 themes of Brocks SMA. The themes are:

1) Brock University seeks to prepare ***21st century citizens***: engaged, informed, capable of making difficult value judgments, unafraid to face challenges they have not encountered before.

The proposed program fits this theme perfectly and the theme description

could have been written specifically for this proposal. The proposal identifies an important, yet largely overlooked, societal need that is about to rapidly grow in importance and proposes to meet that need with resources from a undersubscribed area of the University.

2) Brock University aims to *maintain the focus on and support the research* of its faculty.

The proposal grows rather naturally out of the research interests of a core group of existing faculty members. This recognizes the integral relationship between teaching and research. Indeed “teaching” is the primary revenue-generating activity of most Canadian Universities and the funds from teaching are necessary to support the research infrastructure of the University, along with the expanding group of administrators who coexist symbiotically with academics who conduct the major functions of the University.

3) Brock University is a vigorous *member of its community, both local and global.*

The proposed program will make a very important contribution by preparing graduates who will play a key role in disseminating accurate and honest knowledge and information on scientific matters and participating in science discourse , at the and communities -community through to the global level.

Explain how the proposed program fits with Brock’s current program offerings and the University’s capacity to deliver the proposed program.

The program fits well with Brock’s current program offerings because it primarily utilises existing courses and builds on Brock’s culture of offering interdisciplinary programs. The program utilizes the ~~E~~existing faculty strengths in Earth and Planetary sciences and combines them with the expertise of the already interdisciplinary department of Communication, Popular Culture and Film.

Provide at least two (2) examples of both institutional and sector comparator programs (including program name, university, and most recent tuition fee exclusive of additional fees) used to set the proposed tuition fee.

Comparators may be similar credentials, similar programs or programs with similar cost structures. The Ministry prefers tuition comparators in Ontario, and then in Canada if Ontario comparators are not available. If no comparators are available for tuition fee setting, please provide the rationale.

Justify the reasoning for the proposed tuition; if higher than comparators, describe how the impact on accessibility will be mitigated.

Program Comparators - Institution							
Program Name	Tuition fee for the program’s full academic year, as defined by the	Academic year	Tuition fees: how it is charged (per year/ session/course /credit)	Number of semesters covered by tuition noted in column 2	Number of units of study covered by tuition noted	Number of semesters for program completion	Number of units of study for program completion

	institution				in column 2		
Bachelor of Science (BSc)	\$6089.40 - FLAT RATE	19/20	Per year	2 semesters /yr	12-15 (4-5 courses)	8	120
Communication, Popular Culture and Film	\$6089.40 - FLAT RATE	19/20	Per year	2 semesters /yr	12-15 (4-5 courses)	8	120

Program Comparators - Sector (only the program, institution names, and tuition fees are mandatory)

Program Name	Institution Name	Tuition fee for the program's full academic year, as defined by the institution	Tuition fees: how it is charged (per year/session/course/credit)- if known.	Tuition year	Number of semesters covered by tuition noted in column 1	Number of units of study covered by tuition noted in column 1	Number of semesters for program completion	Number of units of study for program completion
Bachelor of Science (Science Communication)	Mt. Saint Vincent Univ.	\$7932.00-\$8326.00	Per year	19/20	2 semesters/yr	10 courses	8	120

Commentary:

Please note that there are no direct comparators.

List comparator programs both at Brock and other Ontario institutions, with particular reference to universities in the region; document how any duplicative similarities with existing programs at the University and other post-secondary institutions are justified; document that the program has consulted with other regional universities regarding the establishment of a similar program where the existing program is a recognized area of differentiation or leadership for the institution or where the proposed program requires substantial new investment in faculty, infrastructure, or experiential/entrepreneurial learning outside the regular learning environment.

While BSc and BA programs can be found at all Ontario Universities, there is no Bachelor of Arts and Sciences (BASc) program offered by a Science department in Ontario.

Comment on any differences between the proposed program and comparators (number of credits/courses, structure, etc.).

There is no direct comparator program, but this program is fully compatible with existing Brock regulations for credits and duration. n and hence comparable to many BA programs.

Table 2.3: Honours Bachelor Degree, Curriculum Map

[FF11]

BA - Earth and Planetary Science																			
DEGREE LEVEL EXPECTATIONS		Depth and Breadth of Knowledge						Knowledge of Methodologies			Application of Knowledge		Communication Skills		Awareness of Limits of Knowledge		Autonomy and Professional Capacity		
PROGRAM LEARNING OUTCOMES		LO1.1	LO1.2	LO1.3	LO1.4	LO1.5	LO1.6	LO2.1	LO2.2	LO2.3	LO3.1	LO4.1	LO4.2	LO5.1	LO6.1	LO6.2	LO6.3		
MANDATORY COURSES																			
Course No.	Course Title																		
ERSC 1P01	Planet Earth I	1,2		1,2	1	1	1	1	1,2	1,2	1,2			1			1,2		
ERSC 1P02	Planet Earth II	1,2		1,2	1	1	1	1	1,2	1,2	1,2			1			1,2		
ERSC 1P92	Extreme Earth	1,3		1,3				3	3		3			1,3					
ERSC 1P94	Planetary Science	1,3		1,3			1,3		1,3		3		3	1					
Year 2																			
ERSC 2P03	The History of Earth	1,2	1,2	1,2				1,2	1,2	1,2	1,2						2		
ERSC 2P05	Earth Surface Processes																		
ERSC 2P07	Introduction to Geospatial Technologies	1,2	1,2					1			1								
ERSC 2P08	Climate Crisis	In development																	
ERSC 2P15	Introduction to Oceanography	1,2,3		1,2,3		1,2,3	1,2,3	2,3	2,3	1,2,3	2,3		5			3			
ERSC 2P61	Environmental Geoscience	1,2,3		1,2,3	1,2,3	1,2,3			1,2,3				1,2,3	1,2,3	1,2,3,6	1,2,3,6	1,2,3,6		
Year 3																			
ERSC 3P94	Planetary Sciences	In development																	
2P97(23)	Mineralogy I: Minerals, Rocks and their Geologic Context	1,2,3	2,3	1,2,3	1,2,3				1,2,3										
2P97(18)	Introduction to Plate Tectonics	1,2,7						1,2,3	2,3		1,2,3	4,6	4,6				5,7		
3P04	Science Writing	In development																	
Year 4																			
ERSC 4F95	Honours Project I	In development																	
ERSC 4F96	Honours Project II	In development																	
ELECTIVE COURSES																			
Course No.	Course Title																		
ERSC 2P04	Introduction to Meteorology																		
ERSC 2P16	Clastic Sedimentology	1,2,3	3	1,2,3		1,2,3		2,3	2,3		2,3	3	3				3		
ERSC 2P97(3)	Mineralogy II: Crystallography and Optics	1,2,3	2,3	1,2,3	1,2,3			1,2,3	1,2,3		3						3		
ERSC 3P11	Chemical & Carbonate Sedimentology	1,2,3			1,4														
ERSC 3P21	Igneous and Metamorphic Petrology	1,2,3,4	3,4	1,2,3,4	3			1,2,3	1,2,3	3	2,3	3,4					3		
ERSC 3P24	Glacial Geomorphology/Geology																		
ERSC 3P25	Quaternary Geology	1	2,3	1,2,3	1,2,3,5	1,2,3	1,2,3	2,3	2,3	1,2,3	2,3		5	1	1	1	3		
ERSC 3P31	Geochemistry	1,2,3																	
ERSC 3P13	Applied Climatology																		
ERSC 3P26	Glacial Soils and Sediments																		
ERSC 3P01	Structural Geology	1,2,4,7		1,2,4,7				2,3	2,3			4	4				3,4		
ERSC 3P03	Paleontology and Paleobiology																		
ERSC 3P05	Geographic Information Systems	1,3,7,8	1,3,7,8					1,3,7,8		1,3,7,8							1,3,7,8		
ERSC 3P07	Remote Sensing																		
ERSC 3P12	Stratigraphy	1,3	1,3	1,3				1,3	1,3	1,3		3					3		
ERSC 3P33	Biodiversity																		
ERSC 3P35	Biomonitoring & Environmental Stress Assessment																		
ERSC 3P83	Geography of Water Resources																		
ERSC 3P85	Ecology of a Changing Planet																		
ERSC 3P90	Volcanology	1,3,4,5	3,4,5	1,3,4,5	3	3		3,4,5	1,3	3,4,5	3,4,5	4,5	4,5	4	3,4,5	3,4,5	4,5		
ERSC 3P91	Groundwater Hydrology																		
ERSC 3P95	Advanced Geographic Information Systems	1,3,7,8	1,3,7,8					1,3,7,8		1,3,7,8							1,3,7,8		
ERSC 3P99	Field Camp - Solid Earth	3	3	3				3	3		3	3			3	3			
ERSC 3V93	Exploration Geophysics																		
ERSC 4F91	Thesis																		

BASc Earth and Planetary Science Communications

Part 2

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APPENDIX A -Course Level Learning Outcomes

Table A.1: Course Level Learning Outcomes

Course ERSC 1P01

Course Calendar Description:
Planet Earth I

Earth as a member of the solar system, minerals, rocks and sediments, plate tectonics, volcanic activity, earthquakes, plate tectonics and the building of continents, economic geology, stratigraphy and geologic time, fossils and the history of life.

Lectures, lab or local field trip, 5 hours per week.

Note: students may not register concurrently in ERSC 1P92. Completion of this course will replace previous assigned grade and credit obtained in ERSC 1F01, 1F90 and 1P92.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Cosmology: Relate History of ideas of Cosmology (Heliocentric and Geocentric concepts, Spin of Earth Size of Earth) -Understand Modern concepts (Big Bang theory, Doppler effect) -relate Cosmic abundance, source of today's elements -Describe Formation of solar system (Sun, planets etc)	Reading textbook, attending lecture	Tophat clicker quiz question in lecture, midterm exam	

<p>Distinguish between the: Magnetosphere, atmosphere, lithosphere, asthenosphere based on composition, sublayers (ie. crust, mantle, inner/outer core) and methods of studying layers</p>	<p>Reading textbook, attending lecture</p>	<p>Tophat clicker quiz question in lecture, midterm exam</p>	
<p>Continental Drift, sea-floor spreading, plate tectonics. Discuss Wegner's evidence for Continental drift and problems. -Describe the evidence for Pangaea -Describe Paleomagnetism and polar wandering -Discuss evidence of sea-floor spreading -relate sea floor spreading and continental drift to the development of Plate tectonics</p>	<p>Reading textbook, attending lecture</p>	<p>Tophat clicker quiz question in lecture, midterm exam</p>	<p>In previous years a lab relating to continental drift (sea floor spreading and paleomagnetic anomalies) has been held. However due to lab scheduling time restrictions this lab has been removed from the offering.</p>
<p>Plate tectonics. Understand the difference between lithosphere and asthenosphere -distinguish between passive and active continental margins -distinguish between lithospheric plate boundaries and how they form</p>	<p>Reading textbook, attending lecture, lab assignment</p>	<p>Tophat clicker quiz question in lecture, midterm exam, lab assignment</p>	

<ul style="list-style-type: none"> -understand the forces driving plate tectonics -understand how hotspots, continental rifting, etc relate to plate tectonics 			
<p>Minerals. Relate how atoms make up minerals.</p> <ul style="list-style-type: none"> -Understand the basics of crystals and their structure - identify physical properties of minerals -Distinguish between the 7 mineral classes 	<p>Reading textbook, attending lecture, lab assignments</p>	<p>Tophat clicker quiz question in lecture, midterm exam, lab assignments</p>	
<p>Minerals Lab assignment:</p> <ul style="list-style-type: none"> - identify physical properties of minerals - identify 30 minerals (Mohs, Rock forming, Ore minerals, Minerals in common usage) 	<p>Attending Lab, Lab assignment (covered over 2 weeks). Minerals are also studied in "Rocks" labs (Textbook supplemental)</p>	<p>Lab assignment, Rock and Mineral quiz</p>	<p>Field trip involving mineral id/collection would be ideal. However, Niagara area does not have abundant/varied mineral deposits. Size of class a restriction for longer (weekend) field trips.</p> <ul style="list-style-type: none"> -Purchase of document camera an asset to lab demonstration
<p>Magma and Igneous Rocks</p> <ul style="list-style-type: none"> -understand the difference between intrusive and extrusive igneous activity -relate magma formation to asthenosphere/lithosphere -understand concepts of partial melting and fractional crystallization -understand Bowen's reaction series 	<p>Reading textbook, attending lecture, lab assignments</p>	<p>Tophat clicker quiz question in lecture, midterm exam, lab assignment</p>	

<ul style="list-style-type: none"> -understand the concept of magma viscosity and relate to extrusive igneous settings -distinguish between intrusive igneous settings -understand the classification of igneous rocks 			
<p>Igneous Rocks lab assignment:</p> <ul style="list-style-type: none"> -distinguish between Phaneritic, Porphyritic, Vesicular, Glassy, Aphanitic textures -Identify minerals in igneous rocks (Quartz, K-Spar, Plag., Amph/Pyx., Olivine, Biotite) -Identify common igneous rocks 	<p>Attending Lab, Lab assignment. (Textbook supplemental)</p>	<p>Lab assignment, Rock and Mineral quiz</p>	<p>-Purchase of document camera an asset to lab demonstration</p>
<p>Sediments, Soils, Sedimentary Rocks and Sedimentary Environments</p> <ul style="list-style-type: none"> -distinguish between sediment and sedimentary rock -understand how weathering (physical and chemical) relate to sediments and soil formation -distinguish between sedimentary rock types (clastic, biochemical, organic, chemical) based 	<p>Reading textbook, attending lecture, lab assignments</p>	<p>Tophat clicker quiz question in lecture, midterm exam, lab assignment</p>	

<p>on composition and formation</p> <ul style="list-style-type: none"> -describe sedimentary structures -relate sedimentary rock formation to depositional environment (terrestrial vs marine) -understand concepts of transgression vs regression -distinguish various unconformities 			
<p>Sedimentary rock lab</p> <ul style="list-style-type: none"> - distinguish between sedimentary rock types (clastic, biochemical, organic, chemical) based on composition and formation -Identify composition of sedimentary rocks (ie. clasts - size of clasts, dolomite etc). -relate rock characteristics to sedimentary depositional environment -understand the mechanism for formation of a sedimentary structure 	<p>Attending Lab, Lab assignment. (Textbook supplemental)</p>	<p>Lab assignment, Rock and Mineral quiz</p>	<p>Field trip in Niagara region would be ideal. Trip to Ridgemount quarry has been run in years past. Timing (ie. fall reading week, lab scheduling), Size of class, Safety issues are some restrictions.</p> <p>--Purchase of document camera an asset to lab demonstration</p>
<p>Metamorphic Rocks</p> <ul style="list-style-type: none"> -understand how a metamorphic rock forms -understand heat, pressure and temperature as well as stress and fluids relate in metamorphism 	<p>Reading textbook, attending lecture, lab assignments</p>	<p>Tophat clicker quiz question in lecture, midterm exam, lab assignment</p>	

<ul style="list-style-type: none"> -distinguish between foliated and non-foliated metamorphic rocks -understand the concepts of metamorphic grade, zones and facies -distinguish between 7 metamorphic environments 			
<p>Metamorphic Rocks lab</p> <ul style="list-style-type: none"> - distinguish between foliated and non-foliated metamorphic rocks based on texture and/or mineral composition -identify common metamorphic rocks -identify parent rock type 	<p>Attending Lab, Lab assignment. (Textbook supplemental)</p>	<p>Lab assignment, Rock and Mineral quiz</p>	<p>-Purchase of document camera an asset to lab demonstration</p>
<p>Volcanic eruptions</p> <ul style="list-style-type: none"> -distinguish between the products of volcanic eruptions (ie. aa, ash etc) and visually identify (from photos) -distinguish between the shape and plumbing of volcanoes and relate formation to setting -understand Volcanoes as hazards and the consequences (physical, social) of volcanic eruptions 	<p>Reading textbook, attending lecture,</p>	<p>Tophat clicker quiz question in lecture, midterm exam</p>	<p>A section on volcanic eruptions has been included in previous years with the "Earthquake" assignment. The assignment varies from year to year (to avoid duplication) and each year has a different "hazard" (ie. tsunami, liquefaction) for students to research based on real events. A section on volcanic eruptions could be included, however would lengthen the assignment.</p>
<p>Earthquakes</p> <ul style="list-style-type: none"> -understand how earthquakes are formed 	<p>Reading textbook, attending lecture, lab assignment</p>	<p>Tophat clicker quiz question in lecture, final exam, lab assignment</p>	

<p>and distinguish between hypocenter and epicenter</p> <ul style="list-style-type: none"> -distinguish between basic types of faults and their formation -distinguish between the various types of seismic waves and how they are measured -understand the different earthquake measurement scales -relate the distribution of earthquakes to plate tectonic boundaries, as well as understand intraplate earthquakes -understand the effects of earthquakes (physical, social) 			
<p>Earthquakes and Tsunamis</p> <ul style="list-style-type: none"> -discuss historical tsunamis and effects on local population -understand how earthquakes and tsunami study assist in understanding of earth through Seismic waves and seismic stratigraphy 	<p>Reading textbook, attending lecture, lab assignment</p>	<p>Tophat clicker quiz question in lecture, final exam, lab assignment</p>	
<p>Plate tectonics, earthquakes lab assignment</p> <ul style="list-style-type: none"> -relate recent earthquake events by magnitude and depth to plate tectonic boundaries by plotting on map of earth 	<p>Online Lab assignment, Web resources. (Textbook supplemental)</p>	<p>Online Lab assignment</p>	

<ul style="list-style-type: none"> -relate plate movement directions to plate boundary types -relate recent earthquake event to earthquake magnitude scales and social and economic impacts 			
<p>Folds, Faults and Mountain Belts</p> <ul style="list-style-type: none"> -understand orogeny and process of deformation (brittle vs ductile) -describe orientation of structures using strike and dip -distinguish between types of faults and folds -describe the process of orogenesis and how this relates to the formation of mountain belts (ie.Appalachians) -understand the difference between cratons, shields and cratonic platform 	<p>Reading textbook, attending lecture, lab assignment</p>	<p>Tophat clicker quiz question in lecture, final exam, lab assignment</p>	
<p>Strike and Dip lab</p> <ul style="list-style-type: none"> -understand concept of strike and dip -measure strike and dip from a block diagram -draw strike and dip of bed from given coordinates on a block diagram -interpreting strike and dip from geological maps -relate geological time (era, period) to geological map, dipping beds 	<p>Attending Lab, Lab assignment. (Textbook supplemental)</p>	<p>Lab assignment</p>	

<p>Folds and Faults lab -identify anticline vs syncline (plunging vs non-plunging) on geological map -identify normal vs reverse fault on geological map -draw folds/faults on block diagrams</p>	<p>Attending Lab, Lab assignment. (Textbook supplemental)</p>	<p>Lab assignment</p>	<p>Folds and Faults lab was once two separate labs. Now (due to time constraints) joined into one lab. Revisions continue each year.</p>
<p>Fossils and evolution -relate the history of early fossil study and discovery -describe the processes of fossil preservation using examples -identify and classify fossils -understand the process of evolution and extinction</p>	<p>Reading textbook, attending lecture, lab assignment</p>	<p>Tophat clicker quiz question in lecture, final exam, lab assignment</p>	
<p>Fossils lab assignment -observe examples of fossil preservation -identify, label features, classify common invertebrate fossils</p>	<p>Attending Lab, Lab assignment. (Textbook supplemental)</p>	<p>Lab assignment</p>	<p>Field trip in Niagara region would be ideal to collect specimens. Trip to Ridgemount quarry has been run in years past as well as Port Colborne. Timing (ie. fall reading week, lab scheduling), Size of class, Safety issues, specimen depletion are some restrictions. --Purchase of document camera an asset to lab demonstration</p>
<p>Geologic Time -discuss discovery and history of "deep time" -relate relative vs numerical age</p>	<p>Reading textbook, attending lecture, lab assignment</p>	<p>Tophat clicker quiz question in lecture, final exam, lab assignment</p>	

<ul style="list-style-type: none"> -apply principles of deducing relative ages -understand how stratigraphic correlation relates to geologic time -relate various numerical age dating techniques to geological time scale 			
Earth History <ul style="list-style-type: none"> -relate each eon, era, period to past position of continent, ancient orogeny, dating technique, rock type, past climate evidence, life evolution 	Reading textbook, attending lecture, lab assignment	Tophat clicker quiz question in lecture, final exam, lab assignment	
Sequence Diagrams lab assignment <ul style="list-style-type: none"> -apply the principles of relative dating to deduce geological history of sequence diagrams -interpret unconformities from sequence diagrams -understand the enormity of geological time 	Attending Lab, Lab assignment. (Textbook supplemental)	Lab assignment	
Energy resources <ul style="list-style-type: none"> -describe various types of energy resources -relate the geological formation and rock type to energy resource 	Reading textbook, attending lecture	Tophat clicker quiz question in lecture, final exam	
Mineral Resources	Reading textbook, attending lecture	Tophat clicker quiz question in lecture, final exam	

<ul style="list-style-type: none">-differentiate between metallic and non-metallic mineral resources-describe different ways ore deposits form-describe uses for metallic and non-metallic mineral resources-understand Canada's role as a producer of metallic and non-metallic mineral resources			
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Course ERSC 1P02

Course Calendar Description:
Planet Earth II

Glacial geology, geomorphology, Earth surface processes; paleoclimates and future climate change; oceanography; geologic hazards and risk assessment; hydrologic cycle, soil-groundwater contamination, hazardous waste disposal and alternatives.

Lectures, lab or local field trip, 5 hours per week.

Note: students may not register concurrently in ERSC 1P92. Completion of this course will replace previous assigned grade and credit obtained in ERSC 1F01, 1F90 and 1P92.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Topographic maps and contouring: -interpret features on a Topographic map -apply rules of contouring to topographic map -produce a topographic map using provided point elevations -produce a cross section of a topographic map and apply appropriate labels -calculate vertical exaggeration and topographic relief	Attending Lab, Lab assignment (2-week lab assignment) (Textbook supplemental)	Lab assignment (two separate lab assignments to hand in), Lab quiz, field trip	-lab has been split into two separate labs in past year. Introduction to topographic maps and contouring was necessary as students were struggling with contouring exercises as a single lab. Students do not seem to have learned fundamentals of contouring from middle school or highschool (whereas 10 years ago they did). This lab has now become the most conceptually difficult lab for

			<p>students to grasp of all labs in ERSC 1P01 and 1P02. Investing in additional resources (ie. from Wards) may be helpful.</p> <p>-If time allowed in the lab schedule and "introduction to GIS" lab may be considered</p>
<p>Streams, fluvial features and Mass wasting</p> <ul style="list-style-type: none"> -interpret air photographs using a stereoscope -differentiate between types of mass wasting/movement and relate to climate and geology of an area -recognize the human impact of mass movement (both as a cause and effects) -differentiate between 4 main drainage patterns and relate to underlying geology -differentiate between 3 main stream channel forms, their formation and erosional and depositional features -identify other fluvial features (ie. alluvial fans, deltas) and their formation 	<p>Attending Lab, Lab assignment. (Textbook supplemental), Material also taught in Lectures and lab scheduled so that runs at approximate time material also being taught during lectures.</p>	<p>Lab assignment, Lab quiz, field trip</p>	
<p>Waves, currents and Coasts, Oceanography</p>	<p>Attending Lab, Lab assignment. (Textbook supplemental)</p>	<p>Lab assignment, Lab quiz, field trip</p>	<p>In past two separate labs 1) Waves, currents and Coasts, 2) Oceanography</p>

<ul style="list-style-type: none"> -understand the fundamentals of wave motion and explain how and when wave crests are refracted -recognize how coastal landforms form and identify features of erosion and deposition -relate coastal engineering techniques to erosion and deposition of coastal landforms -describe what affects Ocean salinity -produce a bathymetric map of the ocean floor 	<p>Material also taught in Lectures and lab scheduled so that runs at approximate time material also being taught during lectures.</p>		<p>Due to time constraints combined into one lab. Some material omitted or moved to other labs:</p>
<p>Groundwater</p> <ul style="list-style-type: none"> -demonstrate methods to investigate environmental problems associated with groundwater pollution and how human activities may alter groundwater flow patterns -interpret a groundwater contour map and groundwater flow direction -calculate flow rates, hydraulic gradient etc using Darcy's law 	<p>Attending Lab, Lab assignment. (Textbook supplemental) Material also taught in Lectures and lab scheduled so that runs at approximate time material also being taught during lectures.</p>	<p>Lab assignment, Lab quiz, field trip</p>	<p>-</p>
<p>Flooding</p> <ul style="list-style-type: none"> -Investigate stream systems in flood using real time data -interpret stream gauge data, including discharge 	<p>Online Lab assignment, Web resources. (Textbook supplemental) Material also taught in Lectures and lab scheduled so that runs at</p>	<p>Online Lab assignment, Lab quiz, field trip</p>	

<p>rates, hydrographs, causes of flooding</p> <ul style="list-style-type: none"> -research a major historical flooding event and relate social and economic impacts 	<p>approximate time material also being taught during lectures.</p>		
<p>Global Climate Change</p> <ul style="list-style-type: none"> -investigate various methods used to determine climate change -relate effects of volcanic eruptions and El Nino on global climate -interpret Oxygen 18 data from Ice Cores and relate to glacial/interglacials and stadial/interstadials -analyze ice cores based on CO2 data and interpret changes in CO2 (natural vs human impact) -using bathymetric maps interpret sea level changes over time and extrapolate sea level rise effects into future -gain experience interpreting and correlating data 	<p>Attending Lab, Lab assignment. (Textbook supplemental)</p> <p>Material also taught in Lectures and lab scheduled so that runs at approximate time material also being taught during lectures.</p>	<p>Lab assignment, Lab quiz, field trip</p>	
<p>Glaciation and Glacial Landforms</p> <ul style="list-style-type: none"> -interpret topographic maps to determine alpine and continental glacial features 	<p>Attending Lab, Lab assignment. (Textbook supplemental)</p> <p>Material also taught in Lectures and lab scheduled so that runs at approximate time material also being taught during lectures.</p>	<p>Lab assignment, Lab quiz, field trip</p>	

<ul style="list-style-type: none"> -interpret types of glaciation that have affected regions of Canada -interpret topographic maps and satellite imagery to understand the effects of climate change on alpine glaciers 			
<p>Acid Rain and Soils lab</p> <ul style="list-style-type: none"> -determine the relationship between soil horizons and bedrock -produce a soil buffering capacity map -interpret soil buffering capacity and relate to geology of Southern Ontario -demonstrate ability to use digital pH meter and interpret results -relate water cycle, industrial pollutants and the production of acid rain to soil buffering capacity 	<p>Attending Lab, Lab assignment. (Textbook supplemental) Material also taught in Lectures and lab scheduled so that runs at approximate time material also being taught during lectures.</p>	<p>Lab assignment, field trip</p>	<p>Soil samples used in lab exercise need to be replenished. Samples come from across Southern Ontario and may necessitate extended collection field trip.</p>
<p>Field Trip</p> <ul style="list-style-type: none"> -observe and integrate material learned in labs to understand the geologic history of the Niagara region, in particular from the last glaciation to present day -observe coastal and shoreline processes and interpret deposition and erosion occurring in local 	<p>Attending Field Trip, Field Trip assignment. (Textbook supplemental)</p>	<p>Field trip</p>	<p>Students must purchase a Field trip voucher at the bookstore to offset Department field trip costs. Worthwhile to explore Experiential education funding options.</p>

<p>park and along Lake Ontario</p> <ul style="list-style-type: none"> -examine and interpret characteristics of modern beach, ancient lake bottom and glacial deposits -examine shoreline engineering protective measures and predict future stability of shorelines -relate effects of stream flow to lake levels -analyze pH of different bodies of water and relate to soil, geology of area 			
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Course ERSC 1P92

Course Calendar Description: Extreme Earth

Extreme low frequency events and the geological record of their causes and effects, including earthquakes, volcanic eruptions, climatic change and impacts with extraterrestrial bodies.

Note: offered online. Students may not register concurrently in ERSC 1P01 or 1P02. Secondary school sciences are not a prerequisite. Completion of this course will replace previous assigned grade and credit obtained in ERSC 1F01, 1F90, 1P01 and 1P02.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
learn how science creates knowledge.	Reading/viewing online course material.	An assignment that poses questions based on the course material and an online quiz.	
learn what the science of geology includes and how Earth history is interpreted.	Reading/viewing online course material.	An assignment that poses questions based on the course material and an online quiz.	
learn how our understanding of Earth History evolved from a religion-based knowledge to a science-based knowledge.	Reading/viewing online course material.	An assignment that poses questions based on the course material and an online quiz.	
learn how catastrophic events can play an important role in geologic processes.	Reading/viewing online course material.	An assignment that poses questions based on the course material and an online quiz.	
learn about the “nebula hypothesis” for the origin of the solar system and describe the three stages	Reading/viewing online course material.	An assignment that poses questions based on the course material and an online quiz.	

of planet formation and the origin of the moon.			
learn why there is concern today regarding the risk of space objects colliding with Earth.	Reading/viewing online course material.	An assignment that poses questions based on the course material and an online quiz. The capstone assignment (Assignment 4) also draws on knowledge from this section of the course.	
the history of the idea of continental drift and the details of Alfred Wegener's effort to convince geologists that the continents moved.	Reading/viewing online course material.	An assignment that poses questions based on the course material and an online quiz	
learn what plate tectonics is details of its important elements and how the process operates.	Reading/viewing online course material.	An assignment that poses questions based on the course material and an online quiz. The capstone assignment (Assignment 4) also draws on knowledge from this section of the course.	
learn what an earthquake is and how the magnitude and affect of earthquakes are quantitatively described	Reading/viewing online course material.	An assignment that poses questions based on the course material and an online quiz.	An assignment and accompanying on-line tutorial will be produced that uses arrival times of an earthquake to locate earthquake epicentres and magnitude.
learn the types of damage that are caused when an earthquake takes place.	Reading/viewing online course material.	An assignment that poses questions based on the course material and an online quiz.	
learn the settings in which earthquakes commonly take place and the relationship between earthquakes and plate tectonics.	Reading/viewing online course material.	An assignment that poses questions based on the course material and an online quiz. The capstone assignment (Assignment 4) also draws on knowledge from this section of the course.	

learn methods of long- and short-term prediction of when and where earthquakes will take place.	Reading/viewing online course material.	An assignment that poses questions based on the course material and an online quiz.	
learn the components and characteristics of the various types of volcanoes, how the composition of a magma influences the behavior (style of eruption) and form volcanoes and the various types of volcanic processes and deposits.	Reading/viewing online course material.	an online quiz.	
learn how volcanoes are distributed, particularly in relation to plate tectonic processes.	Reading/viewing online course material.	An online quiz. The capstone assignment (Assignment 4) also draws on knowledge from this section of the course.	
learn about the variety of means of long term and short-term prediction of volcanic eruptions and the nature of volcanic hazards and how they may impact life on Earth.	Reading/viewing online course material.	an online quiz.	
learn about Super Volcanoes with examples from the geologic record.	Reading/viewing online course material.	An online quiz. The capstone assignment (Assignment 4) also draws on knowledge from this section of the course.	

Course ERSC 1P94

Course Calendar Description:
Planetary Science

Solar system objects, including the Sun, planets and dwarf planets, named natural satellites (moons) and small solar system bodies; their formation, composition, processes and major characteristics.

Note: offered online.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Have an overview of the components of the solar system	Reading course module, completing assignment	module test, assignment grade	Interaction in forums
Understand planetary formation and differentiation	Reading course module, completing assignment	module test, assignment grade	Interaction in forums
Understand the processes that shape planetary surfaces	Reading course module, completing assignment	module test, assignment grade	Interaction in forums
Have a comprehensive understanding of the role of water in the solar system	Reading course module, completing assignment	module test, assignment grade	Interaction in forums
Understand the various ways used to search for extraterrestrial life	Reading course module, completing assignment	module test, assignment grade	Interaction in forums

Course ERSC 2P03

ERSC 2P03: The History of the Earth

Principles of paleontology, classical stratigraphy, sequence stratigraphy. The origin and evolution of life and the history of the Earth

Lectures, 2 hours per week; Labs, 2 hours per fortnight.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Understand the following: - Rocks, fossils & time, and the evolution of the geological time scale; biological evolution; - Hadean & Archean Earth & life history; - Proterozoic Earth & life history; - Palaeozoic Earth & life history; - Mesozoic Earth & life history; - Cenozoic Earth & life history.	Listening to lectures by the instructor, reading the detailed Powerpoint presentations on SAKAI, reading the text book, revising for the midterm and final exams.	Participation, in reality attendance which is taken for each lecture. An in-class midterm test and a final exam.	Getting students to attend lectures is a major challenge. We hope to trial a clicker system this term to test students with in-lecture questions. This will also serve to monitor attendance at lectures.
Understand the following:	Attending 6 two-hour labs each beginning with a 1-hour explanatory lecture by the instructor, followed by one hour of hands-on activity	Six laboratory assignments are marked by the TAs.	

<ul style="list-style-type: none"> - Relative dating & unconformities; - radiometric ages; - Lithostratigraphy, biostratigraphy, fossilization; - physical correlation; - homologues vs. analogues; - continental drift; - facies relationships; - index fossils and depositional sequences; - geologic maps; Canadian Shield; - patterns of evolution; - correlation of carbonate rocks; - facies and sea-level change. 	<p>helped by TAs. Five labs exclusively follow a lab exercise manual, and one includes the hands-on examination of fossils. Lab manual has good background information as well as instructions on completing the assignments. TAs have office hours to help students with assignments.</p>		
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Course ERSC 2P05

ERSC 2P05 Earth Surface Processes (also offered as GEOG 2P05)

Earth surface processes and geomorphology within global environments. A dynamic and physically based account of processes and the Earth's surface, linking the fields of sedimentology, physical geography and fluid mechanics.

Lectures, lab, field work, 5 hours per week.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Learn how science creates knowledge.	Reading/viewing course material & attending Lectures & completing Labs.	Two in-class Test exams and an Essay marked by the instructor, eight laboratory assignments marked by the TAs, and feedback is given to correct misunderstanding	
Learn what and how Earth Surface Processes are interpreted.	Reading/viewing course material & attending Lectures & completing Labs.	Two in-class Test exams and an Essay marked by the instructor, eight laboratory assignments marked by the TAs, and feedback is given to correct misunderstanding	
Learn how our understanding of Earth Surface Processes developed from a religion-based knowledge to a science-based knowledge.	Reading/viewing course material & attending lectures & completing Labs.	Two in-class Test exams and an Essay marked by the instructor, eight laboratory assignments marked by the TAs, and feedback is given to correct misunderstanding	
Learn the concepts of Magnitude & Frequency in Earth Surface Processes	Reading/viewing course material & attending lectures & completing Labs.	Two in-class Test exams and an Essay marked by the instructor, eight laboratory assignments marked by the TAs, and feedback is given to correct misunderstanding	

Learn why there is concern today regarding the Climate Warming in terms of Surface Processes.	Reading/viewing course material & attending lectures & completing Labs.	Two in-class Test exams and an Essay marked by the instructor, eight laboratory assignments marked by the TAs, and feedback is given to correct misunderstanding	
Learn the relationship between Society and Earth Surface Processes	Reading/viewing course material & attending lectures & completing Labs.	The essay focusses on the relationship between Earth Surface Processes and Society in some aspect as the thesis for the Essay	Be able to give more feedback in class time. Discuss essay grammar, style and reference styles and formats

Course ERSC 2P15

ERSC 2P15 Introduction to Oceanography

Overview of the oceans, their origin, composition, circulation, geology and biota, from the coastal zone to the abyss. Importance of oceanography to humans, history of oceanography, overview of marine hazards and resources, ocean-atmosphere interactions and the global climate.

Lectures, lab, 5 hours per week.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Understand the interaction between the ocean, the rest of the hydrosphere, and the other components of the Earth System on our Blue planet	Attending lectures, reading textbook and lab manual, completing four laboratory assignments, and researching a topic of choice in the scholarly literature	Midterm test, Pop quizzes, Lab exam, Final Exam marked by instructor, Laboratory exercises marked by TAs, Seminar presentations graded by instructor and TAs with peer assessment component	
Understand the basics of physical oceanography, incl. the unique properties of water, the characteristics of water masses, ocean circulation	Attending lectures, reading textbook and lab manual, completing four laboratory assignments, and researching a topic of choice in the scholarly literature	Midterm test, Pop quizzes, Lab exam, Final Exam marked by instructor, Laboratory exercises marked by TAs, Seminar presentations graded by instructor and TAs with peer assessment component	
Understand the basics of geological oceanography, incl. the origin of ocean basins and continental margins from a plate tectonic perspective, bathymetry, sedimentation	Attending lectures, reading textbook and lab manual, completing four laboratory assignments, and researching a topic of choice in the scholarly literature	Midterm test, Pop quizzes, Lab exam, Final Exam marked by instructor, Laboratory exercises marked by TAs, Seminar presentations graded by instructor and TAs with peer assessment component	

Understand the basics of biological oceanography, incl. primary productivity, food webs, marine ecology	Attending lectures, reading textbook and lab manual, completing four laboratory assignments, and researching a topic of choice in the scholarly literature	Midterm test, Pop quizzes, Lab exam, Final Exam marked by instructor, Laboratory exercises marked by TAs, Seminar presentations graded by instructor and TAs with peer assessment component	
Understand marine hazards, incl. coastal erosion, tropical cyclones, tsunami	Attending lectures, reading textbook and lab manual, completing four laboratory assignments, and researching a topic of choice in the scholarly literature	Midterm test, Pop quizzes, Lab exam, Final Exam marked by instructor, Laboratory exercises marked by TAs, Seminar presentations graded by instructor and TAs with peer assessment component	
Appreciate the oceans as a resource that is being exploited and degraded by human activity	Attending lectures, reading textbook and lab manual, completing four laboratory assignments, and researching a topic of choice in the scholarly literature	Midterm test, Pop quizzes, Lab exam, Final Exam marked by instructor, Laboratory exercises marked by TAs, Seminar presentations graded by instructor and TAs with peer assessment component	

Course ERSC 2P61

Course Calendar Description:
ERSC 2P61 Environmental Geoscience

Natural geological processes and anthropogenic impacts, flooding, landslides, earthquakes, volcanic activity, global warming and climate change. Hydrogeology and human activity, surface and groundwater supply and use, solid waste and hazardous waste disposal. Mineral and energy resources, pollution and alternatives. Professional environmental geosciences practices.

Lectures, seminar, 5 hours per week. Prerequisite: ERSC 1F01.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
improve their ability to work to deadlines, read, think and write concise critiques of scientific literature	Lab assignments, oral presentation and debate	three written exams, an oral defense and questioning of claims made in the debate statements	The prof and teaching assistant give written and oral feedback on assignments, exams and the debate
develop and apply their research skills to learn more about real world problems	Lab assignments, oral presentation and debate	three written exams, an oral defense and questioning of claims made in the debate statements	The prof and teaching assistant give written and oral feedback on assignments, exams and the debate
Describe the variety of skills and the sort of environmental problems that are used and addressed by geoscientists	Lab assignments, independent and guided readings and viewing of online material, oral presentation, discussions in the lecture and lab periods and often there is a student debate and guest lecturers	three written exams, an oral defense and questioning of claims made in the debate statements	The prof and teaching assistant give written and oral feedback on assignments, exams and the debate

Course ERSC 3P94 (Planetary Sciences) - Proposed course

Course Calendar Description:
Planetary Sciences

Tools for Planetary Exploration, Planetary Processes, terrestrial planets, icy and rocky satellites, small bodies, Planetary Frontiers

Lectures, Seminar

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Understand Tools and Techniques used for planetary exploration	Lectures, assigned reading	Exam	
Understand the range of Planetary Processes	Lectures, assigned reading	Exam	
Describe the major characteristics of terrestrial planets	Lectures, assigned reading	Seminar, Essay	
Understand the small bodies in the solar system	Lectures, assigned reading	Seminar, Essay	
Understand the current state of planetary frontiers, including colonization and commercialization of space	Assigned Reading	Seminar, Essay	

Course ERSC 2P9X (formerly 2P23)

Course Calendar Description:

Mineralogy I: Minerals, Rocks and their Geologic Context

Topics include mineral identification; mineral chemistry; igneous, metamorphic, and sedimentary mineral assemblages and textures; and their significance for interpreting geologic context. Labs focus on hand sample techniques for mineral and rock identification and interpretation.

Lectures, lab, 6 hours per week

Prerequisite(s): one ERSC credit numbered 1(alpha)00 to 1(alpha)99 or GEOG 1F90; 4U/M Chemistry or CHEM 1P00.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Learn how to test physical properties of a mineral in order to identify 60 different minerals.	Attending lectures, completing lab assignments, reading the textbook, and writing out mineral ID cards	Lab assignments, Lab final exam, Midterm exam, Final exam	Mineral identification is the most challenging aspect of any 2 nd year mineralogy course. I encourage students to employ different strategies for memorization. I also provide exposure to rock and mineral hand samples in nearly every lab. I will include mineral identification mini-quizzes in future iterations of the course.
Understand how chemical bonds (type, strength, and geometry) influence physical properties of	Attending lectures, completing lab assignments, and reading the textbook	Lab assignments, Lab final exam, Midterm exam, Final exam	

minerals and aid in identification.			
Understand the stages of crystal growth and how rates of change in different geologic environments influence crystal morphology and mineral assemblages	Attending lectures, completing lab assignments, and reading the textbook	Lab assignments, Midterm exam, Final exam	
Learn common sedimentary, igneous, metamorphic, and economic mineral assemblages and how assemblages may be used to interpret conditions of formation.	Attending lectures, completing lab assignments, and reading the textbook	Lab assignments, Midterm exam, Final exam	
Learn about the chemistry of the Earth and the Solar System, including the origin, and abundance of the elements, how the chemical affinity of the elements affects their distribution during planet formation and differentiation, and how the diversity of minerals has changed with time (i.e., mineral evolution).	Attending lectures, reading the textbook and other assigned readings	Midterm exam, Final exam	

Course ERSC 2P9X (formerly 2P18)

Course Calendar Description:
Introduction to Plate Tectonics

(also offered as GEOG 2P18)

Topics include plate boundary settings, plate motion, driving forces, earthquakes and volcanic activity and detailed case studies. Labs focus on the analysis of geological maps.

Lectures, lab, 5 hours per week.

Prerequisite(s): one ERSC credit numbered 1(alpha)00 to 1(alpha)99 or GEOG 1F91.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Develop a comprehensive understanding of Plate Tectonics	Lectures	Exam	
Identify geological processes at different plate boundaries	Lectures	Exam	
Understand the nature of earthquakes and volcanic activity at different plate tectonic setting	Lectures	Exam	
Understand how plate tectonics has changed the Earth though geological time	Lectures	Exam, Essay	

Understand how to work with geological maps	Laboratory exercises	Exam	
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Course ERSC 3P04 Science Communication- Proposed course

Course Calendar Description:
Science writing

An overview of primarily Earth related scientific writing and its role in the dissemination of scientific knowledge. Comparison of popular scientific writing and the formal scientific literature and best practices for professional writers.

Blended course with Seminars

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Understand the current state of earth Science writing in popular literature	Lectures, reading, seminar	Participation, seminar, written material	
Critique how scientific information is presented in different popular media	reading, writing, seminar	Participation, seminar, written material	
Understand what is required to transition from scientific literature to popular media	reading, writing, seminar	Participation, seminar, written material	
Present scientific information in several current formats	reading, writing, seminar	Participation, seminar, written material	

Course ERSC 3P01

Course Calendar Description:
Structural Geology

Measurement and effects of stress and strain. Genesis of brittle and ductile structures and their classification. Methods of structural analysis.

Lectures, lab, 5 hours per week.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Understand the basics of kinematic and dynamic analysis	Lectures	Test and Exam	
Understand elastic, plastic and viscous behavior	Lectures	Test and Exam	
Understand faults, folds and foliations	Lectures	Test and Exam	
Read and synthesize scientific papers in Structural Geology	Reading papers, writing abstract and essay	Graded essay	
Analyse Complex maps	Lab activities	Graded Labs and lab exam	
Perform Schmidt net operations	Lab activities	Graded Labs and lab exam	

Course ERSC 3P03

Course Calendar Description:

ERSC 3P03 Paleontology and Paleobiology (also offered as BIOL 3P03)

Biodiversity and ecosystems through geologic time, micro and macro evolution in paleobiology and evolutionary biology, large scale environmental change and the fossil record, functional morphology, and phylogenetic and cladistic analysis of the fossil record.

Lectures, lab, 5 hours per week.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Identify fossils belonging to major animal phyla in the geologic record (Chordata, Echinodermata, Arthropoda, Mollusca, Brachiopoda, Bryozoa, Cnidaria, and various parazoans) as well as common mineralised protistan microfossils (foraminifers, radiolarians, diatoms)	Listening to lectures describing the distinguishing characteristics of these taxa, and through hands-on activities in weekly laboratory exercises, assisted by teaching assistants and the instructor. An optional field trip to a Devonian exposure (abandoned quarry in Wainfleet) offers outcrop scale experience	Seven lab assignments are marked by the TAs assess the students' understanding of the key characteristics of these taxa their ability to recognize them with the aid of their lecture notes, labs and fossil cards; an open-book multiple-station lab exam marked by the instructor tests their ability to do this independently	This course works best with no more than 12-15 students, given the limited number of hand samples available, so optimally two separate lab sections would be offered (although a common time for a lab exam would have to be scheduled)
Understand the various ways in which the remains of organisms can become preserved in the rock record, and the taphonomic losses that alter fossil assemblages relative to life assemblages	Listening to lectures describing these concepts, and through hands-on activities in weekly laboratory exercises, assisted by TAs and the instructor. An optional field trip to a Devonian exposure (abandoned quarry	Two in-class term tests, pop quizzes, and a lab exam and final exam marked by the instructor, seven laboratory assignments marked by the TAs, assess their understanding, and feedback	

	in Wainfleet) offers outcrop scale experience	is given to correct misunderstanding	
Understand how fossils are used in biostratigraphy and chronostratigraphy	Listening to lectures describing these concepts, and through hands-on activities in weekly laboratory exercises, assisted by TAs and the instructor. An optional field trip to a Devonian exposure (abandoned quarry in Wainfleet) offers outcrop scale experience	Two in-class term tests, pop quizzes, and a lab exam and final exam marked by the instructor, seven laboratory assignments marked by the TAs, assess their understanding, and feedback is given to correct misunderstanding. A report of the optional field trip is graded by the instructor and one of the TAs	Make the field trip mandatory for all students (but this would incur additional costs and would work best with two lab sections, further increasing costs)
Understand how fossils can be used to reconstruct paleoenvironmental conditions	Listening to lectures describing these concepts, and through hands-on activities in weekly laboratory exercises, assisted by TAs and the instructor. An optional field trip to a Devonian exposure (abandoned quarry in Wainfleet) offers outcrop scale experience	Two in-class term tests, quizzes, and a lab exam and final exam marked by the instructor, seven laboratory assignments marked by the TAs, assess their understanding, and feedback is given to correct misunderstanding. A report of the optional field trip is graded by the instructor and one of the TAs	Make the field trip mandatory for all students
Understand the taxonomic challenges in paleontology, how the morphospecies concept differs from the biological species concept	Listening to lectures describing these concepts, and through hands-on activities in weekly laboratory exercises, assisted by TAs and the instructor.	Two in-class term tests, quizzes, and a lab exam and final exam marked by the instructor, seven laboratory assignments marked by the TAs, assess their understanding, and feedback is given to correct misunderstanding	
Understand the mechanisms of evolution and causes of	Listening to lectures describing these concepts,	Two in-class term tests, quizzes, and a lab exam and final exam marked by the	Make the book report mandatory for all students and add a group discussion/

<p>extinction and of the “science vs. religion” controversy</p>	<p>and through hands-on activities in weekly laboratory exercises, assisted by TAs and the instructor. Reading an optional sci-fi novel exploring these concepts.</p>	<p>instructor, seven laboratory assignments marked by the TAs, assess their understanding, and feedback is given to correct misunderstanding A book report of an optional sci-fi novel exploring these concepts is graded by the instructor and one of the TAs</p>	<p>seminar (currently, two separate options are offered to reduce costs & cope with ~25 students)</p>
<p>Understand how the fossil record informs our understanding of Earth history</p>	<p>Listening to lectures describing these concepts, and through hands-on activities in weekly laboratory exercises, assisted by TAs and the instructor. Reading an optional sci-fi novel exploring these concepts.</p>	<p>Two in-class term tests, quizzes, and a lab exam and final exam marked by the instructor, seven laboratory assignments marked by the TAs, assess their understanding, and feedback is given to correct misunderstanding A book report of an optional sci-fi novel exploring these concepts is graded by the instructor and one of the TAs</p>	<p>Make the book report mandatory for all students and add a group discussion/ seminar</p>

Course: ERSC 3P05

Course Calendar Description:
Geographic Information Systems

Principles and use of computer-based systems for capturing, managing, manipulating, analysing and displaying data relating to the Earth's surface emphasizing raster applications. Practical work using ArcGIS.

Lectures, lab, 4 hours per week.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Utilize GIS software as a decision support tool	Inspiring lectures, five labs of varying applications, student-customized final project, exam	Five labs of varying applications, student-customized final project, exam	Teaching less than 4 courses with a research program would help.
Data acquisition and management	Students learn various types of spatial data acquisition techniques including remote sensing (including UAVs), and surveying (GPS, total station), and how to integrate data into a mapping environment for analyses.	One of the labs focuses on this, but it is required to complete other components of the course	
Cartographic presentation	Labs and final project have a strong cartography component.	Labs and final project will demonstrate this.	
Geoprocessing and other analytical methodology	Students utilize a variety of analytical procedures to investigate spatial patterns.	Labs and final project will demonstrate this.	
Programming and customizing workflow	Students learn to utilize programming languages to customize analytical operations within GIS software.	Labs and final project will demonstrate this.	

Course ERSC 3P12

Course Calendar Description: Stratigraphy

Fundamentals of lithostratigraphy, biostratigraphy, chronostratigraphy, magnetostratigraphy, geochronology and introduction to the International Stratigraphic Guide; geological time scale, Milankovitch and sub-Milankovitch cyclicality, subsurface geology techniques and correlation, sequence stratigraphy, geological history of southern Ontario.

Lectures, 2 hours per week; Labs, 2 hours per fortnight.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Understand the following: - Discovery of deep time - Geological time scale history - Physical principles for deducing relative age - Stratigraphic correlation - Relative vs numerical age - Stratotypes: unit, boundary, type locality, GSSPs - Biostratigraphy & biostratigraphic units - Geochronometry - Magnetostratigraphy - Cyclostratigraphy - Petroleum geology - Subsurface geology including electric logging - Sequence stratigraphy	Listening to lectures by the instructor, engaging in discussions during the class, reading the detailed Powerpoint presentations on SAKAI, revising for the midterm and final exams.	Participation during lectures and labs, attendance is taken for each lecture. An in-class midterm test and a final exam.	Remedial English for most students, as the midterm test and final exam require essay-type answers; and subsurface assignment should also be written in grammatically and idiomatically correct English.

<p>Do the following:</p> <ul style="list-style-type: none"> - Log and describe sedimentary rock cores; - recognize and interpret sedimentological, deformational, and diagenetic features in a sedimentary rock core - correlate subsurface electric logs - compare and calibrate core descriptions with electric logs for the same core. - subsurface lithological / geophysical correlation using a combination of electric logs and observations of core. - write a report following very detailed instructions. - place the local stratigraphy and geology of subsurface Lake Erie into a regional and global framework. - synthesize information from a variety of sources. 	<p>Attending six two-hour labs where they describe core with the help/guidance of the instructor and TAs. Students complete their report following explicit and detailed instructions including a one-hour introductory lecture, and a one-hour wrap-up lecture. Working independently on their project, including a correlation diagram which ideally should be created using a computer drawing program (but analogue cut & paste allowed).</p>	<p>Participation during labs as assessed by the instructor (attendance is taken), subsurface report marked by the TA.</p>	<p>Schedule the labs for 3-hour duration rather than the 2 hours presently scheduled. This will allow 30 mins to lay out the core, and give the students an extra 30 mins describing the core.</p> <p>Access to, and training in, graphical software allowing students to computer-generate their correlation diagrams for the subsurface project.</p>
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Course 3P24

Course Calendar Description:

Glacial Geomorphology/Geology (also offered as GEOG 3P24)

Introduction to glaciology; glacial processes, glacial deposits; their genesis and sedimentology. Relationship of glacial processes to landforms and surface topography. Glacial systems and facies associations. Applied aspects of glacial geology, such as drift exploration.

Lectures, lab, field work, 5 hours per week.

Prerequisite(s): ERSC 2P05.

Learning Outcome ¶ <i>A student will be able to:</i>	Learning Activity/Experience ¶ <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement ¶ □
Learn the impact of glaciation on Planet Earth. ¶ □	Reading/viewing course material & attending Lectures & completing Labs. □	Two in-class Test exams and an Essay marked by the instructor, eight laboratory assignments marked by the TAs, and feedback is given to correct misunderstanding. □	¶ □
Learn how ice masses form and move. Glacial Physics. ¶ □	Reading/viewing course material & attending Lectures & completing Labs. □	Two in-class Test exams and an Essay marked by the instructor, eight laboratory assignments marked by the TAs, and feedback is given to correct misunderstanding. □	Make the field trip mandatory for all students (but this would incur additional costs). ¶ ¶ □
Learn the basic mechanics of glacial erosion and transport processes, transport pathways, erosional attributes of glacial surfaces and clasts, clast provenance. ¶	Reading/viewing course material & attending lectures & completing Labs. □	Two in-class Test exams and an Essay marked by the instructor, eight laboratory assignments marked by the TAs, and feedback is given to correct misunderstanding. □	□

□			
Learn the concepts of glacial deposition¶ ¶ □	Reading/viewing course material & attending lectures & completing Labs.□	Two in-class Test exams and an Essay marked by the instructor, eight laboratory assignments marked by the TAs, and feedback is given to correct misunderstanding□	¶ ¶ □
Learn concepts related to subenvironments of glacial systems, glaciotectionics, and glaciomarine, glaciolacustrine environments¶ □	Reading/viewing course material & attending lectures & completing Labs.□	□	¶ ¶ ¶ □
Learn aspects of Applied Glacial Geology--drift prospecting, drilling, geotechnique as applied to glacial sediments□	Reading/viewing course material & attending lectures & completing Labs.□	The essay focusses on the relationship between Glacial Processes and Society in some aspect as the thesis for the Essay□	Be able to give more feedback in class time. Discuss essay grammar, style and reference styles and formats□
□	□	□	□

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Course ERSC 3P35

Course Calendar Description:
 Biomonitoring and Environmental Stress Assessment

Use of biodiversity indicators, field methods and passive and active sensors to assess environmental quality. Collection and analysis of quantitative and qualitative data to investigate urban air and water pollution and forest health.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Describe how ambient air quality can be quantitatively assessed using lichens and tree bark.	Attending lectures, learning to identify a small number of common arboreal lichens, going into the field to learn how to use various approaches to map lichen distributions in urban areas. Complete 4 written lab assignments. Participate in field trips: two 2hr on campus, one 8hr off campus.	The prof asks the student to correctly identify 12 species of lichens in a field setting. Lecture material and lessons learned while in the field are tested in two essay style written exams, and 4 (take home) laboratory assignments that include a mix of short and longer answer questions.	Find a new field study location. Make greater use of guest lectures. Receive a budget that will make it possible for us to submit samples for chemical assay/heavy metal analysis. Teach students how to use a drone as a survey/mapping tool. Purchase and use mechanical/passive sensors. Create a 4 th year biomonitoring project course that builds on this course and better integrates this course with GIS, dendrochronology, geochemistry and biology courses.
Describe how biomonitors other than lichens are used to track and quantify pollution impacts in aquatic and	Producing and presenting a 15-20 min PowerPoint presentation. Producing a short bibliography and an	All written work is marked by the prof. The prof and classmates ask questions of the student and the prof	

<p>terrestrial settings (a focus on something other than air quality).</p>	<p>abstract. Completing directed readings and sharing lessons learned during discussions with the prof and students in class and on field trips.</p>	<p>assigns a mark to the presentation and their ability to answer the questions.</p>	
<p>Explain the challenges and identify and evaluate the strengths and weaknesses of approaches and strategies that are used to monitor new/proposed mining sites such as the Ontario Ring of Fire.</p>	<p>A longer/major lab assignment is devoted to this as is the hands-on field work activity and at least 5 hrs of lectures. Sometimes a guest lecture is given by a scientist at the Ontario Ministry of the Environment.</p>		<p>It would be good to take the class on a field trip to the Ontario Ministry of the Environment and have a short meeting with some of the staff. Unfortunately this could take the better part of a day and may conflict with other courses.</p>

Course ERSC 3P90

Course Calendar Description:
Volcanology

Survey of volcanoes, their distribution, forms, composition, eruptive products and styles, and potential hazards.
Lectures, lab, 6 hours per week.

Optional textbook: Francis & Oppenheimer (2003) Volcanoes 2nd ed.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Describe the types and distribution of global volcanic activity and relation to plate tectonics	Attending lectures, completing homework assignment	Writing and oral presentation assignment on an active volcano	
Identify volcanic minerals and rock types	Attending lectures, completing lab assignment	Laboratory exercise on lavas and phenocrysts. Examination	
Describe the different components that make up magma (melt, crystals, volatiles)	Attending lectures and reading course materials	Examination	
Describe the physical properties of magma and relation to magma composition	Attending lectures and reading course materials	Examination	

Define viscosity and influencing factors	Attending lectures and reading course materials, completing lab assignment	Inquiry-based laboratory exercise on viscosity Examination	
Describe the factors that lead to magma ascent and eruption	Attending lectures and reading course materials	Examination	
Describe the range of products and processes of mafic volcanism, including Hawaiian, explosive, and submarine activity	Attending lectures and reading course materials, completing lab assignment	Two laboratory assignments looking at volcanic rock samples that cover the breadth of mafic volcanic products. Examination	
Describe the range of products and products of intermediate silicic volcanism, including lavas and explosive Plinian activity	Attending lectures and reading course materials, completing lab assignment	Laboratory assignment looking at silicic volcanic rock samples. Examination	
Describe potential volcanic hazards and strategies for mitigation, including creating and/or interpreting a volcanic hazard map	Attending lectures and reading course materials, completing lab assignment	Laboratory assignment on volcanic hazard maps Examination	
Convey the volcanic history and potential hazards of a volcano	Completing term project	Staged term project that includes an annotated bibliography, rough draft of term, final draft, and oral presentation on a volcano of the student's choosing	

Course ERSC 3P93

Course Calendar Description:
Exploration Geophysics

Underlying physical principles and practical aspects of field acquisition, processing and data interpretation for most common geophysical techniques used in mineral exploration: potential fields, radiometrics, resistivity and electromagnetic methods. Geological interpretation, data integration and applications to specific deposit types.

Lectures, lab, 5 hours per week.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Learn the concept of data interpolation to create map images out of point data, and determine the main parameters required to create images that are representative of the data without the addition of artefacts.	This concept is reviewed in lectures, but it is also reinforced by giving them a lab where they need to interpolate a given dataset and create several maps.	Selection of proper grid cell size parameters, as well as maximum extrapolation/buffer. The concept keeps appearing throughout the term when other geophysical techniques are introduced.	
Learn about potential field methods (gravity and magnetics). Explore the advantages, uses and limitations of these techniques, involving data acquisition, processing and interpretation.	Concept reviewed in class, but the students are also given the opportunity to use a gravity meter and magnetometers and conduct some small surveys near campus. Data processing is done in labs.	Lab 2 is on gravity data processing, and Lab 3 on magnetic data processing. Subsequent exercises ask the students about the expected gravity & magnetic signature of different simple geological structures and models. This is evaluated during the course midterm test, as well as in the final exam.	

<p>Learn about the following geophysical techniques: radiometrics, ground and airborne electromagnetic methods, electrical resistivity and induced polarization, ground penetrating radar and seismic.</p>	<p>Concepts reviewed in class. The students are also given the opportunity to use induced polarization & resistivity, and ground penetrating radar systems.</p>	<p>Knowing when to apply each technique, based on some general criteria on the geological problem to be solved (e.g. depth of investigation, alteration, etc.). This is evaluated during the course midterm test, as well as in the final exam.</p>	
<p>Apply data integration concepts when faced with multiple datasets over one same area.</p>	<p>The data collection exercises are all run systematically over the same site. That way the students can get a better feeling for what each dataset shows, as well as the progressive development of increased knowledge of the site, as the data is being collected.</p>	<p>Successfully interpreting all the data collected over the site. Lab 4 is about data integration and interpretation. This is evaluated during the course midterm test, as well as in the final exam.</p>	<p>It would be good to have a 1-week field trip where multiple geophysical techniques are applied at a larger scale and the students are asked at the end of every day to process the data collected during the day, and an interpretation report is drafted at the end of the week. This would require more resources, since it would have to be done away from the city and it would require transportation, accommodation, etc.</p>
<p>Learn about data filtering in the FFT and space domains.</p>	<p>Filtering real data (Lab3) and visualizing the outcomes of each filter applied.</p>	<p>Successfully classifying each filter applied based on what it does to the data (for example high pass vs low pass)</p>	

Course ERSC 3P99

Course Calendar Description: Field Camp-Solid Earth

Two-week immersion course offered after final examinations in year 3 introducing students to collecting, recording and synthesizing field data, airphoto mapping, preparing geologic maps and reports. Field area, situated in northern Ontario, consists of Archaean, Proterozoic and Paleozoic lithologies.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Understand the logistics involved with field work	Spending 10 days in a field camp	Participation in field activities is graded by Instructors.	This course works best with a small enrollment and a high instructor to student ratio.
Undertake the task included for geological mapping, including navigation and the measuring of geological attitudes using a compass.	Undertaking a series of exercises that include navigation and the taking of strike and dip.	Participation in field activities is graded by Instructors.	
Construct a geological map	Integrating all data acquired during the exercises into a geological map	Map is graded by instructors	
Write a geological report	Writing a geological report that uses the acquired data	Report is graded by instructors	

Course ERSC 4P01

Course Calendar Description:
Advanced Structural Geology

Exploration of topics relevant to structural geology through the study of the scientific literature. Topics may vary.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Understand the assemblage of the Canadian Shield	Reading assigned papers and writing abstracts	Marking of abstracts	
Analyze Geological Survey of Canada Maps of selected areas	Analyzing selected maps in labs, discussion of possible approaches during the labs	TAs mark labs	Take advantage of visiting GSC geologists to discuss how they produce maps.
Appreciate how our understanding of the geological evolution of selected parts of the shield has evolved over time	Reading and presenting a series of papers spanning more than a decade on the same region. Class discussion on selected readings	Prof and TA grade presentation and discussion.	
Improve scientific reading and writing skills	Writing abstracts of selected papers. Writing major term paper.	Marking of abstracts and major term paper.	

Course ERSC 4P10

Course Calendar Description:
ERSC 4P10 Advanced Clastic Sedimentology

Team study of the subsurface geology of a selected area of a Lake Erie gas field. Drill cores and geophysical logs are used to correlate lithostratigraphic units and to construct structure contour maps and isopach maps of gas-bearing strata.

Lab, seminar, 4 hours per week.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Work with small teams to complete a project through the cooperative efforts of the team. The teams learn how to distribute work equitably and establish schedules with the aim of meeting a specific deadline for the project.	All activities of the project add to team final reports that contribute to the final grade (see below for details)	The instructor works with the teams, acting as a “consultant” and a “knowledge resource” for the project. The instructor contributes a grade component (10% of the team report grades) based on level and quality of participation of each student. Students submit “peer evaluations” of their team’s members worth 10% towards the team project grades.	This is a course works best with small enrolments and/or multiple sections and neither approaches are consistent with the budgetary goals of the University. In future I will offer separate periods so that no more than two teams are working on core logging at the same time.
Create sedimentological sections based on drill core describing the colour, grain size, composition of and sedimentary structures that are present.	Logging 9 drill cores of various lengths. The instructor is present during this process to point out important characteristics and, if necessary, explain their significance and how to	The instructor works directly with students as they log the core and evaluates their level of success and any improvement in their abilities.	

	recognize them in other cores.		
Interpret gamma ray logs in terms of lithologies present and identify boundaries between formal stratigraphic units.	The students participate in the interpretation of 48 gamma ray logs from the gas field from which the drill core were taken.	The instructor reviews the interpretation and corrects any misinterpretations with explanation for the reason for the correction.	
Create correlation diagrams for formal stratigraphic units in the sequence identified in the sedimentological sections and gamma ray logs.	The students create two correlation diagrams (extending in two approximately orthogonal directions) using their gamma ray log interpretations and their sedimentological sections based on core.	The diagrams are included in the final report and they contribute to the grade assigned to that report.	
Create of structure contour map and isopach map based on data collected from gamma ray logs.	Data for the maps is taken from the gamma ray log interpretations of the elevation of the base of the Grimsby Formation (structure contour map) and of the total thickness of the Grimsby and Thorold formations (isopach map).	The maps are included in the final report and they contribute to the grade assigned to that report.	
In depth knowledge of an area that is related to clastic sedimentology in general.	Students complete a term paper on an area of interest in clastic sedimentology.	The instructor grades the term paper and the student is also graded on a 15 minute in-class presentation on the topic of the paper.	

Course ERSC 4P11

Course Calendar Description:
ERSC 4P11 Sedimentary Facies Models

Depositional environments of clastic sediment in marine and non-marine settings and geological criteria for recognizing their deposits.

Lectures/seminar, 3 hours per week.

<p>Learning Outcome</p> <p><i>A student will be able to:</i></p>	<p>Learning Activity/Experience</p> <p><i>A student will learn this by:</i></p>	<p>Assessment</p> <p><i>Achievement of this outcome will be demonstrated by:</i></p>	<p>Strategy for Improvement</p>
<p>learn how “academic integrity” underpins the evolution of reliable and accurate scientific knowledge.</p>	<p>Lecture and seminars covering the nature of academic misconduct at the highest levels and its potential impact on science.</p>	<p>Discussion during seminars.</p>	
<p>Learn how to critically evaluate scientific literature and what makes a “good” scientific paper.</p>	<p>Lecture on “reading and writing scientific papers”.</p>	<p>Assignment where students provide a critical review of a scientific paper that is assigned by the instructor.</p>	
<p>learn about the history of discovery in the area of bed forms and stratification from Sorby to the present.</p>	<p>Lecture and discussion of papers by John Southard and Gerry Middleton.</p>	<p>Discussion and an optional course project using the recirculating sediment flume to determine flow constraints on fields of bed form stability. [students are given the choice of group flume projects or major essay on a depositional</p>	<p>The addition of a wave generator to the recirculating flume will enable a broader range of experiments for the group flume project.</p>

		setting; they always choose the flume project.]	
learn the history of geological knowledge that led to the concept of “facies models” as a basis for interpreting sedimentary rocks in terms of their environment of deposition.	Lecture and readings.	Evaluated through discussion in seminars.	
Become familiar with the “facies models” and other information regarding deep water clastic deposits, meandering and braided fluvial systems, shallow marine clastic deposits.	Lectures, readings and seminars.	Evaluation through discussion and seminars and a term paper.	

Course ERSC 4P16

Course Calendar Description: Precambrian Geology

Archaean and Proterozoic evolution of the Earth examining: geology, tectonics, stratigraphy and history of the Precambrian; evolution of the Earth's crust; Precambrian time scale; evolution of life, oceans and atmosphere.

Lectures, seminar, 4 hours per week.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Learn about the evolution of the Earth and its processes during the Precambrian. Particular emphasis is given to mantle processes that lead to plate tectonics, continental drift and breakup, and supercontinents formation and evolution.	Reading a number of key articles on these topics, as well as presenting them to the class.	The students need to write a final review paper on some key concept of Precambrian evolution. This has to be a compilation of elements, rather than just a presentation of an already written/discussed paper.	This works well for small classes (<8 students). That way we can keep a constant flow of student presentations and discussions, without a long wait between presentations for each student. For larger classes it might be easier to split them into 2 sections.
Learn about all the processes involved in the Earth evolution during the Precambrian that lead to life on Earth	Invited presentation by Francine McCarthy. The students were asked to prepare a compiled/joint presentation at the end of the course.	Final joint presentation involving all what was discussed/presented during the course.	This also works well for a small class. For larger classes, it might be required to split into multiple sections.

Course ERSC 4P18

Course Calendar Description:
Paleobotany and Palynology (also offered as BIOL 4P18)

Fossil record of the green lineage: chlorophytes, charophytes and embryophytes. Evolution of the clade Viridiplantae. Record of terrestriation and of plant interactions with fungi and animals. Reconstruction of paleoenvironments and paleoclimates from paleobotanical evidence.

Lectures, lab, field trips, 5 hours per week.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Know the Mesozoic through Recent evolutionary history of the Green Lineage (green algae + plants) and other algal groups (the Red Lineage)	Lectures, 3 laboratory exercises, term paper research	2 term tests marked by instructor; labs marked by TA	
Be familiar with the systematics of the Green and Red Lineages	Lectures, 3 laboratory exercises, project	2 term tests & report marked by instructor; labs marked by TA	
Understand the “Botanical Code” and taxonomic convention	Lectures, 3 laboratory exercises, project	2 term tests & report marked by instructor; labs marked by TA	
Become familiar with the biogeographic distribution of plants and algae and associated environmental controls	Lectures, 3 laboratory exercises, local field trip (St. John’s Conservation Area)	2 term tests marked by instructor; labs and field trip report marked by TA	
Identify microfossil and macrofossil representatives of Chlorophyta and Streptophyta	Lectures, 3 laboratory exercises, project	2 term tests & report marked by instructor; labs marked by TA	

Identify pollen and non-pollen palynomorphs and interpret assemblage data (biostratigraphy, paleoenvironments)	Lectures, 3 laboratory exercises, project	2 term tests & report marked by instructor; labs marked by TA	
Process sediments for palynological analysis, interpret assemblages (biostratigraphy, paleoenvironments)	Project entailing processing and analyzing an unknown preQuaternary sample, including photomicrographs	Illustrated report of project marked by instructor	
Learn more detail about a topic in paleobotany/ palynology than is covered in class and communicate that knowledge (orally & in written form)	Research (primarily using journal articles) a topic of choice	An abstract, term paper & oral presentation using Powerpoint) to be graded by instructor with input from TA	Include peer assessment as a component of grade and learning experience

Course ERSC 4P21

Course Calendar Description:
ERSC 4P21 Advanced Igneous Petrology

Igneous petrogenesis, emphasizing the physical chemistry of igneous processes, igneous rock complexes and studies of a number of petrologically important areas.

Lectures, lab, 6 hours per week.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Characterize the mineral and chemical make-up of the Earth's mantle	Attending lectures, reading provided course materials, completing laboratory exercise	Laboratory exercise using a petrographic microscope to characterize the minerals and textures of mantle peridotites sampled from mafic lavas as xenoliths or from an ophiolite belt Lab final exam	
Use Excel to perform calculations on geochemical analyses	Completing homework assignments	Homework assignments that use Excel to find seafloor spreading rates and the chemical composition of a pyroxene	
Describe how energy flows in igneous processes	Attending lectures, reading provided course materials	Take home examination	

Characterize the mineral, chemical, and textural characteristics of mafic rocks	Attending lectures, reading provided course materials	Laboratory exercise using a petrographic microscope to characterize the minerals and textures of basaltic lavas Lab final exam	
Describe how and why the mantle melts at different tectonic settings (mid ocean ridge, subduction zone, intra-plate)	Attending lectures, reading provided course materials	Take home examination	
Calculate how trace element partition during partial melting and fractional crystallization processes.	Attending lectures, reading provided course materials, completing homework assignment	Assignment on the partitioning of rare earth elements during partial melting of the mantle. Take home examination	
Describe the process of fractional crystallization in terms of phase stability and how it affects magma composition	Attending lectures, reading provided course materials, completing laboratory exercise	Laboratory exercise where student simulate the fractional crystallization of a magma chamber Lab final exam, Take home examination	
Describe how melt kinetics affect rates of igneous processes and textures.	Attending lectures, reading provided course materials, completing laboratory exercise	Laboratory exercise using a petrographic microscope to characterize textures in undercooled submarine lavas Lab final exam, Take home examination	
Describe igneous processes, tectonic controls, and range of lithologies and textures at layered mafic intrusions,	Attending lectures, reading provided course materials, completing laboratory exercise	Laboratory exercise using a petrographic microscope to interpret rocks from the Bushveld Igneous Complex, South Africa	

		Lab final exam, Take home examination	
Describe the processes involved in andesite generation, including magma mixing, crustal assimilation, and fractional crystallization	Attending lectures, reading provided course materials, completing homework assignment and laboratory exercise	Homework assignment calculating two-component mixing Laboratory assignment looking at magma mingling textures in andesites Lab final exam, Take home examination	
Describe the processes, lithologies, and textures involved in the formation of granites	Attending lectures, reading provided course materials, completing laboratory exercise	Laboratory exercise using a petrographic microscope to interpret rocks from the Sierra batholith Lab final exam, Take home examination	

Course ERSC 4P31

Course Calendar Description:
Watershed Study and Assessment

Hydrologic/watershed cycle; fundamentals and principles of watersheds-interaction of hydrosphere-lithosphere-biosphere; physical characteristics, effects and controls of stream sediments/contaminants/pollutants; aqueous geochemistry; introduction to watershed toxicology. Investigation of concerns with several watersheds. Major study and report of a local subwatershed.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Describe the physical nature of a watershed and the intrinsic and extrinsic impacts; gather water quality parameters; evaluate the impacts of pollutants/ contaminants on water quality; understand the impacts of extrinsic conditions on watersheds	Listening to the discussion and presentations in lecture; participating in regular field trips collecting water quality and stream parameters; by assessing extrinsic conditions in the field (ie. Spillage, flooding)	The preparation of two reports on extrinsic impacts on ground and surface water; preparation of a full-fledged technical report to industry standards	
Handle sophisticated water quality instruments; measure physical stream parameters; calculate stream load capacity and discharge; use basic statistics; write a proper technical (industry standard) report	Preparing the instruments used for water quality analysis; learning how to calibrate the field instruments; collecting and analyzing water samples for select water parameters (e.g., TSS)	Writing a technical report of results and analyses; the proper construction of field notes	Expansion of enrollment is limited by the lack of more equipment

Course ERSC 4P45

Course Calendar Description:
Advanced Environmental Site Assessment

Theoretical and practical training required for both Phase I and II Environmental Site Assessment in accordance with Canadian laws. Assessment, installation, development and monitoring of bore holes for soil and groundwater samples. Evaluation of environmental risk.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Conduct a Phase I environmental audit; conduct a waste audit; conduct a carbon audit/gasoline consumption audit; conduct an energy/electricity audit; conduct a climate change audit/assessment	Compiling scientific and news media literature; compiling and gathering information relevant to the audit (e.g., library); gathering waste from various localities and sorting it and recording findings; doing a statistical evaluation of results	The completion of several technical reports; 1) Phase I Audit, 2) Waste Audit, 3) Energy Audit; Debate on a chosen topics	

Course ERSC 4P50

Course Calendar Description:
Petroleum geology

Hydrocarbon exploration and exploitation, including physical and chemical properties of petroleum, methods of exploration, the subsurface environment, generation and migration of petroleum, reservoirs, traps and seals, sedimentary basins and petroleum systems, emphasizing Canada, nonconventional petroleum resources, and the economics and geopolitics of petroleum.

Lectures, 2 hours per week; Labs, 6 two-hour seminars.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Understand the following: - Introduction to petroleum geology - History of exploration and corporate history - Physical and chemical properties of petroleum - Origins of petroleum - Generation and migration of petroleum - The subsurface environment - The reservoir - Traps and seals - Sedimentary basins and petroleum systems with emphasis on Canada - Nonconventional petroleum resources - Economics, geopolitics, and environmental impacts of petroleum.	- Listening to lectures by the instructor, engaging in discussions during the class, reading the detailed Powerpoint presentations on SAKAI, revising for the midterm and final exams. - means of a video and a lecture for the Troll Field case study.	Participation during lectures, attendance is taken for each lecture. Performance in an in-class midterm test and a final exam.	Remedial English for most students, as the seminar and associated essay should be written in grammatically and idiomatically correct English.

<p>- as a case study, learn about the petroleum geology and drilling technology of the Troll Field in the Norwegian sector of the North Sea.</p>			
<p>Do the following:</p> <ul style="list-style-type: none"> - Independently research and evaluate a petroleum basin / or field of their choosing from a list made available, or a basin/field not on that list. - evaluate the information critically. - arrange and synthesize the acquired information. - present a Powerpoint seminar to fellow students and instructional staff. - critically and courteously evaluate the presentations of fellow students. - write an essay on the subject of their seminar presentation. 	<ul style="list-style-type: none"> - Presenting a 20-minute seminar on a petroleum basin / or field of their choosing. - Attending all student seminars and critiquing the seminars of other students. - writing an essay on the subject of their seminar presentation. 	<p>Participation during seminars, attendance is taken for each seminar. Students each give a seminar and write an essay and both are evaluated by the instructor.</p>	

Course ERSC 4P61

Course Calendar Description:
ERSC 4P61 Surface Hydrology

Distribution and variation of run-off, recurrence of floods and droughts; fluvial processes and sediment transport; limnology and paleolimnology; hydrologic and water management techniques; surface and groundwater interaction.

Lectures, lab, local field trip, 5 hours per week.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Understand the hydrologic cycle and the unique properties of water that drive it, the problems posed by excesses and deficits and the behavioural and engineering approaches to mitigating these problems	Listening to lectures describing these concepts, and through hands-on activities in four laboratory exercises, assisted by TA and the instructor.	Two term tests and a lab exam marked by the instructor will test their understanding, as will the four lab assignments marked by the TA	
Understand and calculate the inputs, abstractions and outputs that comprise the hydrologic continuity equation	Listening to lectures describing these concepts, and through hands-on activities in four laboratory exercises, assisted by TA and the instructor.	Four laboratory assignments marked by the TA, and the lab exam marked by the instructor assess their understanding, and feedback is given to correct misunderstanding.	
Understand the measurement and assessment of meteorological, limnological and hydrological data, including unit conversion, sample statistics, and	Listening to lectures describing these concepts, and through hands-on activities in four laboratory exercises, assisted by TA and the instructor.	Four laboratory assignments marked by the TA, and the lab exam marked by the instructor assess their understanding, and feedback	

probability - including flood prediction		is given to correct misunderstanding.	
Understand the hydraulics of flood control and flow routing	Listening to lectures describing these concepts, and through hands-on activities in four laboratory exercises, assisted by TA and the instructor.	Two term tests and a lab exam marked by the instructor will test their understanding, as will the four lab assignments marked by the TA	
Understanding surface water-groundwater interactions	Listening to lectures describing these concepts, and through hands-on activities in four laboratory exercises, assisted by TA and the instructor.	Two term tests and a lab exam marked by the instructor will test their understanding, as will the four lab assignments marked by the TA	
Understand long-term hydrological and paleolimnological variations in response to climate change	Listening to lectures describing these concepts, and through hands-on activities in four laboratory exercises, assisted by TA and the instructor.	Two term tests and a lab exam marked by the instructor will test their understanding, as will the four lab assignments marked by the TA	
Learn about a topic in Surface Hydrology in greater detail than was covered in class and communicate that knowledge (both orally and in writing)	Research (primarily using journal articles) a topic of choice	An abstract, poster and oral presentation (at poster session) to be graded by instructor with input from TA, with a component of peer assessment	

Course ERSC 4P85

Course Calendar Description:

Ecosystems and Changing Disturbance Regimes (also offered as BIOL 4P85 and GEOG 4P85)

Terrestrial ecosystem response to large-scale environmental change. Topics may include disturbance regimes, adaptation, alteration of biogeochemical cycles, invasive species and range shifts, carbon cycle feedbacks, predicting future climate and vegetation impacts, change detection, scaling-up and nonlinearity.

Lectures, seminar, 3 hours per week.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Provide clear examples of how terrestrial ecosystems respond to ecological disturbances such as fire, drought, climate change, glacial advance/retreat.	Attending lectures, actively/verbally contributing to seminars, taking notes, finding, reading and suggesting assigned readings, producing annotated bibliographies.	This is tested in two essay style written exams, two essay style in-class assignments, an annotated bibliography, a 20 minute talk and a 10 minute question period.	Scheduling this class at mid-day (not at 8 am or late in the afternoon) improves student participation. Capping enrolment at <25 students ensures that everyone has a chance to speak up in class. It also ensures prompt and useful written feedback on the essay answers and assignments.
Describe and critically evaluate the strengths and limitations of research methods that are used to quantify baseline abiotic/biotic conditions, track and identify changes in biogeochemical cycles and predict shifts and responses	Attending lectures, actively/verbally contributing to seminars, taking notes, finding, reading and suggesting assigned readings, producing annotated bibliographies.	This is tested in two essay style written exams, two essay style in-class assignments, an annotated bibliography, a 20 minute talk and a 10 minute question period.	

that follow natural and human caused disturbances.			
Independently research and effectively critique scientific literature and communicate in a classroom setting.	Attending lectures, verbally contributing to seminars, taking notes, asking questions and finding, reading and suggesting assigned readings, producing annotated bibliographies.	This is tested in two essay style written exams, two essay style in-class assignments, an annotated bibliography, a 20 minute talk and a 10 minute question period.	
Work with another student to develop learning resources and make an oral presentation to the class that teaches their peers about key concepts in disturbance ecology.	Work with a partner to find, critically evaluate scientific literature, compile an annotated bibliography and orally present a 20 min PowerPoint.	Written work is marked by the TA. The prof and classmates ask questions of the student and the prof assigns a mark to the presentation and their ability to answer the questions.	
Effectively communicate in writing.	Students complete two written assignments (5 pages of writing), write an abstract for their talk and compile an annotated bibliography. This is done in class (closed computer but open book).	Written work is marked by the TA. The prof follows each assignment and exam with an in class review and discussion of correct/best answers.	
Quickly scan a large set of readings, highlight key points and take notes that can be used to address specific and open-ended questions.	Students are given a large reading list and question sets are used to force students to find and use facts and views found in some but not every reading.	This is tested in two essay style written exams, two essay style in-class assignments, an annotated bibliography, a 20 minute talk and a 10 minute question period.	

Course ERSC 4F95/ 4F96 (Proposed courses)

Course Calendar Description: Honours Project I

Individual research project carried out under the direction of a faculty adviser.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Research a topic of their choice in depth	Researching the topic in the scientific media	Proposal, regularly scheduled meetings with supervisor	
Compile the research into a coherent framework	Compiling the information into a single coherent framework	regularly scheduled meetings with supervisor	
Develop a strategy for presenting the topic in their chosen media (written, video)	Presenting an outline for the completed project	Presentation, regularly scheduled meetings with supervisor	
Present their research topic in their chose media on a format that is accessible to the general public	Presentation of completed project	Presentation, completed project	

Year 1

ERSC 1P01

ERSC 1P01
Planet Earth I
Fall Term/2016/Duration 2
Prof. Martin J. Head
mjhead@brocku.ca
MC D425
MC D420, Ext. 3703

Times and Locations:

LECTURE: Tuesdays and Thursdays 8:00-9:00 am, Room TH 325

LABS: Mondays 2–5pm, MC D309, Tuesdays 2–5pm, MC D309, Wednesdays 2–5pm, MC D309, Thursdays 2–5pm, MC D309, Fridays 2–5pm, MC D309

Note: Classes at Brock University end ten minutes ahead of the hour to facilitate transfer time.

Course Calendar Description:

Earth as a member of the solar system, minerals, rocks and sediments, plate tectonics, volcanic activity, earthquakes, plate tectonics and the building of continents, economic geology, stratigraphy and geologic time, fossils and the history of life.

Additional Description:

ERSC 1P01 aims to give science students a background in the broad range of subjects studied in the field of Earth Sciences. The daily news commonly includes stories of geological events that have a profound impact on our lives. Such events vary from devastating earthquakes to a wide variety of environmental concerns that affect our local region and even global climate. The course includes a component of Earth history, and how our understanding of the Earth and life on it has changed over the 4.6 billion years since it formed.

ERSC 1P01 is a half (0.5) credit course comprising two one-hour lectures per week, plus a weekly 3-hour lab, where students gain practical experience with topics covered during lectures.

Science context credit: ERSC 1P01 fulfills the requirement for (0.5) credit of your Science context credit.

NOTE: Completion of this course will replace previous assigned grade and credit obtained in ERSC 1F01, 1F90 and 1P92.

Recommended Text:

Marshak, S., 2015. Earth: Portrait of a Planet. Fifth Edition. W.W. Norton and Company, Inc. New York. 984 pp.

Course Communications:

Note: Please use your Brock student e-mail account to communicate with instructors and include “ERSC 1P01” in the subject line.

Any questions related to lab material or lab scheduling should go directly to the Senior lab instructor/coordinator, Astride Silis. Questions pertaining to lecture material should be directed to the lecture instructor, Prof. Head

In the event of class cancellations, inclement weather etc. students will be notified via Brock email and an announcement posted on Sakai. Please note that university-wide cancellations are posted on the Brock University website.

Evaluation Components and Due Dates

Evaluation Component	Grade Weight	Due Date
Midterm Exam	20%	Thursday, October 27, 2016
Final Exam	40%	December 2016- <i>To be scheduled by Registrar's office</i>
Lab component	40%	<i>See detailed breakdown</i>
Total	100%	

*In addition to requiring an overall minimum of 50% in the course, students must also achieve a minimum of 50% in the lecture component to pass the course, i.e. grade weight for the Fall Mid-Term Exam and Final Exam when added together must reach a minimum of 30 (out of a total weight of 60).

Late Submission Policy:

All "in-lab" assignments are **due at the end of the lab period** unless otherwise specified. Labs that are not handed in at the end of the scheduled lab period will have 10% deducted from the final mark of the lab assignment per day up until 5 days (including the weekend) (or 50%) have passed. After 5 days a mark of zero ("0 %") will be given for the assignment, unless accompanied by medical documentation. See Medical Exemption Policy and the medical health certificate at <http://www.brocku.ca/health-services/policies/exemption>

No labs or assignments will be accepted for marking (i.e. student shall receive a mark of 0% on the assignment) after the assignment has already been marked and handed back to students.

Relationship between attendance and grades:

Students are expected to attend all classes (lectures) and laboratories and must submit all laboratory assignments in order to pass this course. See additional notes on Lab component for more details.

Important dates:

September 20, 2016 is the date the online registration closes. Changes after this date must be done with a course Add/Withdrawal form.

October 10, 2016 Thanksgiving Holiday, University closed.

October 11-14, 2016 Fall Break week.

November 1, 2016 is the date you will be notified of at least 15% of your course grade.

November 8, 2016 is the date for withdrawal from the course without academic penalty.

December 7-8, 2016 are set aside for designated reading days (these may be used to cover classes missed because of adverse weather).

December 9-20, 2016 are set aside for formal final examination periods.

Academic Policies

Academic Integrity:

Statement for undergraduate courses

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.

Intellectual Property Notice:

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

Academic Accommodation:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Services for Students with Disabilities in the Student Development Centre (4th floor Schmon Tower, ex. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

Academic Accommodation due to Religious Obligations:

Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements.

Medical Exemption Policy:

The University requires that a student be medically examined in Health Services, or by an off-campus physician prior to an absence due to medical reasons from an exam, lab, test, quiz, seminar, assignment, etc. The Medical Certificate can be found at: <http://www.brocku.ca/health-services/policies/exemption>

Sequence and Dates of Lectures/ Textbook readings

Class Dates	Topic	Textbook Reference
1) September 8, 2016	Introduction	
2) September 13, 2016	Cosmology and origin of Earth	Ch. 1, p. 12-35
3) September 15, 2016	Atmosphere, lithosphere, asthenosphere	
4) September 20, 2016	Continental drift, Paleomagnetism	Ch. 2, p. 36-59
5) September 22, 2016	Plate tectonics	Ch. 4, p. 86-113
6) September 27, 2016	Minerals	Ch. 5, p. 116-140
7) September 29, 2016	Magma and igneous rocks	Ch. 6, p. 152-182
8) October 4, 2016	Weathering	Interlude B, p. 183- 201
9) October 6, 2016	Sedimentary rocks	Ch. 7, p. 202-214
October 11, 13, 2016	Fall Break week- NO LECTURES	
10) October 18, 2016	Sedimentary structures and environments	Ch. 7, p. 215-232
11) October 20, 2016	Metamorphic rocks and rock cycle	Ch. 8, p. 233-260, Interlude C, p. 261-269
12) October 25, 2016	Volcanic eruptions	Ch. 9, p. 272-311
13) October 27, 2016	Mid-Term Exam	
14) November 1, 2016	Earthquakes and tsunamis I	Ch. 10 and Interlude D, p. 312-378
15) November 3, 2016	Earthquakes and tsunamis II	Ch. 10 and Interlude D, p. 312-378
16) November 8, 2016	Folds, faults, mountain belts	Ch. 11, p. 379-415
17) November 10, 2016	Geologic time I	Ch. 12, p. 434-466
18) November 15, 2016	Geologic time II	Ch. 12, p. 434-466
19) November 17, 2016	Fossils and evolution	Interlude E, p. 418-433
20) November 22, 2016	Earth history I	Ch. 13, p. 467-501
21) November 24, 2016	Earth history II	Ch. 13, p. 467-501
22) November 29, 2016	Energy resources	Ch. 14, p. 504-544
23) December 1, 2016	Mineral resources	Ch. 15, p. 545-569
24) December 6, 2016	Review	

INTRODUCTION TO ERSC 1P01 LABS

Sequence, Dates and Grade weight distribution of ERSC 1P01 Laboratory component

Lab Dates (week of...)	Topic	Lab grade Distribution (%)
September 5, 2016	No labs this week	
1) September 12, 2016	Minerals I (Week 1 of 2)	
2) September 19, 2016	Minerals II (Week 2 of 2)	4.0
3) September 26, 2016	Igneous Rocks	3.0

4) October 3, 2016	Sedimentary Rocks and Depositional environments	3.5
<i>October 10, 2016</i>	<i>Fall Term Reading Week (No labs this week)</i>	
5) October 17, 2016	Metamorphic Rocks	3.0
6) October 24, 2016	Earthquakes Online lab + Study week for quiz	3.0
7) October 31, 2016	Mineral and Rock Quiz	10.0
8) November 7, 2016	Strike and Dip	3.0
9) November 14, 2016	Folds and Faults	4.0
10) November 21, 2016	Paleontology	3.0
11) November 28, 2016	Sequence Diagrams	3.5
<i>December 5, 2016</i>	<i>No labs this week</i>	

- 1) Laboratory exercises for ERSC 1P01 will consist of “in lab” assignments, an online assignment, and a lab quiz. The labs are held in the Mackenzie Chown (MC) Building, Room D309.
- 2) The lab component of ERSC 1P01 for practical purposes essentially runs independently of the lecture component. Any questions related to lab material or lab scheduling should go directly to the Senior lab instructor/coordinator, Astride Silis. Questions pertaining to lecture material should be directed to the lecture instructor, Prof. Head.
- 3) Lab information is posted on Sakai/Isaak. It is the student’s responsibility to ensure that *labs are printed and brought with you* to your registered lab section before the start of the lab. The lab instructors will not provide copies of the lab.
- 4) Lab assignments are due at the end of the lab period (unless otherwise specified). Attendance and participation for the entire scheduled duration of the lab section is required for complete marks.
- 5) Labs begin at 2:00 pm and are scheduled for 3 hours. Some labs may take the full three hours to complete. Other labs may run for a shorter duration. Please do not make arrangements for other activities before the end of the lab (5 pm).
- 6) Plan to arrive for the lab shortly before 2:00 pm. There will normally be an introduction lasting 30-45 minutes and the remaining time will be devoted to completing the lab assignment. It is important that you attend the introduction since information necessary to complete the assignment will be discussed during this time. If you arrive after 2:15 pm you will have missed too much information and you will be asked to leave that lab. Do not arrive late!
- 7) Do not switch lab sections without prior approval from the senior lab instructor/coordinator. Contact information is available at the beginning of this syllabus.
- 9) If a lab assignment or lab quiz is missed, it is the student’s responsibility to contact the Senior Lab Instructor/Coordinator as soon as possible after the missed lab. Please note that it is Department and University policy to require medical documentation (i.e. A doctor’s note) for missed assignments. A make-up lab section may be assigned during the same week. If no supporting documentation can be provided, a mark of zero (0) will be assigned for the lab.
- 10) Scheduling and timing may make it impractical to schedule make up labs. The student is still responsible for all material that was covered during the missed lab and should contact the senior lab instructor/coordinator and make arrangements with a classmate to obtain information that was covered.

LAB ASSIGNMENT LATE POLICY

All “in-lab” assignments are **due at the end of the lab period** unless otherwise specified. Labs that are not handed in at the end of the scheduled lab period will have 10% deducted from the final mark of the lab assignment per day up until 5 days (including the weekend) (or 50%) have passed. After 5 days a mark of zero (“0 %”) will be given for the assignment.

No labs or assignments will be accepted for marking (i.e. student shall receive a mark of 0% on the assignment) after the assignment has already been marked and handed back to students.

ERSC1P02

ERSC 1P02
Planet Earth II (Surface geologic processes)
Winter Term/2019/Duration 3
Dr. John Menzies
menzies@brocku.ca
MC D421, Ext. 3865

Times and Locations:

LECTURE: Mondays and Wednesdays 10:00 am -11:00 am, Room TH 243

LABS: Mondays 2-5pm, MC D309, Tuesdays 2-5pm, MC D309, Wednesdays 2-5pm, MC D309, Thursdays 2-5pm, MC D309, Fridays 2-5pm, MC D309

Note: Classes at Brock University end ten minutes ahead of the hour to facilitate transfer time.

Course Calendar Description:

Earth surface processes / geomorphology; mass movement, rivers & drainage basins, glacial geology, periglacial landscapes, climate change; oceans & coasts, soils, groundwater, and the hydrological cycle.

Additional Description:

ERSC 1P02 aims to give science students a background in the broad range of subjects studied in the field of Earth Sciences. The daily news commonly includes stories of geological events that have a profound impact on our lives. Such events vary from devastating landslides to a wide variety of environmental concerns that affect our local region and even global climate. ERSC 1P02 is a half (0.5) credit course comprising two one-hour lectures per week, plus a weekly 3-hour lab, where students gain practical experience with topics covered during lectures.

Science context credit: ERSC 1P02 fulfills the requirement for (0.5) credit of your Science context credit.

NOTE: Completion of this course will replace previous assigned grade and credit obtained in ERSC 1F01, 1F90 and 1P92

Optional Text:

Marshak, S., 2015. Earth: Portrait of a Planet. Fifth Edition. W.W. Norton and Company, Inc. New York. 984 pp. but any Modern Physical Geology text will suffice

Course Communications:

Note: Please use your Brock student e-mail account to communicate with instructors and include "ERSC 1P02" in the subject line.

Any questions related to lab material or lab scheduling should go directly to the Senior lab instructor/coordinator Astride Silis. Questions pertaining to lecture material should be directed to the lecture instructor, Prof. Menzies

In the event of class cancellations, inclement weather, etc. students will be notified via Brock email and announcement posted on Sakai. Please note that university wide cancellations are posted on the Brock University website.

Evaluation Components and Due Dates

Evaluation Component	Grade Weight	Due Date
Midterm Exam	20%	Thursday, March 1 st , 2018
Final Exam	40%	April 2018- To be scheduled by Registrar's office

Lab component	40%	<i>See detailed breakdown</i>
Total	100%	

Late Submission Policy:

All “in-lab” assignments are **due at the end of the lab period**. In-lab assignments will not be accepted after the scheduled lab period has ended (unless previous permission has been obtained). Online lab assignments and field trip reports will be assessed a late penalty of 10% deducted from the final mark of the lab assignment/report per day up until 5 days (including the weekend) (or 50%) have passed. After 5 days a mark of zero (“0 %”) will be given for the assignment/report, unless accompanied by medical documentation. See Medical Exemption Policy and the medical health certificate at <http://www.brocku.ca/health-services/policies/exemption>

Relationship between attendance and grades:

Students are expected to attend all classes (lectures) and laboratories, and must submit all laboratory assignments in order to pass this course. See additional notes on Lab component for more details.

Important dates:

January 18, 2019 is the date the online registration closes. Changes after this date must be done with a course Add/Withdrawal form.

February 18, 2019 Family Day Holiday, University closed.

February 19, 2019 President’s Day Holiday, Administrative offices closed.

February 18-22, 2019 Reading week.

March 8, 2019 is the date for withdrawal from the course without academic penalty.

March 1, 2019 is the date you will be notified of at least 15% of your course grade

April 8&9, 2019 are set aside as a designated snow/reading day (this may be used to cover classes missed because of adverse weather).

April 10-24, 2019 are set aside for formal final examination periods. April 19 (Good Friday Holiday- University closed)

Academic Policies

Academic Integrity:

Statement for undergraduate courses

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Intellectual Property Notice:

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Academic Accommodation:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Services for Students with Disabilities in the Student Development Centre (4th floor Schmon Tower, ex. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

Academic Accommodation due to Religious Obligations:

Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious 4

obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements.

Medical Exemption Policy:

The University requires that a student be medically examined in Health Services, or by an off-campus physician prior to an absence due to medical reasons from an exam, lab, test, quiz, seminar, assignment, etc. The Medical Certificate can be found at: <http://www.brocku.ca/health-services/policies/exemption>

Sequence and Dates of Lectures/ Textbook readings

Class Dates	Topic
1) January 7, 2019	Introduction
2) January 9, 2019	Process Geomorphology
3) January 14, 2019	Weathering
4) January 16, 2019	Mass Movement I
5) January 21, 2019	Mass Movement II
6) January 23, 2019	Streams and Drainage Basins I
7) January 28, 2019	Streams and Drainage Basing II
8) January 30, 2019	Coasts
9) February 4, 2019	Oceans

10) February 6, 2019	Groundwater
11) February 11, 2019	Karst
12) February 13, 2019	Arid / Aeolian Processes
<i>February 18 - 22, 2019</i>	<i>Winter Reading week- NO LECTURES</i>
13) February 25, 2019	Review Lecture
14) February 27, 2019	Midterm Exam
15) March 4, 2019	Glacial Landscapes I
16) March 6, 2019	Glacial Landscapes II
17) March 11, 2019	Glacial Landscapes III
18) March 13, 2019	Periglacial Landscapes
19) March 18, 2019	Soils I
20) March 20, 2019	Soils II
21) March 25, 2019	Climate and Global Change I
22) March 27, 2019	Climate and Global Change I / Environmental Geology I
23) April 1, 2019	Environmental Geology II
24) April 3, 2019	Final Review Lecture

INTRODUCTION TO ERSC 1P02 LABS
Sequence, Dates and Grade weight distribution of ERSC 1P02 Laboratory component

Lab Dates (week of...)	Topic	Lab grade Distribution (%)
<i>December 31-January 4, 2019</i>	<i>No labs this week, University re-opens January 2, 2019</i>	
1) January 7, 2019	Topographic maps and contouring I	3.0
2) January 14, 2019	Topographic maps and contouring II	3.0
3) January 21, 2019	Rivers and Mass wasting	3.0
4) January 28, 2019	Coasts and Oceans	3.0
5) February 4, 2019	Groundwater	3.0
6) February 11, 2019	Flooding (online)	3.0
<i>February 18, 2019</i>	<i>Winter Term Reading Week (No labs this week)</i>	
7) February 25, 2019	Global Climate Change	3.0
8) March 4, 2019	Glaciers and Glaciation	3.0
9) March 11, 2019	Acid Rain and Soils	3.0
10) March 18, 2019	Lab quiz	8.0
11) March 25, 2018	Field Trip	5.0
<i>April 1, 2018</i>	<i>Alternate Week for Field Trips in case of inclement</i>	

1) Laboratory exercises for ERSC 1P02 will consist of “in lab” assignments, an online assignment, a lab quiz, and a field trip. The labs are held in the Mackenzie Chown (MC) Building, Room D309.

2) The lab component of ERSC 1P02 for practical purposes essentially runs independently of the lecture component. **Any questions related to lab material or lab scheduling should go directly to the Senior lab instructor/coordinator, Astride Silis. Questions pertaining to lecture material should be directed to the lecture instructor, Prof. J. Menzies.**

3) Lab information is posted on Sakai/Isaak. It is the student’s responsibility to ensure that **labs are printed and brought with you** to your registered lab section, before the start of the lab. You will not be provided with copies of the assignment in lab.

4) Lab assignments are due at the end of the lab period (unless otherwise specified). Attendance and participation for the entire scheduled duration of the lab section is required for complete marks.

5) Labs begin at 2:00 pm and are scheduled for 3 hours. Some labs may take the full three hours to complete. Other labs may run for a shorter duration. Please do not make arrangements for other activities before the end of the lab (5 pm).

6) Plan to arrive for the lab shortly before 2:00 pm. There will normally be an introduction lasting 30-45 minutes and the remaining time will be devoted to completing the lab assignment. It is important that you attend the introduction since information necessary to complete the assignment will be discussed during this time. If you arrive after 2:15 pm you will have missed too much information and you will be asked to leave that lab. Do not arrive late!

7) A field trip to study areas of local geological interest will take place during the regularly scheduled lab section periods. The total time for the field trip is expected to run approximately 2.5 to 3 hours, including travel to and from the site. Attendance and participation in the field trip is required for complete marks. In order to cover the cost of transportation for the field trips (i.e. bus rental), the Department has instituted a "field trip levy". A "field trip voucher" must be purchased through the bookstore and handed in to the senior lab instructor.

8) Do not switch lab sections without prior approval from the senior lab instructor/coordinator. Contact information is available at the beginning of this syllabus.

9) If a lab assignment, lab quiz or field trip is missed, it is the student's responsibility to contact the Senior Lab Instructor/Coordinator as soon as possible after the missed lab. Please note that it is Department and University policy to require medical documentation (i.e. A doctor's note) for missed assignments. A make-up lab section may be assigned during the same week. If no supporting documentation can be provided, a mark of zero (0) will be assigned for the lab.

10) Scheduling and timing may make it impractical to schedule make up labs. The student is still responsible for all material that was covered during the missed lab and should contact the senior lab instructor/coordinator and make arrangements with a classmate to obtain information that was covered.

LAB ASSIGNMENT LATE POLICY

All "in-lab" assignments are **due at the end of the lab period**. In-lab assignments will not be accepted after the scheduled lab period has ended (unless previous permission has been obtained). Online lab assignments and field trip reports will be assessed a late penalty of 10% deducted from the final mark of the lab assignment/report per day up until 5 days (including the weekend) (or 50%) have passed. After 5 days a mark of zero ("0 %") will be given for the assignment/report, unless accompanied by medical documentation. See Medical Exemption Policy and the medical health certificate at <http://www.brocku.ca/health-services/policies/exemption>

ERSC 1P94

ERSC 1P94
Planetary Science: a fully on-line, asynchronous course
January 9 to April 7, 2017

Instructor Name: Dr. Frank Fueten
Email: ffueten@brocku.ca

Instructor Name: Dr. Mariek Schmidt
Email: mschmidt2@brocku.ca

Senior Course Coordinator: Astride Silis
Email: asilis@brocku.
ca

Course calendar description:

Solar system objects, including the Sun, planets and dwarf planets, named natural satellites (moons) and small solar system bodies; their formation, composition, processes and major characteristics.

Additional Description:

We live in a time when we are about to embark on a new leg of the human journey that started when our ancestors began to spread out from Africa to eventually have a presence on all of the land masses on Earth. Over the millennia our numbers have grown exponentially and we will soon be too many to be sustained by the resources that are available on Earth. Over the lifetime of most of the students in this course humanity will follow a path that will lead to the exploration, exploitation and habitation of the moon and Mars and eventually beyond.

At the moment you might take this course out of curiosity about the bodies that make up the solar system; such curiosity has been the reason that humans have done so well as a species. You might take this course so that you have a better understanding of news stories about all of the off-world activity that is becoming more and more common. We hope that some of you will take this course because you see it as first step towards a career that will see you boldly go where no human has gone before (to borrow words from William Shatner's classic Star Trek introduction).

Please read over the section entitled “Welcome to ERSC 1P94” on the Sakai site for more information about the course instructors and their thoughts on how and why they developed this course.

Science context credit: ERSC 1P94 fulfills the requirement for (0.5) credit of your Science context credit.

Required and Recommended materials:

All course material is available from the course Sakai site. No text book is required. This course is offered online, therefore you must have access to a computer and internet service.

Course Communications

Questions pertaining to course content should be directed to the instructors, Prof. F. Fueten or Prof. M. Schmidt. Questions pertaining to assignment material should be direct to teaching assistants. Any questions related to course administration ie. missed assignment or quiz should go directly to the Senior course coordinator Astride Silis.

Course communication will be done through the Yammer link on the left-hand side of the Sakai site. However, if your questions are of a personal nature (e.g., accommodations, discussion of grades, etc.) you must use the private message tool in Yammer. Assignment and quiz reminders will be sent before the due dates directly to Brock student email accounts.

Evaluation Components and Due Dates

Component	Grade value (%)	Completion Date
Orientation Quiz	2	Tuesday January 17
Module 1 quiz	10	Tuesday January 24
Module 2 quiz	10	Thursday February 9
Module 3 quiz	10	Tuesday March 7
Module 4 quiz	10	Thursday March 23
Module 5 quiz	8	Thursday April 6
<u>QUIZ SUBTOTAL =50%</u>		
Assignment 1	10	Monday January 23
Assignment 2	10	Wednesday February 8
Assignment 3	10	Monday March 6
Assignment 4	10	Wednesday March 22
Assignment 5	10	Wednesday April 5
<u>ASSIGNMENT SUBTOTAL = 50%</u>		
Total:	100 %	

Topics covered in ERSC 1P94

The course content is grouped into the following five modules and the notes that make up the course content for each module are available on the Sakai site for the course.

Module 1: The Solar System

Module 2: Planetary Formation and Differentiation

Module 3: Shaping Planetary Surfaces

Module 4. Follow the Water

Module 5. The Search For Life

Assignments and Late submission policy

Assignments:

Five exercises will be assigned as a part of this course. These include:

Assignment 1: Missions, instrumentation and discoveries (Module 1) Assignment 2: Density and differentiation of planetary bodies (Module 2). Assignment 3: Dating planetary surfaces by crater counting (Module 3) Assignment 4: Relative sequencing of Geological events (Module 4) Assignment 5: Probability, habitability and extremophiles (Module 5)

All assignments must be handed in using the Assignment tool at the course Sakai site. Please note that all times noted.

Please keep in mind that due dates and times for this course refer to Eastern standard time (EST) or “Brock University time”, which technically is UTC-5. (http://localtimes.info/North_America/Canada/click on UTC-5 and it will give you St. Catharines time to the nearest second)

Assignments are due at the end of the day (specifically 11:55pm) on the date indicated in the schedule. The time of 11:55 is a limitation in Sakai and we will accept assignments without penalty until 11:59:59pm on the due date. Assignments may be handed in at anytime prior to the due date/time!

Assignment may ALSO be resubmitted prior to the due date (NOTE: each resubmission overrides the previous submission).

Late Submission Policy:

Late assignments will be penalized by a grade reduction of 10% of the assignment’s total value per whole or part day elapsed between when it is due and when it is handed in. For example, Assignment 2 has a total of 31 possible marks and it is due to be handed in at 11:55pm on Wednesday, February 8th. If that assignment is handed in at noon on Thursday, February 9th it will be penalized by a grade reduction of 10% of 31 or 3.1 points so if that assignment earned a grade of 25/31 it would be reduced to 21.9/31. Saturday and Sunday (ie. “The weekend”) will count as one day or 10% reduction.

Quizzes

Note that Quizzes are only visible in the “Tests & Quizzes” section of Sakai for the 1-day (24 hour) period that they must be written in, as indicated in the schedule.

The first quiz is an Orientation Quiz based on information in this course outline and questions to find out how well you are prepared for an on-line course. For the Orientation Quiz only you can have unlimited attempts to complete it over the period from January 9 to the end of the day on January 17.

Following completion of each module there will be an on-line quiz of the material in that module. The module quizzes will all be made up of multiple choice questions (25 questions for each quiz with a maximum of 25 minutes to complete the quiz) and every student will write a unique combination of questions from a bank of questions for each module. You have only one attempt at each module quiz. Tests will be completed on Sakai and graded automatically upon completion.

Students are required to write the quizzes on the date specified in the course schedule; the quizzes will be

available to complete starting from 12:01am to 11:59 pm of the day on which they are scheduled.

Organizing your time

Good time management skills will help you succeed in this course!

Because the quizzes and assignments have firm completion dates it is very important that you follow a strict schedule in reading over and understanding the course materials that are available for each module at the Sakai site. For that reason all students are strongly advised to follow the following schedule for completion of each module:

Module 1: January 9 to January 24.

Module 2: January 25 to February 9.

Module 3: February 10 to March 7.

Module 4: March 8 to March 23.

Module 5: March 24 to April 7.

Important notes

The last day for withdrawal without academic penalty and last day to change from credit to audit status for this and other Winter Term Duration 3 courses is Friday, March 10, 2017.

Students will have received notification of at least 15% of their final grade by March 3, 2017.

Academic Policies

Academic Integrity:

Statement for undergraduate courses

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Intellectual Property Notice:

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Academic Accommodation:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If

you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Services for Students with Disabilities in the Student Development Centre (4th floor Schmon Tower, ex. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

Academic Accommodation due to Religious Obligations:

Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements.

Medical Exemption Policy:

The University requires that a student be medically examined in Health Services, or by an off-campus physician prior to an absence due to medical reasons from an exam, lab, test, quiz, seminar, assignment, etc. The Medical Certificate can be found at: <http://www.brocku.ca/health-services/policies/exemption>

INDG 1F90

Faculty of Education

Tecumseh Centre for Research and Education



Indigenous Studies 1F90 – Fall/Winter 2020-2021

Instructor: Sherri Vansickle

Phone: 226-450-3991 (calls and texts only 9am-7pm)

Office Hours: (by appointment)

E-mail: svansickle@brocku.ca

(expect a response within 2-4 business days)

Date: Monday

Time: 5:00-8:00 p.m.

Location: Semi-synchronous

Office: Welch Hall 65

"Put your whole heart in what you learned, so that the spirit of our ancestors, our Creator and our Peacemaker can talk right through your body and use you, so that you can communicate peace. And then our people, we will get peace. Our people will be united again"

Tom Porter – Mohawk - Bear Clan Elder

"Erase the blackboard...and see if you can understand what a Mohawk sees, feels, is happy about, and is sad about."

Tom Porter – Mohawk - Bear Clan Elder

Calendar Description:

Indigenous cultures in contemporary North America. Diverse and common features of different nations; effects of geography, politics, history and language use.

Course Description:

This course will familiarize students with issues that affect Indigenous people with respect to both historical and contemporary issues. This course will utilize readings, guest speakers and activities that will bring to life the content of the required readings. We will explore the social and cultural implications of issues such as but not limited to residential schools, politics, spirituality, the Truth and Reconciliation Commission, Missing and Murdered Indigenous Women, and more. We will engage in rigorous discussion and critical reflection of the issues presented. Our class is designed as a critical lens through which we will view these issues with the hope of understanding ways in which we may help make a positive difference for future generations.

Course Objectives:

This course is designed to help you:

1. Acquire an appreciation for Indigenous traditions, customs and beliefs
2. Actively engage in a personal understanding of Indigenous issues
3. Make critical connections between society and Indigenous communities, and families
4. Create a learning environment where an Indigenous worldview will flourish
5. Develop your educational research and writing skills
6. Develop your thinking, organization, and presentation skills

Monday November 2, 2021

Last date for withdrawal without academic penalty and last day to change from credit to audit status for duration 2 courses without academic penalty.

Late Assignments:

Communicate with me before deadlines regarding late assignments. A penalty of 2% per calendar day may apply.

Documentation will be necessary for late assignments and the assignment will not be accepted without a Doctor's note.

Medical Exemption Policy:

The University requires that a student be medically examined in Health Services, or by an off-campus physician prior to an absence due to medical reasons from an exam, lab, test, quiz, seminar, assignment, etc. The Medical Certificate can be found at <http://www.brocku.ca/health-services/policies/exemption>

Accommodations:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the University community with disabilities. If you require accommodations related to a documented disability to participate in this course, you are encouraged to contact the Student Wellness and Accessibility Services (4th Floor Schmon Tower ST400 ext. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assignments.

Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor for alternative dates and/or means of satisfying requirements.

Communications:

All communications with the instructor must be via Sakai e-mail at the address provided and include the words **INDG 1F90** in the subject line. You are required to check your Brock e-mail account daily. Expect a response within 2 business days to any email correspondence.

APA:

You are required to adhere to APA style and format for written work. You will need to consult and follow exactly the citation rules laid out in the Publication Manual of the American Psychological Association, Seventh Edition and the APA requirements of the Faculty of Education at Brock.

Academic Integrity:

Students enrolled in this course are expected to maintain university policies on academic honesty. All work that you turn in should be yours. Proper credit must be given to the ideas and work borrowed from or influenced by others. Failure to do so will result in disciplinary actions according to university policy. The definitions, expectations and policies pertaining to Academic Integrity applicable to this course are found at <http://www.brocku.ca/academicintegrity/policy.php>.

Plagiarism software may be used on your final essay. See the instructor if you wish to opt out of this option.

Students handing in plagiarized assignments will receive **ZERO** marks for that assignment.

In more serious cases of academic dishonesty much more serious penalties may apply. Students are urged to refer to and review Brock University's Academic Integrity Policy located at <http://www.brocku.ca/academicintegrity/policy.php> for expectations regarding academic honesty, policies, and procedures.

***** NB All assignments must be submitted in order to achieve credit for this course*****

***** NB All assignments must be submitted via Drop Box in Sakai**

Course Evaluation:

Journals	15%
Participation and attendance	15%
Fall Midterm	20%
Winter Midterm – APA quizzes	20%
Final Essay	30%

Course Schedule and Required Readings:

Lecture One: September 14th – Introductions

McIntosh, P. (1990). White privilege: Unpacking the invisible knapsack. *Independent School*, 49(2).

Lecture Two: September 21th – Understanding Wounded Bears

APA overview

Eagleheart, S. (2002). The wounded bear: A modern day medicine story. *Reclaiming Children and Youth* 11(3) 186-188.

Lecture Three: September 28th – Residential Schools

APA Overview

Tonight's lecture will be in the oral tradition – there are no assigned readings.

Lecture Four: October 5th – Ohen:ton karihwatehkwen – Asynchronous

Tonight's class is in the oral tradition there are no assigned readings. Check your emails and messages in Sakai for instructions.

NO CLASS! – October 12th - Thanksgiving and Reading Week! – Enjoy time with family and friends, wash your hands, practice physical distancing and make wise choices!!

Lecture Five: October 19th – Residential Schools

Dorrell, M (2009). From Reconciliation to Reconciling: Reading what “we now recognize” in the Government of Canada's 2008 residential schools apology. *English Studies Canada* 35(1) 27-47.

Harper, S. (2008). Video and Text of Stephen Harper's residential school apology
[.http://www.ctv.ca/CTVNews/QPeriod/20080611/harper_text_080611/](http://www.ctv.ca/CTVNews/QPeriod/20080611/harper_text_080611/)

Martin, G., (2011). Drumming my way home: A Secwepemc perspective. *The Canadian Journal of Native Studies*, 31(2), 107-116.

Barnes, R., Josefowitz, N., Ester, C., (2007). Residential Schools: Impact on Aboriginal students' academic and cognitive development. *Canadian Journal of School Psychology* 21(1) 18-32.

Morrisette, P., (1994). The Holocaust of First Nation people: Residual effects on parenting and treatment implications. *Contemporary Family Therapy* 16(5) 381-392.

Lecture Six: October 26th – Truth and Reconciliation – Asynchronous

***Check your emails and messages in Sakai for instructions. ***

The 94 Calls to Action from the Truth and Reconciliation Commission.
http://trc.ca/assets/pdf/Calls_to_Action_English2.pdf

Lecture Seven: November 2nd - Indigenous Critiques of Child Welfare & Education

Midterm presentations

Blackstock, C. & Trocme, N.,(2005). Community-Based Child Welfare for Aboriginal Children: Supporting Resilience through Structural Change. *Social Policy Journal of New Zealand*, 24, 12-33.

Blackstock, C. (2012). Special Foreword: We Are the Manifestations of Our Ancestor's Prayers, *Child Welfare* 91(3).

Blackstock, C. The Canadian Human Rights Tribunal on First Nations Child Welfare: Why if Canada wins, equality and justice lose. *Children and Youth Services Review*, 33(1).

Lecture Eight: November 9th – Lacrosse – Spirit of the Game – Asynchronous

***Check your email and messages in Sakai for tonight's instructions. ***

It is not available to rent in Canada, but it is streaming for free on
Tubi: https://tubitv.com/movies/498407/spirit_game_pride_of_a_nation?start=true

Lecture Nine: November 16th– Guest Lecturer – Two Spirit Relationships

Tonight we are fortunate to be welcoming Jane to our class. Jane is from the Mi'kmaq Nation

and is an Indigenous activist who is trying to make the world better for our Indigenous siblings who identify as Two- Spirited.

Lecture Ten: November 23th – The Power or Protests and Demonstrations

Tonight's class is in the oral tradition. There are no assigned readings. Check your messages for videos to watch prior to class.

Lecture Eleven: November 30th – Politics and the Land – Doctrine of Discovery - Asynchronous

Check your emails for tonight's instructions

Hill, S., (2009). Conducting Haudenosaunee historical research from home: In the shadow of the Six Nations Caledonia reclamation. *American Indian Quarterly* 33(4), 4779-498.

Corntassel, J., (2012) Re-envisioning resurgence: Indigenous pathways to decolonization and sustainable self-determination. *Decolonization: Indigeneity, Education & Society* 1(1) 86-101.

Lecture Twelve: December 7th – Special Topics (TBD – Readings to be assigned)

First 5 Journals due in DROPBOX (on Sakai) December 8th

TERM II

Lecture Thirteen: January 4th –

Lecture Fourteen: January 11th– Sixties Scoop

Guest Lecturer – Darcy Belanger

Tonight we welcome Darcy Belanger to our class. Darcy is from the Cree people of the west and he is an

Indigenous activist and educator who is choosing to share his story with us.

Lecture Fifteen: January 18th- Missing and Murdered Indigenous Women

Bailey, J., & Shayan, S. (2016). Missing and Murdered Indigenous Women crisis: Technological Dimensions.

Canadian Journal of Women & the Law, 28(2), 321-341.

Razack, S., (2016). Sexualized violence and colonialism: Reflections on the inquiry into Missing and Murdered Indigenous Women. *Canadian Journal of Women & the Law*, 28(2) i-viii, 8.

Eberts, M., (2014). Knowing and unknowing: Settler reflections on Missing and Murdered Indigenous Women. *Saskatchewan Law Review*, 77(1), 69-104.

Lecture Sixteen: January 25th — Being an Indigenous and Male – (Readings to be assigned)

Lecture Seventeen: February 1st - Midterm Essay/Presentations/Spirit and Sight DUE

Lecture Eighteen: February 8th – Special Topics (TBD – Readings to be assigned)

NO CLASS! February 15th– Family Day and Reading Week – Enjoy time with your family by birth and/or by choice and most of all be Safe!!!

Lecture Nineteen: February 22nd- Relationships to Land

Alfred, T., (2014) The Akwesasne cultural restoration program: A Mohawk approach to landbased education.

Decolonization: Indigeneity, Education & Society 3(3) 134-14

Lecture Twenty: March 1st–

Lecture Twenty-One: March 8th – Decolonization and the United Nations Declaration on the Rights of Indigenous People

Tuck, E., & Yang, K. W., (2012). Decolonization is not a metaphor, *Decolonization: Indigeneity, Education & Society* 1(1), 1-40.

Tuck, E. (2009). Suspending Damage: A Letter to Communities, *Harvard Educational Review*, 79(3), 409-427. Gunn, B. (2013). Overcoming obstacles to implementing the UN Declaration on the Rights of Indigenous Peoples in Canada. *Windsor Yearbook of Access to Justice*, 31(147), 1-23.

Champagne, D. (2013). UNDRIP (United Nations Declaration on the Rights of Indigenous Peoples): Human, Civil and Indigenous Rights. *Wicazo Sa Review*, 28(1), 9-22.

The following document will be distributed in class for discussion.

http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf

Lecture Twenty-Two: March 15th– Spirituality

Tonight's guest is Sabrina Shawana who will be speaking about Anishinabe spirituality.

Simpson, L., (2014) Land as pedagogy: Nishnaabeg intelligence and rebellious transformation. *Decolonization: Indigeneity, Education & Society* 3(3), 1-25.

Anderson, K. (2004). Speaking from the heart: Everyday storytelling and adult learning. *Canadian Journal of Native Education*, 28, 123-129.

Mohawk, J. (1995). The Earth is our mother. *Conservationist* 49(4), 4-6.

Simpson, L. (2000). Stories, dreams, and ceremonies - Anishinaabe ways of learning. *Tribal College Journal*, 11(4), 26-34.

Lecture Twenty-Three: March 22nd– Interconnectedness and Final Essay Prep

Bonfenbrenner, U., (1994). Ecological models of human development. *International Encyclopedia of Education* 3(2) Ed Oxford: Elsevier 1642-1647.

<http://www.psy.cmu.edu/~sieglar/35bronfenbrenner94.pdf>

Lecture Twenty-Four: March 29th - Cultural Survival and Final thoughts -

Alfred, T., (2015) Cultural strength: Restoring the place of Indigenous knowledge in practice and policy.

Australian Aboriginal Studies 1, 3-11.

Fagan, K., (2004) Tawatatha:wi : Aboriginal Nationalism in Taiaiake Alfred's Peace, Power, Righteousness: An Indigenous Manifesto. *American Indian Quarterly* 28(1 & 2) 12-29.

Last 8 Journals due in DROPBOX (on Sakai) March 30th

Final Essay DUE

Assignments:

Journals – Due December 7th, 2020 (first 5) and April 1st, 2021 (last 5)

We will be using reflective journals to help us synthesize and relate to the readings, presentations and classroom activities. There are 24 classes and you will submit journals for 10 of the classes, five in each term. Each journal will be one page in length. Submit your first 5 journals in one continuous Word document not five separate documents (marks will be deducted for submitting them separately). Be certain to use a reference page. The responses will be typed and double spaced. You must use at least one quote per journal. I am looking for evidence of interconnectedness with the readings, the class discussion, the presenters or the classroom activities. For example, what provoked you? What made you angry or hopeful? What was new to you? How do you think you can make a difference for future generations? Use your senses and express how this impacted your research, your thinking, your feeling, your relationships or your understanding of Indigenous families, communities and worldview.

**Submit your journals to the Dropbox in Sakai with the following title using your name – First name, last initial - Fall Journals. (Substitute Winter for Fall when appropriate)
i.e. Malcolm, X – Fall Journals**

Participation and attendance

Participation and attendance is important in this course. There will be many opportunities to share in this course as we discuss and actively participate in our own learning journeys. Be certain to have read the readings ahead of time so that you are prepared to actively participate and contribute to class discussion. I am looking for quality participation and attendance marks will be achieved in the classroom discussion, forums and involvement in the lecture.

Fall Midterm – Due November 2nd, 2020

You will have choice of Midterm assignment. Choose one of the following midterm opportunities. Note that some have presentation requirements. **Submit your midterm to the Dropbox in Sakai with the following title using your name – First name, last initial - Fall Midterm.**

i.e. Malcolm, X – Fall Midterm

Midterm Essay – This will be a research essay. For this assignment, you will research and write a 6-7 page (plus a title page and reference page) paper on any of the topics presented during the course. Make sure you follow appropriate APA formatting with a minimum of 3-5 citations per page. You will use a minimum of three articles in your bibliography from **peer reviewed journals** – one of which will be from the reading list. I am looking for evidence of connecting to the readings in a personal way as well as growth as a writer. This essay should show more critical analysis of the articles that you choose to use. I would also like you to end with a plan for hopeful change towards more positive experiences for Indigenous people with respect to community and/or family.

OR

Presentation – This will be a 20-25-minute presentation to the class of your continued research on one of topics presented during the course. You will research and present on the topic of your choice. You will utilize your technology skills by providing me with a handout of your PowerPoint notes (N.B. No Prezi). The presentation should be well researched, have a good flow and be of similar academic caliber to the essay. You will refer to a minimum of three articles from peer reviewed journals – one of which must be from the reading list. This presentation must be well cited in APA format with a minimum of 18-21 citations. I am looking for evidence of connecting to the readings in a personal way as well as growth as a presenter. This presentation should show more critical analysis of the articles that you choose to use. I would also like you to end with a plan for hopeful change towards more positive experiences for Indigenous people with respect to community and/or family.

Spirit and Sight Assignment

This project is meant to be a pictorial depiction of your connection to the teachings of Haudenosaunee and Anishinabe spirituality. This will be a well-researched and well thought out photo assignment presented in a PowerPoint (not Prezi). You will submit five legal and original pieces of photography that have been taken by you since September 1, 2020. These photos must positively reflect the nature, substance and traditional, spiritual teachings of the Haudenosaunee and Anishinabe people as represented in the readings, lectures and class discussions. In your presentation to the class, you will explain each photo and its spiritual connection to both you and Haudenosaunee or Anishinabe people. You will have up to ten minutes to present your photos. You must upload a copy of your pictures in PowerPoint to Dropbox in Sakai. ***** Presentation to the class via Teams *****

OR

Experiential Learning – Attendance at an Indigenous Event ONLINE - This assignment will be an opportunity for you to attend one event in the Indigenous communities that is hosted ONLINE. You will attend the event and then write a two-page journal for your event. You must follow proper APA formatting with the inclusion of one quote. Your journal will demonstrate your thoughts, feelings and understanding prior to attending the event and reflect your thoughts feelings and understanding as a result of having attended an event. You must make strong connections to Haudenosaunee/Anishinabe spiritual beliefs and values, teachings and wisdom. What did you learn? What was new to your way of seeing/being/moving in the world? After some contemplative thought, what changes will you make in your life to help you grow spiritually? This assignment is not just about retelling what you did, I am looking for strong signs of connection and critical thought. You may choose to share with the class.

OR

Art Project – This assignment will help connect with the literature using your artistic self. You will create an art piece that reflects your understanding of the Indigenous teachings presented in class. You will refer to three peer-reviewed journals in your presentation to me. The idea behind this assignment is that you will have designed a piece of artwork that you may share with others to help them increase in their knowledge and understanding of Indigenous teachings. You will meet with me at a mutually agreed upon time outside of class and using our oral tradition you will explain your artwork to me in an academic manner. I am looking for evidence of connecting to the readings in a personal way as well as growth in your understanding Haudenosaunee and or Anishinabe teachings as they relate to the teachings in this class. This artwork should show more critical analysis of the articles that you choose to use. I should be able to easily identify your artwork as having Indigenous teachings in it. I am also evaluating your ability to analyze the lectures, videos and synthesize them with materials presented in class in a clear and concise manner.

*****Present to me only – may choose to present to the class*****

OR

Heart Garden – This assignment will connect your learning to the work of Dr. Cindy Blackstock with the First Nations Child and Family Caring Society. The “Honouring Memories – Planting Dreams” project helps us to connect the loss of Indigenous spirituality, language, morals and Traditional Indigenous Knowledge directly to the impact of the Indian Residential School system and its assimilationist policies. To work towards the Calls to Action of the Truth and Reconciliation Commission we will be raising awareness of the horrors of the Residential School System. You will construct, decorate and plant 10 hearts in the gardens around you. An upclose photo of ONE of these hearts must be submitted to Dropbox via Sakai for evaluation. A group picture of the ten hearts will also be uploaded. You will research the story of one Residential School Survivor and give an oral journal to the lecturer about what you have learned in your research about this survivor’s story, making the hearts and what it means to you. I am looking for some critical thinking and personal reflection. You may choose to share with the class. *****Present to me only*****

OR

Experiential Learning – Nature Walk - This assignment will be an opportunity for you to experience a 3 hour walk/prayer/fast (without any technology/music/electronics). You will

walk/pray/fast with a spiritual lens, then write a two-page journal for your event. Your two-page journal will demonstrate your thoughts, feelings and understanding prior to attending the event and reflect your thoughts feelings and understanding as a result this experience. You must make strong connections to Haudenosaunee spiritual, traditional and moral beliefs and values. What did you learn? What was new to your way of seeing/being/moving in the world? After some contemplative thought, what changes will you make in your life to help you grow or change as a person spiritually? Did you re-evaluate some life choices? This assignment is not just about retelling what you did, I am looking for strong signs of connection and critical thought. You may choose to share with the class.

OR

Honouring Mother Earth Assignment

This project is meant to be a Photo depiction of your connection to the teachings of Haudenosaunee/ Anishinabe spirituality, thought and world view paying particular attention to ways in which we honour Mother Earth and/or areas for improvement. This will be a well-researched and well thought out photo assignment presented in Powerpoint format (No Prezi). You will submit five legal and original pieces of photography that have been taken by you since July 1, 2020. These photos will be used by you to explain how we are honoring (or not) Mother Earth spiritually. Your photos need to reflect the nature, substance, values and traditional, spiritual teachings of the Haudenosaunee/ Anishinabe people as represented in the readings, lectures, videos and class discussions. In your presentation to the class, you will explain each photo and its spiritual connection to you **and** Haudenosaunee/Anishinabe spirituality, world view, Traditional Ecological Knowledge. You will have up to ten minutes to present your photos. You must provide me a copy of your pictures in PowerPoint using DROP BOX.

***** Present to class*****

Winter Midterm – Due January 15th, 2021

The second midterm for this course is designed to help you be a better academic writer. You will watch the videos as frequently as you choose and then do the ten corresponding quizzes. You may complete the quizzes at your own pace prior to January 15, 2021.

Final Essay – Due April 1st, 2021

Final Essay – This essay is an opportunity for you to synthesize the material presented and reflect on your learning journey in this course. **Your final essay will be 7-9 pages in length (plus a title page and reference page) and follow proper APA citation and formatting.** It will be a topic that you did not explore previously. Your final essay will use four references in your bibliography, one of which must be from the course syllabus. Your references must be from academic peer-reviewed journals, however, I will accept five or fewer references to reliable/credible newspapers or websites provided by me in Sakai. **You may use a maximum of 5 personal communications as references.** I want you to incorporate Urie Bronfenbrenner’s Ecological Theory in your essay. I would like you to refer to at least one of our guest speakers and how they changed your thinking

or taught you something new about Aboriginal people. I want you to explain how the topic you chose to explore affects Aboriginal communities and/or families. In addition, I would like you to incorporate at least one word/phrase from an Indigenous language, either Mohawk, Cayuga or Anishinabemowin. Be certain to define or explain the word/phrase in English in the body of your essay. As well, I want to see strong evidence of an understanding of traditional values, beliefs, morals, and ways of thought towards community and/or family. Finally, the critical exploration of your topic should be phrased in the positive where possible.

Drumming our way home

Tonight, we welcome Sabrina Shawana and the Niagara Women's Drum Group to sing and drum for us.

Martin, G., (2011). Drumming my way home: A Secwepemc perspective. *The Canadian Journal of Native Studies*, 31(2), 107-116.

Francis, M. & Vansickle, S. (2018). Gana'Joh: Haudenosaunee pedagogies of the drum letters from the workshop. *World Futures* 74(7-8) 490-502.

Indigenous Worldview on Ecological Issues

-Readings to be determined

WRDS 1P06

IASC/ENCW/WRDS 1P06:

The History and Future of Storytelling

F/W 2021 D3 January 11-April 9, 2021

Lecture: Asynchronous online in Sakai

Seminar: Synchronous through MS Teams and collaborative documents

Instructor: Alisa Cunnington

Email: acunnington@brocku.ca

Office hour time and link:

Course Coordinator:

Teaching Assistants:

SEM 1 Tuesdays 1000-1100:

SEM 2 Mondays 1600-1700:

SEM 3 Fridays 1300-1400:

SEM 4 Thursdays 1600-1700:

SEM 5 Wednesdays 1000-1100:

SEM 6 Tuesdays 1200-1300:

SEM 7 Tuesdays 1100-1200:

SEM 8 Mondays 1500-1600:

Liaison Librarian: John Dingle

Any requests for seminar changes must be made before January 20, 2021. Please contact: . We cannot guarantee accommodations for seminar change requests but will do our best to work with students on scheduling issues.

Course Calendar Description:

History of storytelling from the earliest oral traditions to contemporary forms of digital expression. Storytelling's cultural roots in fairytales, legends and myths through to film, video games and interactive fiction. Elements of narrative, structure, character, conflict, and dramatic arc. Concepts and practices in rhetoric, storyboarding, and presentation.

This course introduces students to the idea of storytelling as a central human activity, exploring the way that frames - both temporal and spatial - help direct our experience of story. We will focus on common patterns in stories, the way stories are adapted across mediums, the way stories are used to define aspects of human identity, and the way storytelling has changed in the digital age. For this interdisciplinary course, which considers storytelling both as an object of study and as an activity, assignments will include opportunities to develop both a writing and analytical practice that includes creative writing and using analytical tools explored in course content. Seminar activity, likewise, will alternate between reviewing and expanding discussion of concepts introduced in lecture and writing workshops, during which students will experiment with their own writing. The quizzes will primarily test students on their knowledge of concepts, reading material and the use of analytical tools.

Learning Objectives and Outcomes:

At the completion of this course students will:

- Be able to identify genres and understand their function in storytelling.
- Develop a writing practice.
- Understand and identify plot structures.
- Apply genre formulas and plot structures to different genres of writing, such as creative writing, analytical writing, persuasive writing, writing the self, and reflective writing.
- Use analytical and creative writing concepts as they apply to professional writing including resumes and job applications.
- Understand concepts of literacy and the historical development of different kinds of literacy.
- Understand adaptation and digital storytelling environments.
- Be familiar with some of the ways social media, games and interactive environments engage storytelling devices and structures.
- Understand how to storyboard a concept.
- Understand bias (and power relations) in reading and telling stories.
- Learn to give constructive criticism and respectful feedback.

Required Readings and Texts:

For purchase through the Campus Store (Sakai: Order Textbooks):

Christie, Agatha. *Five Little Pigs*. 1942 (Harper)

Willingham, Bill & Lan Medina. *Fables: Legends in Exile* 2002 (Vertigo/ DC Comics)

Wilson, G. Willow & Adrian Alphona. *Ms. Marvel: No Normal* 2014 (Marvel Comics)

Other required readings available through Sakai:

Turtle Island Origin story: Onondaga Historical Association (video).

Genesis: Christian origin story

King, Thomas. *One Good Story, That One. One Good Story, That One*. Toronto: Harper Perennial Canada, 1999. PDF Resource available through Sakai.

Broome, John and Gil Kane. *Showcase #22: Green Lantern*. 1959: DC Comics. PDF resource available through Sakai.

Lee, Stan and Steve Ditko. *Amazing Fantasy #15: Introducing Spiderman*. 1962: Marvel Comics. Web resource. Available through Sakai.

Allen, Violet. *The Venus Effect*. Dec. 2016: Lightspeed Magazine. Web Resource

Ngozi Adichie, Chimamanda. *The Danger of a Single Story*. Nov. 2009. TED talk.

Luhrmann, Baz (dir.). *Australia*. 2008, Bazmark Films Australia. Film. Available through Criterion-on-Demand via the Brock Library.

Telltale Games. *The Wolf Among Us*, episode one (Telltale Games). Videogame. Instructions available through Sakai.

Perrault, Charles. *Bluebeard*. Reprint of the 1697 French version. PDF resource available on Sakai.

Ferrari, Pepita. *Capturing Reality*. 2008/2018: NFB. Instructions and links available through Sakai.

Shoebridge, Paul & Michael Simons, *Welcome to Pine Point*. 2011: NFB Canada. Web Resource.

Instructions available through Sakai.

Dufresne, David. *Fort McMurray*. 2013: Toxa/Arte/NFB. Instructions and links available through Sakai.

Chris Hatfield Twitter thread. Link available through Sakai.

Creepy Pasta: Slenderman: Links available through Sakai.

Schulman, Ariel and Henry Joost (dirs.) *Catfish*. Documentary, 2010. Available through Criterion-on-Demand via the Brock Library.

Course Communications

All email communication must be made from a Brock account. The preferred method of communications with the Instructor in this class will be through MS Teams where you can either private message or leave a seminar/course question. Reasonable time for a

response is within 48hours. A reasonable turn- around time for receiving email responses during the week is 48-hours (email is checked periodically on the weekends, a timely response is not guaranteed). Be sure to include 'IASC 1P06' in the subject line of your email. Each TA will define the best way to communicate with their seminar(s).

Sakai Announcements will be used to provide all notices for the class, please be sure to check them regularly. All readings, guidelines for assignments, and grades will be posted on Sakai. This class will also occasionally use web-based active learning software platforms (instructions will be provided in through Sakai).

Respectful behaviour is required in this class at all times. Writing and storytelling can be a highly personalized experience and requires all participants in the class to adhere to student codes of conduct.

Important dates:

Check the section on sessional or important dates in the relevant online University calendar at <http://brocku.ca/webcal/>

5 March 2021 is the last date for withdrawal from the course without academic penalty.

1 March 2021 is the date you will be notified of 15% of your course grade.

February 15-19 2021 is the scheduled reading week.

Evaluation Components and Due Dates Evaluation Component	Grade Weight	Due Date
Course Introductions Quiz	2%	Friday January 15 12noon: Tests and Quizzes in Sakai
Writing Labs (seminar)	30%	Ongoing throughout the term, Writing lab meetings and submissions in Forums.
Writing Portfolio	25%	Thursday April 1 at 12:00noon Electronic submission via Sakai in Assignments.
Quizzes	25%	5 Quizzes over the course of the term. Quiz 1: January 29 Quiz 2: February 12

COMM 1F90

COMM 1F90
Introduction to Communication & Media Studies
Fall & Winter 2018/19 (D1)

Lecture (Time & Location): Tuesday & Thursday, 3-4 PM, Sean O'Sullivan Theatre

Professor Derek Foster

Office: SBH 311

Phone: 905-688-5550 x 5366

Email: dfoster@brocku.ca (see note below)

Twitter/instagram: @popcultprof

Office hours: Wednesdays, 10 AM - 12 PM (or by appointment)

COURSE DESCRIPTION:

COMM1F90 explores research approaches and issues in communication and media studies from humanities and social science perspectives. Topics include the cultural use of symbols and signs, research tools for media analysis, media content, audiences, and institutions with emphasis on the role of media in Canadian society.

COURSE FORMAT:

LECTURES review the issues and ideas covered in the assigned lecture readings and present examples and material not found in the textbook. Instructions for assignments and review for tests and exams are provided in lecture. Since these instructions will not be repeated in seminar, lecture attendance is essential to successful completion of the course.

PLEASE NOTE - CLICKERS WILL NOT BE USED IN THIS COURSE THIS YEAR.

SEMINARS help develop oral communication and critical thinking skills through presentations, discussion and debate related to assigned seminar readings. Seminar participation grades are based on attendance, completion of assigned reading and preparation for discussion of the issues. Every seminar counts toward your final participation grade, therefore each missed seminar results in a grade deduction. For further information about the composition of your participation grade, see the appropriate files on the SAKAI page.

LEARNING OUTCOMES:

Upon completion of this course you should be able to:

- Understand fundamental ideas and approaches in communication and media studies. Identify and explain key theoretical concepts in communication and media studies and understand their links to other disciplines in the social science and humanities.
- Apply your knowledge of media and communication to create your own personal brand.
- Critically analyze different aspects of media and communication, including advertising, journalism, film, television and internet and strategic communication.
- Express your ideas and arguments clearly and effectively in written form.
- Express your ideas and arguments clearly and effectively in oral form, using skills developed through seminar participation and presentation.

REQUIRED TEXT:

O'Shaugnessy, Michael, and Jane Stadler. *Media and Society* (6th edition). Melbourne: Oxford University Press, 2016. ('MS' hereafter).

PLEASE NOTE - The text is available for purchase in the bookstore and a previous edition is available for borrowing (on reserve) in the library. Bringing your copy of the text to seminar is highly recommended in order to properly discuss class material.

COURSE COMPONENTS BREAKDOWN

Assignments

Written Assignment #1:	15%	Due 3 pm, Thurs. November 15 (online and paper).
Written Assignment #2:	20%	Due 4 pm, Tue. March 5 (online submission).

Tests & Examinations

In class test #1:	5%	Scheduled for Tue. October 16
In class test #2:	5%	Scheduled for Tue. December 4
Final Exam (take home):	25%	Due 3 pm, Thurs. April 11 (online submission)

Seminar Participation:	10%	(5% per term), attendance required
Seminar Submissions:	15%	8 per term (1% per submission, see note
Seminar Presentation:	5%	(scheduled for final 3 weeks of the winter term)

TOTAL = 100%

In order to obtain a mark in this course, you are expected to complete the following *required components*: (a) the 2 written assignments, (b) the 2 fall term in-class tests, and (c) the final exam.

Regular attendance in lecture (reflected in your seminar submissions), ongoing contributions to seminars (reflected in your participation grade), and completion of a seminar presentation

are very strongly recommended. Failure to complete them will not result in an automatic grade of F. However, failure to complete them will lower your grade and could lead to an F. You are responsible for taking or obtaining your own notes.

Final seminar participation grades are an average of 1st & 2nd term grades.

“Written Assignments”: Throughout the year, you will write 2 essay-style assignments. Each one is an opportunity to provide your critical readings of contemporary media culture. Full details will be provided on SAKAI, closer to the assignment dates.

Seminar Participation: Attendance at your assigned seminar is not sufficient for a passing participation grade. Your grade will depend on your regular contribution to seminar discussion. An outline of what constitutes good participation and good questions is provided on SAKAI. Please note - you should be prepared for each seminar with at least one question relating to either lecture or textbook material or the seminar exercises as they relate to course content (optimally, both). Seminar leaders are encouraged to involve every student in discussion. Examples of questions will be provided before the first seminar. Your mark will be determined on the following basis: Each week you will be given a grade out of 10. You are allocated 3 marks for attending (but not saying anything). You receive 5 marks for contributing to class discussion (but without any obvious reference to class material -- these tend to be references to personal experience or other examples which add to the liveliness of seminars but don't necessarily move discussion in a constructive fashion). You get 6 marks for alluding to (or speaking vaguely) about course concepts. You get 7 marks for discussing class material by making specific references to terms and/or concepts and therefore being a more productive contributor to seminars. You are rewarded 8 marks for both specific references to class material and specific page references to the textbook, pointing your fellow students to relevant material. You can receive 9-10 marks for providing 'A' level feedback, but via multiple contributions each class (without dominating class discussion). Sometimes this contribution will take the form of responding to other students' questions and/or encouraging your fellow students' contributions. A+ participation grades will also typically be granted for connecting the current week's material to previous weeks.

Seminar Presentations: At the end of the winter term, each student will have a chance to present a brief overview of their own personal branding efforts over the past year to their seminar. These will be brief (5 minutes, maximum). During the winter term, your seminar leader will circulate a sign-up sheet in which you can sign up for one of the final two weeks. It is your responsibility to remember the date for which date you volunteered.

In-class tests (fall term): In the Fall term, you will write two separate in-class tests. Each of these will be worth 5% and will cover only the material in the 6 weeks preceding the test. These tests are broken up in this fashion to (a) provide you with relief from the December exam period, and provide you with an opportunity to learn from your performance on the 1st test before the 2nd.

Final Examination: The final exam will be a take-home format exam and will be due 3pm, April 11th (to be handed in on sakai only - no paper submission). It will cover the Winter term material.

COURSE WITHDRAWAL & INTERIM GRADE

Interim grades will be released by Friday, Jan. 11, 2019.

The last day to withdraw from the course without academic penalty is Friday, Jan. 18,

2019. The course withdrawal form can be found here:

<https://brocku.ca/admissions/wp-content/uploads/sites/18/Add-Withdrawal-Form-FINAL.pdf>

ASSIGNMENT POLICY

Written assignments must be submitted to the 'Assignment' link on SAKAI BEFORE 3 pm (class time) on the date indicated.

Late assignment policy: Assignments received after 3 pm on the due date will receive a late penalty of 5% per day until a week after the original due date. To be clear, assignments handed in after 3 pm (date and time recorded on sakai) without having received a pre-arranged extension will be penalized 5% for having submitted late. After 7 days (and a total possible deduction of 40%), papers will receive an automatic grade of zero unless officially documented evidence of illness or other extenuating circumstances is provided. (Workload, computer problems or forgetting are not legitimate reasons for lateness.)

Extensions on assignments may only be granted by the instructor in cases of illness or other extenuating circumstances. Except in exceptional circumstances, extensions must be requested in advance, stating explicit reasons and attaching documentation. TAs may not give extensions.

ACADEMIC INTEGRITY

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties. Once a student engages in a documented act of plagiarism or other forms of academic dishonesty, instructors MUST report this to the CPCF Academic Integrity Officer, who may then refer the case to the Associate Dean and the Registrar. The consequences of plagiarism may include a grade of zero on the assignment, course failure, and in subsequent offences, suspension from the University.

To ensure that students understand the importance of academic integrity, they will be required to read, understand, and sign an academic integrity pledge form (or simply attach the document to the online submission). This must be submitted with, each written assignment (and the take-home exam) in COMM 1F90 (see sample form provided at the back of this outline). This form will be available on the COMM 1F90 SAKAI page.

TURNITIN.COM

Instructors are responsible for taking steps to detect plagiarism in all course work submitted

by students. In COMM 1F90 all students should submit written assignments to a computerized plagiarism detection database. Assignments must be submitted electronically at the Assignment link on SAKAI where they will be sent automatically to Turnitin.com. A separate Turnitin.com account and enrollment are NOT required for this course. Submission to Turnitin.com is voluntary, but students who wish to opt out of using Turnitin.com will be subject to equally rigorous scrutiny. These students must: a) notify the Instructor well in advance of the assignment due date, and b) hand in, along with the submitted assignment, a short reflection paper on the main arguments and research methodology used, all rough notes, a detailed outline, and rough draft of the submitted essay.

CLASS SCHEDULE:

Week 1: Thursday, September 6 - Introduction to course
Required reading: course outline and course supplements, posted online.

Week 2: Tue. Sept. 11 & Thurs. Sept. 13 - Defining the Media
Required reading: *MS*, Chapter 1

Week 3: Tue. Sept. 18 & Thurs. Sept. 20 - Media Studies
Required reading: *MS*, Chapter 2

Week 4: Tue. Sept. 25 & Thurs. Sept. 27 - Media and Society
Required reading: *MS*, Chapter 3

Week 5: Tue. Oct. 2 & Thurs. Oct. 4 - Language and the Social Construction of Reality
Required reading: *MS*, Chapter 4 Week 6: no

classes (Fall Term Reading Week)

Week 7: Tuesday, Oct. 16 - IN CLASS TEST #1

Thursday, October 18 - Texts, Meanings, and Audiences
Required reading: *MS*, Chapter 6

Week 8: Tue. Oct. 23 & Thurs. Oct. 25 - Media and Representation
Required reading: *MS*, Chapter 5

Week 9: Tue. Oct. 30 & Thurs. Nov. 1 - Semiology
Required reading: *MS*, Chapter 8

Week 10: Tue. Nov. 6 & Thurs. Nov. 8 - Reading Images and Advertisements
Required reading: *MS*, Chapter 9

REMINDER: FALL TERM WRITTEN ASSIGNMENT DUE THURSDAY NOVEMBER 15, 3pm.

Week 11: Tue. Nov. 13 & Thurs. Nov. 15 - Discourse and Ideology
Required reading: *MS*, Chapter 11

Week 12: Tue. Nov. 20 & Thurs. Nov. 22 - Ideology and Branding

Required reading: Shepherd, Ifan D. H. "From Cattle and Coke to Charlie: Meeting the Challenge of Self Marketing and Personal Branding," *Journal of Marketing Management* 2005, 21, 589-606. (available via sakai)

Week 13: Tue. Nov. 27 & Thurs. Nov. 29 - Globalisation

Required reading: *MS*, Chapter 25

Week 14: Tuesday, December 4 - Last day of the fall term - IN CLASS TEST #2

December 5 & 6 (Snow Days, in the event of a cancelled class earlier in the term)

WINTER BREAK

Winter Term Week 1: Tue. Jan. 8 & Thurs. Jan. 10 - Genre, Codes, and Conventions

Required reading: *MS*, Chapter 14

Winter Term Week 2: Tue. Jan. 15 & Thurs. Jan. 17 - On Narrative Structure

Required reading: *MS*, Chapter 16

Winter Term Week 3: Tue. Jan. 22 & Thurs. Jan. 24 - Why Stories?

Required reading: *MS*, Chapter 19

Winter Term Week 4: Tue. Jan. 29 & Thurs. Jan. 31 - "New Media"

Required reading: *MS*, Chapter 7

Winter Term Week 5: Tue. Feb. 5 & Thurs. Feb. 7 - Stars and Celebrities

Required reading: *MS*, Chapter 23

Winter Term Week 6: Tue. Feb. 12 & Thurs. Feb. 14 - Microcelebrity

Required reading: Alice E. Marwick (2015) "Instafame: Luxury Selfies in the Attention Economy," *Public Culture* 27:1 pp. 137-160. (available via sakai)

(Winter Term Reading Week): No classes Feb. 18 - Feb. 22, 2018

Winter Term Week 7: Tue. Feb. 26 & Thurs. Feb. 28 - Dominant Ideology and Hegemony

Required reading: *MS*, Chapter 12

REMINDER: WINTER TERM WRITTEN ASSIGNMENT DUE TUESDAY MARCH 5, 3pm.

Winter Term Week 8: Tue. Mar. 5 & Thurs. Mar. 7 - Ideologies of Gender

Required reading: *MS*, Chapters 20 & 21

Winter Term Week 9: Tue. Mar. 12 & Thurs. Mar. 14 - Ethnicity, Ideology, and the Media

Required reading: *MS*, Chapter 22

Winter Term Week 10: Tue. Mar. 19 & Thurs. Mar. 21 - Postmodernism

Required reading: *MS*, Chapter 24

Winter Term Week 11: Tue. Mar. 26 & Thurs. Mar. 28 - Culture Jamming & Counter Hegemony

Required reading: *MS*, Chapter 13

Winter Term Week 12: Tue. Apr. 2 & Thurs. Apr. 4 - Crisis Communication & Branding

Required reading: Duncan Koerber (2017) "Defining the field" in "Crisis Communication in Canada." (to be available via sakai)

(Monday April 8 & Tuesday April 9 = snow days for rescheduled classes)

April 10 - 24, 2019: FINAL EXAM PERIOD

REMEMBER - Take Home Exam is Due 3 pm, April 11 (sakai submission)

Please note the following policies:

COURSE COMMUNICATIONS:

You are expected to regularly check SAKAI for course announcements, updates, and additional resources. Please use the Messages tool on the course Sakai site for all communications with your seminar leader or the instructor.

The instructor and teaching assistants will not respond to email. I will attempt to reply to messages within 24 hours (usually checking sakai once each day), during the week. Expect that correspondence on weekends and holidays will take longer. Be careful to address your message to a specific person, not to all the site users.

Before asking for help, please check the course outline, assignment handout or your lecture notes. If the answer to your question is in these sources, the information will not be provided again by message. If you need additional help with your work, are experiencing difficulty in the course, or have a personal emergency, please contact your teaching assistant (TA) or call my office and leave a message.

Everyone is welcome to come to office hours with the instructor or TAs, appointments are not necessary, our doors are always open during these times! To ensure availability for meeting outside of office hours, please consult with me (or the T.A.s) beforehand.

Basic course content will be discussed in class. If you miss a class, talk to classmates or consult the lesson synopses that are available online. Do not ask to be brought up-to-date via e-mail. I will not discuss marks or evaluation issues via e-mail. Most importantly, e-mail is not a secure medium. Plus, if it is important to you, it is important to me and anything of importance deserves proper discussion, preferably face-to-face. Course-related questions can also be difficult to address via electronic correspondence so I may encourage you to consult with me or your T.A. in person whenever you cannot easily answer your own questions.

However, I also encourage you to use the “forums” section on SAKAI to “crowdsource” answers to your questions from your fellow students before arranging an appointment to talk with me. I will do my best to respond to inquiries as soon as possible. However, please do not expect instant results. I deal with inquiries on a first come, first served basis. If it takes longer than you expect, it is likely a busy time and many other students have questions too. This tends to occur at the end of term and around the time of assignment deadlines.

Grading Policies:

Make back-ups of your work frequently. Computer problems are frequent and though I am sympathetic to losses of data, these can be prevented with foresight. These will not be accepted as excuses for missing a deadline. Assignments must reflect your own work. For your own protection, always keep the original of all your written work and hand in a duplicate copy. In case of loss, theft, destruction, dispute over authorship, or any other eventuality, it will be your exclusive responsibility to provide a copy. Failure to provide a copy results in an automatic F.

PLEASE NOTE - The text chosen from this class is intended to be easy to read. It is written in easy to understand language and contains many illustrations and examples. Some weeks, you may be expected to read more than others, but it is always intended to be a manageable amount. While all course content will be covered in the lectures and seminars, not all content comes directly from the required text. Therefore, regular attendance in lectures is required to be exposed to all the supplemental material.

Grades are not designed to be negotiable. If you wish additional feedback or clarification regarding your performance on an assignment, feel free to first consult with your T.A. and, if necessary, your course professor. There are specific circumstances that have to be present in order to appeal a grade. Check Sakai for further information. A lot of effort has gone into creating a fair marking scheme, reasonable measures of performance, and standardized evaluation of course material. The course content is designed to be accessible and the approach to it should be straightforward, consistent, and flexible enough so that every learner can benefit. If you have a situation that you think might affect your performance on an assignment, let the professor know as soon as possible. Deadlines are stated above so that you can take the necessary steps to avoid missing them. Thinking up, researching, and writing tends to take longer than expected. Start early.

To be clear, there are no opportunities for “extra” grades in this class. There may be an opportunity for “Bonus” marks to be allocated (either on individual assignments/tests or at the end of the year). When this occurs, these marks will be allocated to potentially all students.

There is no avenue for extra grades to be given on an individual basis. Marks are allocated based on the grading breakdown described above. There are multiple assignments and different formats of evaluation designed to accommodate different learning types. Poor performance on any one of these assignments means there are other chances to increase your grade in the class but fairness to your fellow students means all students are graded on the same basis.

No extensions will be provided without medical documentation, documentation through the Student Development Centre, or other relevant documentation.

IMPORTANT NOTE ABOUT THE FINAL TAKE-HOME EXAM: The 5% late penalty per day is designed for the written assignments to be submitted during the course. The final exam is scheduled for a specific date - the same as if it were scheduled in the final exam period. You must hand in your exam before the due date of 3pm, Thursday April 11. Since you are provided the case-study for the final exam on the first day of class and the final exam format is provided to you the first day of the winter term, you should be thinking about and preparing your exam far in advance of the due date. No late exams will be accepted.

Special Accommodation:

The University is committed to fostering an inclusive and supportive environment for all students and will adhere to the Human Rights principles that ensure respect for dignity, individualized accommodation, inclusion and full participation. The University provides a wide range of resources to assist students, as follows:

If you require academic accommodation because of a disability or an ongoing health or mental health condition, please contact Student Accessibility Services at askSAS@brocku.ca or 905 688 5550 ext. 3240.

If you require academic accommodation because of an incapacitating medical condition, you must, as soon as practicable, inform your instructor(s) of your inability to complete your academic work. You must also submit a Brock University Student Medical Certificate (found at <https://brocku.ca/registrar/toolkit/forms>). The University may, at its discretion, request more detailed documentation in certain cases. If you are unable to write a scheduled examination due to an incapacitating medical condition, you must follow the process set out in the Faculty Handbook III:9.4.1.

If you are experiencing mental health concerns, contact the Student Wellness and Accessibility Centre. *Good2Talk* is a service specifically for post-secondary students, available 24/7, 365 days a year, and provides anonymous assistance: <http://www.good2talk.ca/> or call 1- 866-925-5454. For information on wellness, coping and resiliency, visit: <http://brockmentalhealth.ca/mental-well-being/>.

If you require academic accommodation on religious grounds, you should make a formal, written request to your instructor(s) for alternative dates and/or means of satisfying requirements. Such requests should be made during the first two weeks of any given academic term, or as soon as possible after a need for accommodation is known to exist.

If you have been affected by sexual violence, the Human Rights & Equity Office offers support, information, reasonable accommodations, and resources through the Sexual Violence Support & Education Coordinator. The Brock Student Sexual Violence Support Centre supports and advocates for people who have experienced sexual violence. A full list of services can be

found at www.ASaferbrock.org. If you or a friend need support or have questions text 289-990- SAFE(7233). All services are 24/hr, anonymous, confidential, and free. For information on sexual violence, visit Brock's Sexual Assault and Harassment Policy or contact the Sexual Violence Support & Response Coordinator at humanrights@brocku.ca or 905 688 5550 ext. 4387.

If you feel you have experienced discrimination or harassment on any of the above grounds, including racial, gender or other forms of discrimination, contact the Human Rights and Equity Office at humanrights@brocku.ca.

Intellectual Property Notice:

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights

Class Conduct:

Conduct that distracts from either the lecture or seminar (and either bothers the professor or, more importantly, one's fellow students) will not be tolerated. Please consult SAKAI in order to review the information about behaviour in class that will negatively affect your participation grade. In extreme cases where one's behavior is disruptive or disrespectful, you may be asked to leave the class.

In order to limit the distraction of other students' laptops, cellphones, etc, the professor reserves the right to designate a section of the classroom for people with electronic devices.

Course Updates:

COMM 1F90 is available on the SAKAI online learning system. Registered students should log on at <https://lms.brocku.ca/portal> using their Brock computer ID and password. SAKAI is your source for all course-related announcements and updated course content. Extensive information designed to help you in the course and supplement lectures while also structuring seminars will be posted there.

Course Planning:

If you require assistance with course planning throughout the school year, please contact the department's Academic Advisor, Penni Lafleur (Office: SBH344, Extension: 5308; email: plafleur@brocku.ca)

COMM 1P96

COMM 1P96
Introduction to Professional Communication
Fall 2018

Instructor Name: Dr. Duncan Koerber
Email: Isaak "Messages"
Twitter: @duncankoerber
Website: www.duncankoerber.com
Office Location: Scotiabank Hall 343
Office Hours: Fridays from noon to 2 p.m or other days by appointment

Times and Locations:

Lecture: Fridays, 2 p.m. to 4 p.m. South Block 202

Seminar 1: Wednesdays, 9 a.m. to 10 a.m., Arthur Schmon Tower 109, TA: Leaya Amey

Seminar 2: Tuesdays, 4 p.m. to 5 p.m., Mackenzie Chown Block D 404, TA: Leaya Amey

Seminar 3: Fridays, 10 a.m. to 11 a.m., Arthur Schmon Tower 109, TA: Josh Augustino

Seminar 4: Mondays, 10 a.m. to 11 a.m., Plaza 411, TA: Josh Augustino

Seminar 5: Fridays, 11 a.m. to noon, Plaza 408, TA: Duncan Koerber

Course Calendar Description:

Introduction to theory and practice of professional communication focusing on applied rhetoric for organizational contexts.

Additional Description:

This course develops your ability to write non-fiction prose at a professional level. The main assignment to accomplish this goal is the story. Story, also called narrative, is the most important genre in most professional communication fields, including advertising, public relations, and journalism. The weekly lectures and readings present lessons and models for application and emulation. Students must revise their draft personal stories during the term, applying the lessons. In weekly seminars, students will share their writing exercises and present their writing to their classmates in group editing sessions. At the end of the course, each student will submit a portfolio of high-quality, engaging, well-edited stories.

Learning Objectives/Outcomes:

By the end of this course, students should be able to:

Recognize the enhancing and interfering factors in professional writing;
Edit and revise their own writing and the writing of others;
Produce compelling storytelling that engages readers; and,
Punctuate sentences properly.

Required Readings and Materials:

Koerber, Duncan, and Allen, Guy. *Clear, Precise, Direct: Strategies for Writing*. Oxford University Press, 2014 or 2015.

Allen, Guy, ed. *Showing the Story: Creative Nonfiction by New Writers*. Life Rattle Press, 2014.

Koerber, Duncan. Perfect English Punctuation for Beginners Online Course. Udemy.com.

Course Communications:

All communication with me should take place in class, in office meetings, or through the messaging feature of the Isaak course website. I will try to respond to messages within 48 hours (weekends not included). If you are asking about an assignment fewer than 48 hours before its due, you may not receive an answer before the deadline. In the case of an emergency, traffic delays, or inclement weather affecting my attendance in the classroom, I will send an announcement through the Isaak website as soon as possible before the class.

Evaluation Components and Due Dates

Evaluation Component	Grade Weight	Due Date
Seminar Participation	10%	Weekly, in your seminar
Writing Exercises	35%	Weekly, in your seminar
Punctuation Test	15%	September 28, in lecture
Professional Writing Portfolio	40%	In your last seminar
Total	100%	

All exercises and portfolios must be printed and submitted to your teaching assistant in seminar. Label the exercises with your name, student number, and the exercise number. The Professional Writing Portfolio should have a title page with your name, student number, and the title "Professional Writing Portfolio."

Assignment Descriptions

Seminar Participation: Attend every seminar, volunteer to read your exercises out loud, and offer editing comments to your peers to earn a high mark on participation. Teaching Assistants will explain how participation will be calculated.

Writing Exercises: Almost every week, students must complete writing exercises that apply the lecture/textbook lessons. First, read the associated chapter material to understand the concepts. Then write and edit the exercise. Print out the exercise and include a title page with your full name, student number, and the title of the exercise. Submit the printed copy to your teaching assistant in the seminar. Late exercises will earn a zero grade, unless medical documentation is provided to the teaching assistant. As we have 5 seminars over 4 different days of the week, the due dates will vary, please see the detailed exercises schedule for your specific seminar on the Isaak website under “Resources.”

Punctuation Test: This test will require you to edit sentences and paragraphs to correct punctuation problems. To prepare for the test, watch the videos in the online course Perfect Punctuation for Beginners (see link above under Required Readings and Materials). Take notes and try out the quizzes in the online course to make sure you know the material. There will be questions on the test from all the topics of the online course. It’s important to master punctuation, as it will also be an element of your Professional Writing Portfolio grade.

Professional Writing Portfolio: During the term, you will write 5 personal narratives (stories) like the ones in the textbook collection Showing the Story. The rough drafts of these stories must be edited/revised during the term according to the lessons learned from the lectures and textbook Clear, Precise, Direct: Strategies for Writing. At the end of the course, you will copy and paste your 5 stories into one Word file, attach a title page with your name, student number, and the title “Professional Writing Portfolio,” and submit the printed copy to your teaching assistant in your last seminar. By the end of the course, your 5 personal narratives should be pristinely edited and perfectly punctuated, removing the problems described in the course, to get an A grade.

Late Submission Policy:

Writing Exercises must be submitted in seminar on the day they are due. You are allowed to correct exercises in seminar with a pen or pencil before your TA collected them for marking. But writing exercises cannot be handed in late. If the final Professional Writing Portfolio is handed in after your last seminar, it will incur 10% off per day late. There is no makeup date for the Punctuation Test. You must complete it on the scheduled day or you will earn zero.

The late penalties listed here will be waived if the professor or teaching assistant receives medical documentation from the student. See Medical Exemption Policy and the medical health certificate at <https://brocku.ca/registrar/toolkit/forms/>

Relationship between attendance and grades:

Students are expected to attend all classes and must submit all assignments to pass this course.

Important dates:

November 6, 2018, is the date for withdrawal from the course without academic penalty.

October 30, 2018, is the date you will be notified of at least 15% of your course grade.

October 8 to 12, 2018, is the scheduled Thanksgiving/Reading Week break.

Academic Integrity:

Statement for undergraduate courses

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties. Information on what constitutes academic integrity is available at <https://brocku.ca/academic-integrity/>

Intellectual Property Notice:

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Special Accommodation:

The University is committed to fostering an inclusive and supportive environment for all students and will adhere to the Human Rights principles that ensure respect for dignity, individualized accommodation, inclusion and full participation. The University provides a wide range of resources to assist students, as follows:

If you require academic accommodation because of a disability or an ongoing health or mental health condition, please contact Student Accessibility Services at askSAS@brocku.ca or 905 688 5550 ext. 3240.

If you require academic accommodation because of an incapacitating medical condition, you must, as soon as practicable, inform your instructor(s) of your inability to complete your academic work. You must also submit a Brock University Student Medical Certificate (found at <https://brocku.ca/registrar/toolkit/forms>). The University may, at its discretion, request more detailed documentation in certain cases. If you are unable to write a scheduled examination due to an incapacitating medical condition, you must follow the process set out in the Faculty Handbook III:9.4.1.

If you are experiencing mental health concerns, contact the Student Wellness and Accessibility Centre. *Good2Talk* is a service specifically for post-secondary students, available 24/7, 365 days a year, and provides anonymous assistance: <http://www.good2talk.ca/> or call 1-866-925-5454. For information on wellness, coping and resiliency, visit: <http://brockmentalhealth.ca/mental-well-being/>.

If you require academic accommodation on religious grounds, you should make a formal, written request to your instructor(s) for alternative dates and/or means of satisfying requirements. Such requests should be made during the first two weeks of any given academic term, or as soon as possible after a need for accommodation is known to exist.

If you have been affected by sexual violence, the Human Rights & Equity Office offers support, information, reasonable accommodations, and resources through the Sexual Violence Support & Education Coordinator. For information on sexual violence, visit [Brock's Sexual Assault and Harassment Policy](#) or contact the Sexual Violence Support & Response Coordinator at humanrights@brocku.ca or 905 688 5550 ext. 4387.

If you feel you have experienced discrimination or harassment on any of the above grounds, including racial, gender or other forms of discrimination, contact the Human Rights and Equity Office at humanrights@brocku.ca.

Sequence and Dates of Lecture Topics and Readings

Lecture Week Number + Date	Topic	Readings (Read Before Lecture)
1 September 7	Introduction to the Course and Expectations + Starting to Write	
2 September 14	Professional Writing Style + Storytelling Principles	CPD, Chapter 1 Showing the Story, Chapter 1, The Child
3 September 21	Economy	CPD, Chapter 2 Showing the Story, Chapter 2, School
4 September 28	Punctuation Test	Perfect Punctuation for Beginners online course
5 October 5	Strong Verbs	CPD, Chapter 3 Showing the Story, Chapter 3, Family
	THANKSGIVING &	READING WEEK BREAK
6 October 19	Active Voice	CPD, Chapter 4 Showing the Story, Chapter 4, Relationships
7 October 26	Strong Nouns	CPD, Chapter 5 Showing the Story, Chapter 5, People
8 November 2	Original Language	CPD, Chapter 6 Showing the Story, Chapter 6, Places
9 November 9	Parallelism	CPD, Chapter 7 Showing the Story, Chapter 7, Work
10 November 16	Sentence Variation & Sound	CPD, Chapter 8 Showing the Story, Chapter 8, The Interview
11 November 23	Applying Lessons to other Writing Genres	

12 November 30	Wrap Up and Final Thoughts	
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CHEM 1P00

(a prerequisite for ERSC 2P23)

CHEM 1P00
Introductory Chemistry
SEPTEMBER-DECEMBER 2017

INSTRUCTOR:	Prof. T. Yan e-mail: tyan@brocku.ca	CRN415
LAB COORDINATOR:	Dr. S. Paone e-mail: spaone@brocku.ca	E305
LABORATORY:		H213

1. REQUIRED SUPPLIES AND TEXTBOOKS

(b) Available in the Bookstore

Textbook: Zumdahl, Introductory Chemistry, A Foundation, 8th Ed (earlier editions are ok) Lab coat
Safety glasses or goggles
One bound carbonless copy notebook

(c) Download from Sakai

Assignments and report sheets
(see below) Lab manual
Experiments, and report sheets for all experiments

2. INTRODUCTION TO CHEMISTRY 1P00: COURSE REQUIREMENTS

– General

CHEM 1P00 is designed to help students prepare to take a full-year university level Chemistry course such as CHEM 1P91/1P92. The course covers basic math skills in addition to concepts essential to understanding and applying chemical principles in future chemistry courses. A short laboratory session each week gives practical experience in handling chemicals and apparatus, and interpreting data. Tutorials give practice and experience in solving problems, and are specifically designed to develop problem-solving skills.

– Examinations

There are two 50-minute midterm tests plus a final exam. The midterm tests consist primarily of problems and short-answer questions. The final examination may include essay questions as well as problems and short-answer questions. All examinations are cumulative and may also include topics from the laboratory work.

Departmental Policy on Final Examinations: A student must achieve a mark of at least 30% on the final examination in order to receive a passing mark in the course.

– Laboratories

Students attend a lab once a week, according to the schedule given later in this Outline. The lab period is 90 minutes long, and is preceded or followed by a 90-minute tutorial. A

completed experiment includes a submitted lab report. Students must complete at least 90% of the labs in order to pass the course.

Report sheets for each experiment must be downloaded from Sakai.

Laboratory reports are due two working days after completion of the experiment. The reports should be turned in by 4:30 p.m. on the due dates in the report box located in the hall between MC E305 and MC H302.

– Tutorials

Tutorials are integrated with the text. Certain essential math skills are emphasized in each tutorial. The tutorial topic is given in the schedule shown later in this course outline.

– Assignments

There are weekly assignments in CHEM 1P00, designed to follow the adopted textbook. They may also have questions on math skills that are covered in the tutorials.

Assignments can be found on Sakai. Each student has a different set of assignments; you will be given a “version number” for your assignments when you log onto Sakai for CHEM 1P00.

3. APPROXIMATE LECTURE SCHEDULE

Lectures are on Tuesday, Wednesday and Thursday 12:00-13:00 pm in AS216

Date	Lecture Topic	Zumdahl Ref.
Sep 6	Scientific notation. Units. Length, volume, and mass.	1; 2.1-2.3
Sep 8	Significant figures. Dimensional analysis	2.4-2.6
Sep 12	Multistep dimensional analysis. Temperature. Density.	2.7-2.8
Sep 13	Properties of matter. Elements and compounds.	3.1-3.3
Sep 15	Mixtures and pure substances. Separation of mixtures	3.4-3.5
Sep 19	Energy and energy changes. Heat capacity	10.1-10.2
Sep 20	The chemical elements. Dalton's theory.	4.1-4.4
Sep 22	Chemical formulas. Atomic structure. Isotopes	4.5-4.7
Sep 26	Periodic Table. Structures of elements. Ions.	4.8-4.11
Sep 27	Naming compounds. Metals that form 2 cations.	5.1-5.2
	Naming nonmetal compounds. Polyatomic anions	5.3-5.4
Sep 29	Naming acids. Formulas from names.	5.5-5.7
Oct 3	Counting by weighing. Atomic masses. The mole. Molar mass. Percentage composition.	8.1-8.3
Oct 4	Empirical formulas. Empirical formula calculations. Molecular formulas.	8.4-8.8
Oct 6	Midterm 1	
	October 10 - 13 Fall Week (no classes/labs/tutorials)	
Oct 17	Chemical reactions. Balancing chemical equations.	6.1-6.3
Oct 18	What causes reactions? Solids and solubility rules.	7.1-7.2

Oct 20	Reactions in water. Acid-base reactions.	7.3-7.4
Oct 24	Redox reactions. Classifying reactions.	7.5-7.7
Oct 25	Mole-mole relationships in chemical equations. Mass	9.1-9.2
Oct 27	Mass calculations (continued).	9.3
Oct 31	Limiting reagents. % Yield.	9.4-9.6
Nov 1	Intermolecular forces. Types of solids. Solubility.	14.3, 14.5; 15.1
Nov 3	Solution composition: mass %, molarity.	15.2-15.4
Nov 7	Dilution. Solution stoichiometry.	15.5-15.7
Nov 8	Electromagnetic radiation. Energy levels of hydrogen.	11.1-11.4
Nov 10	Midterm 2	
Nov 14	Wave mechanical model of the atom. Orbitals.	11.5-11.6
Nov 15	Electronic configuration and the Periodic Table	11.7-11.9
Nov 17	Types of chemical bonds. Electronegativity. Dipole moments.	12.1-12.3
Nov 21	Configurations of ions. Ionic compounds. Lewis structures.	12.4-12.6
Nov 22	Molecular structure. VSEPR.	12.7-12.9
Nov 24	Molecular structure and VSEPR (continued).	12.9-12.10
Nov 28	Arrhenius and Bronsted acids and bases.	16.1-16.2
Nov 29	Water as an acid and a base. Ion product of water.	16.3-16.4
Dec 1	pH. Buffers.	16.5-16.6
Dec 5	Final Review	

4. MARKING SCHEME

Two 50-minute tests, 15% each (Oct 6 and Nov 10)	30%
Labs	15%
Tutorials	10%
Assignments	20%
Final examination (3 hours)	25%

5. LAB AND TUTORIAL SCHEDULE

Week	Date	Lab
1	Sep 6-8	No lab.
2	Sep 11-15	Lab. Safety. Orientation to Lab. H213
3	Sep 18-22	Expt. 1. Density; Reading and Using Graduated Cylinders, Burets, and Top-
4	Sep 25-29	Expt. 2. Mining for Chocolate Chips
5	Oct 2-6	Expt. 3. Properties of Acids and Bases
	Oct 9-13	Fall break, no lab
6	Oct 16-20	Expt. 4. Solubility
7	Oct 23-27	Expt. 5. Precipitation Reactions
8	Oct 30-Nov 3	Expt. 6. Oxidation-Reduction Reactions

9	Nov 6-10	Expt. 7. Reactions Producing Gases The Analytical Balance. Preparation of NaOH Solution
10	Nov 13-17	Expt. 8. Formula of a Hydrate
11	Nov 20-24	Weigh Sample From Expt. 8. Expt. 9. Standardization of NaOH Solution.
12	Nov 27-Dec 1	Expt. 10. Percent Purity of an Acid

Week	Date	Tutorial
1	Sep 6-8	No tutorial
2	Sep 11-15	Dimensional Analysis. Handout will be Provided
3	Sep 18-22	Systems of Measurement; Matter and Energy (Chapters 2 and 10)
4	Sep 25-29	Chemical formulas, atomic structure, isotopes (Chapter 4).
5	Oct 2-6	Nomenclature (Chapter 5).
	Oct 9-13	Fall break, no lab
6	Oct 16-20	The Mole, Empirical formulas (Chapter 8)
7	Oct 23-27	Reaction Types and Balancing Equations (Chapters 6 and 7)
8	Oct 30-Nov 3	Mole-Mole relationships, mass calculations (Chapter 9).
9	Nov 6-10	Limiting Reagent and % Yield (Chapter 9).
10	Nov 13-17	Solution composition and solution stoichiometry (Chapter 15)
11	Nov 20-24	Orbitals, electronic configuration, Periodicity (Chapters 4 and 11)
12	Nov 27-Dec 1	Chemical bonds, dipole moments, molecular structure (Chapter 12)

6. MISSED LABS, TESTS, AND ASSIGNMENTS

If you miss a lab because of illness, please submit a medical certificate to Dr. Paone. You will be excused from that piece of work. You may also request to be excused from a lab for certain reasons other than illness, such as a death in the immediate family.

Missed assignments cannot be made up.

If you miss a scheduled exam, you will need to provide a medical certificate or other valid reason (including documentation) for not writing the exam, and a makeup exam will be set. Students who do not have valid reasons for missing an exam will be given a zero on the exam. Note that if you decide to write an exam while ill, you may not write a make-up exam, even with a medical certificate.

Final examinations are administered by the Registrar's Office and exam regulations are available elsewhere. Note that it is your responsibility to carefully read the exam timetable and to be in the right place at the right time for examinations. Since exam timetables can be changed up to shortly before the exam period, be sure that you have seen the *final* timetable, not just the earlier tentative one.

Departmental Policy on Final Examinations: A student MUST achieve a mark of at least 30% on the final examination in order to receive a passing mark in the course.

7. PENALTY FOR LATE ASSIGNMENTS AND LABS

It is Chemistry Department policy that a lab turned in late is penalized 10% for each day that it is late, with no credit given after 5 days. Note, however, that most of the labs must be completed and reports turned in, in order to pass the course, so that handing them in late is much better than not turning them in at all.

Assignment answer sheets are to be placed in the box marked "CHEM 1P00 ASSIGNMENTS" located in the hall between MC E305 and MC H302. Assignments will not be accepted after 4:30 pm on the due dates.

8. ASSIGNMENT DUE DATES

Week	Assignment #	Due Date
1	No assignment	
2	#1	Friday Sep 15
3	#2	Friday Sep 22
4	#3	Friday Sep 29
5	#4	Friday Oct 6
6	#5	Friday Oct 20
7	#6	Friday Oct 27
8	#7	Friday Nov 3
9	#8	Friday Nov 10
10	#9	Friday Nov 17
11	#10	Friday Nov 24
12	#11	Friday Dec 1

9. Other important dates

– November 7, 2017: Last day for withdrawal without academic penalty.

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10. Academic Integrity

Every student must be aware of Brock's Academic Integrity policy. A link to the university website on the Academic Integrity Policy is here:

<https://www.brocku.ca/academic-integrity>

GEOG 1F90

Brock University - Department of Geography & Tourism Studies GEOG 1F90: Introduction to Human Geography

Course Outline - Fall Term, 2020-2021

Instructor: Professor Christopher Fullerton Email: chris.fullerton@brocku.ca

Course Coordinator: Alexandra Glenn Email: aglenn@brocku.ca

Teaching Assistants/Online Seminar Group Leaders:

Seminar # Seminar Leader Email Address 1 Michael Smith msmith6@brocku.ca 2 Michael Smith msmith6@brocku.ca 3 Michael Smith msmith6@brocku.ca 4 Aaron Geraghty ag20cu@brocku.ca 5 Aaron Geraghty ag20cu@brocku.ca 11 Nikki McIntyre nm19yu@brocku.ca 12 Nikki McIntyre nm19yu@brocku.ca 13 Ishwinder Saraan isaraan@brocku.ca 14 Ishwinder Saraan isaraan@brocku.ca 15 Lina Adeetuk ladeetuk@brocku.ca 16 Lina Adeetuk ladeetuk@brocku.ca 17 Rebekah Casey rkraulis@brocku.ca 18 Rebekah Casey rkraulis@brocku.ca 19 Michael Smith msmith6@brocku.ca 20 Michael Smith msmith6@brocku.ca 21 Anthony Montagano ac15du@brocku.ca 22 Michael Smith msmith6@brocku.ca 23 Krista Hrin khrin@brocku.ca 24 Anthony Montagano ac15du@brocku.ca

Course Description:

The purpose of this course is to introduce students to the fascinating discipline of Human Geography. We will begin the Fall Term by examining what Human Geography is all about and why looking at issues from a geographical perspective has become increasingly important in an ever-changing world. We will then examine issues currently of interest to geographers as they relate to the following: globalization; economic geography and economic development; urban and transportation geography/planning; rural geography and rural development; tourism geography; and population geography. In the Winter Term we will examine several other subdisciplines of human geography.

Course Structure:

This course has four main parts: weekly lecture recordings; assigned readings; online Forum Discussions; and another online component called “Mastering Geography”. Your active engagement in all course components will be crucial to your success in this course. More information on each of these components is provided on the next page.

Course Communication:

This online course is delivered via the GEOG 1F90 Sakai site that you are expected to check regularly and carefully. Announcements, notices, and course materials will be posted frequently, and it is your responsibility to check often for updates!

Required Text:

Knox, P. L., Marston, S. A., and Imort, M. 2019. Human Geography: Places and Regions in Global Context (Updated Fifth Canadian Edition). North York, ON: Pearson Canada.

The course textbook is available to you in an electronic (e-book) format. Students who would also like to have a hard copy of the textbook will be able to purchase (for a small additional fee) a loose-leaf, binder-ready version as well, but must first purchase the e-book. It is essential that you purchase this textbook, as many of your assignments throughout both the Fall and Winter Terms will be based on the textbook content. Detailed information about how to purchase the textbook and how to access the “Mastering Geography” materials via Sakai will be provided in the Week One GEOG 1F90 materials.

Please note that additional mandatory readings will also be assigned at certain times during the Fall and Winter Terms. These will be made available online (free of charge) via the course Sakai site.

Course Grading Scheme - Fall Term

1. Lectures and Readings:

The recorded lectures that will be posted each week provide the fundamental material for the course. The textbook chapters and other readings are meant to complement the lecture materials.

2. Discussion Forums:

Your participation and engagement (e.g. reading other posts, responding to the Seminar Leader’s follow-up discussion questions, etc.) in the Discussion Forums throughout the Fall Term are worth 15% of your final course grade.

3. “Mastering Geography” Assignments:

You will also be required to complete a series of online assignments via the “Mastering Geography” website. This will include multiple-choice questions, more detailed tasks that test your understanding of textbook content, and writing exercises that enable you to critically reflect on some of the topics about which you’ve read in the assigned chapters. The Fall Term “Mastering Geography” assignments will be worth 15% of your final course grade.

4. Take-Home Examination:

There will be a take-home examination scheduled during the examination period in December. The exam, which will draw from material covered in all lectures and seminar materials from the Fall Term, is worth 20% of your final course grade. The take-home examination submission deadline will be announced once it has been set by the Registrar's office. The examination period for this term is between December 10 and 22, 2020.

Grading Criteria:

All assignment, examination and seminar grades will be based on the following Brock University guidelines:

- A - 90 to 100: Reserved for students where work is of outstanding quality that provides clear evidence of a rare talent for the subject and of an original and/or incisive mind.
- A - 80 to 89: Awarded for excellent, accurate work in which evidence of a certain flair for and comprehension of the subject is clearly perceptible.
- B - 70 to 79: Indicates competent work that shows a sound grasp of the course goals without being distinguished.
- C - 60 to 69: Represents work of adequate quality which suffers from incompleteness or inaccuracy.
- D - 50 to 59: Given where the minimum requirements of a course are barely satisfied.
- F - 49 or lower: Means that minimum requirements have not been met and no credit has been given for the course.

Late Penalty:

Assignments submitted more than one hour after the due date and time are subject to a late penalty of 10% per day (including weekends). Furthermore, an assignment submitted more than five days after the due date will not be graded but will instead automatically receive a grade of zero. Exceptions will be granted in the case of medical or family emergencies, but only when supporting documentation is submitted to the Course Coordinator (Alexandra Glenn, aglenn@brocku.ca). See Medical Exemption Policy and the medical health certificate at <https://brocku.ca/registrar/wp-content/uploads/sites/45/Medical-Certificate.pdf>

Technological Issues:

Students are responsible for ensuring their work is backed-up properly. Materials handed in late or incomplete due to computer malfunctions will be penalized in accordance with the standards set forth above, with no exceptions.

Appealing a Grade:

If you wish to challenge any of your course grades, you must follow the process outlined below (see e-mail policy for additional requirements):

1. Contact your Seminar Leader by e-mail. 2. In your email, provide specific reasons why you believe your grade requires reconsideration. 3. Your Seminar Leader will review the grade in question in light of your comments and decide whether the grade should be changed. 4. Any continuing concerns may be mediated by the Course Instructor at his discretion.

5. Appeals regarding Fall Term grades must be brought to the attention of your Seminar Leader by January 31, 2021, at the very latest. Appeals brought forward after this date may not be considered.

E-mail Policy:

Course inquiries may be made by e-mail to your Seminar Leader or, if appropriate, the Course Instructor. Please be aware that, in order to receive a response from us, you must follow the guidelines below:

1. All e-mails must be sent from a Brock University e-mail account!

2. All e-mail messages must include the course number and a concise statement of purpose [e.g. GEOG 1F90 Assignment] in the subject line; otherwise, the message is likely to be deleted.

3. Your full name and student number must be included in the body of your message; once again, your message may otherwise be deleted. 4. Please make sure you consult the course syllabus and any other handouts BEFORE submitting inquiries by e-mail. Many of the questions that Seminar Leaders and I receive could have easily been answered after a more thorough reading of these materials!

5. We will do our best to respond to legitimate emails within 24 hours. However, this general policy only applies from Monday to Friday. We reserve the right not to respond to student emails in the evenings or on weekends.

Course Withdrawal: The last date for withdrawal from this course without academic penalty is January 15, 2021.

Academic Integrity: Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University

Policies” entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties. Information on what constitutes academic integrity is available at <https://brocku.ca/academic-integrity/>.

Intellectual Property Notice:

All slides, presentations, handouts, tests, exams, and other course materials created by the instructors in this course are the intellectual property of the instructors. A student who publicly posts or sells an instructor’s work, without the instructor’s express consent, may be charged with misconduct under Brock’s Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

GEOG 1F90: Introduction to Human Geography, Fall-Winter 2020-2021

Special Accommodations:

The University is committed to fostering an inclusive and supportive environment for all students and will adhere to the Human Rights principles that ensure respect for dignity, individualized accommodation, inclusion and full participation. The University provides a wide range of resources to assist students, as follows:

a) If you require academic accommodation because of a disability or an ongoing health or mental health condition, please contact Student Accessibility Services at askSAS@brocku.ca or (905) 688-5550, ext. 3240.

b) If you require academic accommodation because of an incapacitating medical condition, you must, as soon as practicable, inform your instructor(s) of your inability to complete your academic work. You must also submit a Brock University Student Medical Certificate (found at <https://brocku.ca/registrar/toolkit/forms>). The University may, at its discretion, request more detailed documentation in certain cases. If you are unable to write a scheduled examination due to an incapacitating medical condition, you must follow the process set out in the Faculty Handbook III:9.4.1.

c) If you are experiencing mental health concerns, contact the Student Wellness and Accessibility Centre. Good2Talk is a service specifically for post-secondary students, available 24/7, 365 days a year, and provides anonymous assistance: <http://www.good2talk.ca/> or call 1-866-925-5454. For information on wellness, coping and resiliency, visit: <http://brockmentalhealth.ca/mental-well-being/>.

d) If you require academic accommodation on religious grounds, you should make a formal, written request to your instructor(s) for alternative dates and/or means of satisfying

requirements. Such requests should be made during the first two weeks of any given academic term, or as soon as possible after a need for accommodation is known to exist.

e) If you have been affected by sexual violence, the Human Rights & Equity Office offers support, information, reasonable accommodations, and resources through the Sexual Violence Support & Education Coordinator. For information on sexual violence, visit Brock's Sexual Assault and Harassment Policy or contact the Sexual Violence Support & Response Coordinator at humanrights@brocku.ca or (905) 688-5550, ext. 4387.

f) If you feel you have experienced discrimination or harassment on any of the above grounds, including racial, gender or other forms of discrimination, contact the Human Rights and Equity Office at humanrights@brocku.ca.

GEOG 1F90: Introduction to Human Geography Course Schedule - Fall Term, 2020-2021

Week # Dates Topic Readings Assignment

1 Sept. 11-17 “What is Human Geography?” Textbook, Chapter 1 “Meaningful Places” Forum

2 Sept. 18-24 “Human Geography and Globalization” Textbook, Chapter 2 “My Ideal Place to Live” Forum

3 Sept. 25-Oct. 1

“Economic Geography and Economic Development”

Textbook, Chapter 7

Mastering Geography (Chapter 1 and 2 Questions)

4 Oct. 2-8

Mastering Geography (Chapter 7 Questions)

5 Oct. 9, Oct. 19-22 “Urban and Transportation Geography”

Textbook, Chapter 10 (“Urban Geography and Urbanization” Section only)

Textbook, Chapter 11

“My Shopping Behaviour” Forum

Reading Week (No Classes) - October 12-16

6 Oct. 23-29

“Urban and Transportation Geography”

Textbook, Chapter 10 (“Urban Geography and Urbanization” Section only) Textbook, Chapter 11

Mastering Geography (Chapter 11 Questions) 7 Oct. 30-Nov. 5 “My Travel Behaviour” Forum

8 Nov. 6-12

“Rural Geography and Rural Development”

“Counterurbanization”

“Rural Communities” (optional)

None

9 Nov. 13-19

“Images of Rurality: Commodification and Place Promotion”

“Beyond the Rural Idyll” (optional)

“Country Music and the Construction of Rural Identities” Forum

10 Nov. 20-26 “Tourism Geography” “Geography and Tourism” None

11 Nov. 27-Dec. 3 “Population Geography” Textbook, Chapter 3

Mastering Geography (Chapter 3 Questions)

Year 2

COMM 2P15

COMM / PCUL 2P15
Research Methods in Communication and Culture

2018-2019 / D2
Instructor: Russell Johnston
office: SBH 320
e-mail: russell.johnston@brocku.ca

Classes:
- Tuesdays, TH325 9:00-9:50 am
- Thursdays, TH325 9:00-9:50 am
- labs as scheduled by section

Course Description:

This course will introduce you to the basic methods of research used to study communication and popular culture. These methods are used by academics, government agencies, and the private sector. They will provide you with a concrete set of skills for your studies and your career.

In lectures, we will sketch out the basic procedures for each method. We will also explore the advantages and disadvantages associated with them. Attention will be given to practical concerns, such as how each method affects the information you collect and how you can minimize problems through careful planning. Labs will be tied directly to lectures. Each week, a lab assignment may ask you to try a research procedure for yourself. Then, you may critique an example of published research that employs a similar procedure. Finally, the course assignments will ask you to plan your own research project by adapting these procedures to a topic of your choice.

Learning Outcomes: identify and express the basic goals, perspectives, and ethical considerations of communication and cultural research

identify and describe the basic methods used to collect data for communication and cultural research

distinguish the basic advantages and disadvantages of each method

assess published research for its effective use of each method

design and justify a simple research program

Required text:

COMM/PCUL 2P15 lab kit (Campus Store).

Strongly suggested text:

G. Merrigan, C.L. Huston, & R. Johnston (2012). *Communication Research Methods, Canadian Edition*. Don Mills, ON: Oxford University Press.

Mark Breakdown:

Labs - Facilitation & Participation	20%	based on entire term
Literature Review*	20%	Tuesday, 2 October 2018
last date for withdrawal	-	Tuesday, 6 November 2018
Content Analysis Proposal*	30%	Tuesday, 6 November 2018
Final Exam	<u>30%</u>	to be scheduled by Registrar
Total	100%	

* Both written assignments will be submitted to Turnitin.com

Labs: Facilitation and Participation

Value: 20% altogether

Due: as scheduled during the term

The Point of the Exercise

Each week in lab you will discuss ideas, procedures, and issues related to the previous week's lectures. The labs may have two components. One component may centre on an activity led by your teaching assistant. Another component may have you critique a published research article. This critique will be led by your fellow students. Your participation in both components of the lab will help you to develop a wide-ranging set of skills. With respect to your participation grade, the most important skills are analysis and public speaking.

A.

Facilitation

During the term, you will facilitate a class discussion of one published research article. You may have one or two partners, depending on the size of your section.

As a facilitator, please do the following:

Introduce the reading by placing it in context for the course. This means you can supply background information on the topic. draw attention to the review of the literature (if there is one). draw attention to relevant concepts, theories, or perspectives discussed in lectures. Lead the class through an analytical discussion of the author's research method. The class should begin by identifying the researchers' claim. The claim may be phrased as a research question, hypothesis, or thesis. Next, the class should identify the research method used by the researchers. You should also ensure that the class knows how the research method was used. Once these things are known, the class should assess whether the researchers' method actually collected the data required to address their claim. During this discussion, it may be helpful to link the article to a relevant lecture, textbook chapter, or lab activity. For example, what was learned through a recent lab activity? Did the researchers use similar procedures? Did the lab activity provide any insight that would help us to assess the procedures described in the article?

Last, the class should assess the researchers' findings. Are their conclusions faithful to their data? Do you think their conclusions are compelling? You may use materials outside the readings such as visual materials, videos, or hand-outs with additional information. If you do this, however, please ensure that all materials are relevant to an analysis of the research method used in the article.

Draw conclusions from the class discussion. Present your analysis of the article and the research method used. You may draw upon the class discussion or ask the class for assistance if it helps to clarify your analysis.

Suggested Format

You may conduct your lab any way you wish so long as the class discusses the research method in a full and informative manner. The following is only a suggested format:

2-5 minutes - introduction

35-40 minutes - analytical discussion that involves the entire class 2-

minutes - concluding comments

Marking

You will not be marked for the facilitation. If you do not lead a facilitation, however, you will not receive a mark for Labs - Facilitation & Participation.

B.

Participation

When you're facilitating, it's your job to ensure that the class understands the assigned article and its research method. When you are not facilitating, it's your job to learn as much as possible and to help your fellow students to do the same. This means you should be polite, attentive, and ready to respond to your TA or the facilitators. Questions and comments are crucial to a lively discussion. Your participation can challenge fuzzy thinking, reveal unexpected implications, and clarify issues. If you have a question or comment, voice it. If you agree or disagree with any part of the lab, then speak up. Be demanding! Expect to learn something, and you will get the most of out these classes.

Suggested Format

Always remember that lab participation is an assignment that is factored into your final grade for the course. Do the assigned readings, complete the assigned activities, and discuss them intelligently in class. Every week.

Marking

The ten labs with assigned readings and/or activities will be used to calculate your mark. Your mark for participation will be based upon the value of your contributions to class discussion in all ten of these labs.

Attendance is not participation. Attendance will not be graded. If you do not participate in lab discussions or activities, you will not earn a participation grade.

Similarly, if you do not attend a lab, you cannot earn a participation grade for that day. Your participation mark drops by 10% with each day missed. If you have acceptable documentation to explain your absence, then you may complete a make-up assignment that is due within ten days of the missed lab. The assignment is available only from the course instructor.

Lecture and Lab Schedule

All lecture readings and lab activities can be found in the assigned textbook, *Communication Research Methods*, Canadian Edition (2012). All assigned materials for the lab activities and research critiques are in the course reading kit. Please complete the assigned readings before your lab and bring your course reading kit to each meeting.

Week One (5-7 September)	Lab Activity	Research Critique
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<p>What is research? curiosity argument collecting information</p> <p><i>Reading for lectures</i> Ch.1, Introduction, 2-9 Ch.3, Three Paradigms</p>	<p>All labs will meet for the first time next week, starting on Monday, 10 September.</p> <p>Please check the timetable to find the day, time, and room for your section.</p>	no critique
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Week Two (10-14 September)

<p>Three Perspectives objectivity & subjectivity discovery perspective interpretivist perspective critical perspective</p> <p>The Culture of Research making claims the scientific method research reports critical essays peer review & gatekeeping</p> <p><i>Reading for lectures</i> Ch.4, Making Claims</p>	<p>registration for facilitations</p> <p>Try It! Activity - arguments. Ch.6, p.102.</p> <p><i>Dryden Observer, 1 May 2012</i> <i>Sudbury Star, 30 April 2012</i> <i>Sarnia Observer, 3 May 2012</i> <i>Guelph Mercury, 9 May 2012</i></p> <p>Bring your lab kit to lab every week!</p>	no critique
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Week Three (17-21 September)

<p>The Literature Review what is “the literature”? assessing the quality of the literature on your topic library resources for secondary research</p> <p><i>Reading for lectures</i> Ch.1, Introduction, 9-18</p>	<p>Try It! Activities 2, 3, and 4 - perspectives. Ch.3, p.46-47.</p> <p>Hoffman, R. (1991). Case 23: Multibake Corporation, <i>Organizational Behaviour: Canadian Cases and Exercises</i>. Whitby: Captus/McGraw-Hill Ryerson. 127-135.</p>	no critique
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Week Four (24-28 September)

Week Four (24-28 September)	Lab Activity	Research Critique
<p>Historical & Policy Analysis uses & limits procedures & considerations sources repositories</p> <p><i>Reading for lectures</i> Ch.9, Historical, Policy and Case Analysis</p>	<p>Try It! Activities 2 and 3 -- Research Reports & Essays Ch.1, p.19. (read Ch.1, 9-18, before lab)</p> <p>Databases discussion activity sheet is available on Sakai in Resources folder sheet includes video link</p>	<p>student facilitation</p> <p>R. Caers et al. (2013). Facebook: A Literature Review, <i>New Media & Society</i>, 15, 982-1002.</p>

Week Five (1-5 October) Literature Review assignment due in lecture on Tuesday, 2 October.		
Historical & Policy Analysis procedures & considerations chronology and themes data triangulation Case Analysis uses & limits procedures & considerations quality vs. quantity theory vs. fact <i>Reading for lectures</i> Ch.5, What Counts as Data, 60-67 Ch.6, Warrants, 88-96	Try It! Activity 2 - time lines and narratives. Ch.9, p.172-173. Materials will be provided in lab.	student facilitation McLaughlin, M.J. (2013). Rise of the Eco-Comics: The State, Environmental Education, and Canadian Comic Books, 1971-1975, <i>Material Culture Review</i> , 77/78, 9-20.

Week Six (8-12 October)		
Reading Week	no activity	no lab

Week Seven (15-19 October)		
Content Analysis uses & limits procedures & considerations media selection sampling <i>Reading for lectures</i> Ch.8, Content Analysis	no activity	student facilitation Blue, G. (2009). Branding Beef: Marketing, food safety and the management of risk, <i>Canadian Journal of Communication</i> , 34, 229-244.

Week Eight (22-26 October)		
	Lab Activity	Research Critique
Content Analysis procedures & considerations units of analysis coding recognizing patterns <i>Reading for lectures</i> Ch.13, Descriptive Stats, 244-251	Try It! Activity 2 - Sampling Ch.5, p.81. Materials will be provided in lab, but activity sheet is available on Sakai in Resources folder.	student facilitation Kubrin, C.E. (2005). Gangstas, Thugs and Hustlas: Identity and the Code of the Street in Rap Music, <i>Social Problems</i> , 52, 360-378.

Week Nine (29 October-2 November) The last date for withdrawal without academic penalty is Tuesday, 6 November.		
Statistical analysis - uses & limits - basic descriptive measures - basic inferential measures <i>Reading for lectures</i> Ch.14, Inferential Stats, 277-281	no activity	student facilitation Hibbard, A.L., & Keenleyside, T.A. (1995). The Press and the Persian Gulf Crisis , <i>Canadian Journal of Communication</i> , 20, 255-266.

Week Ten (5-9 November) Content Analysis proposal is due in lecture on Tuesday, 6 November.		
Research Ethics what are research ethics? Survey Research uses & limits procedures & considerations - ethics and recruiting <i>Reading for lectures</i> Ch.2, Ethics and Research	Try It! Activity 1 - Surveys Ch.7, p.124.	student facilitation Demers, D. (1995). Corporate Newspaper Structure, Editorial Page Vigour and Social Change , <i>Journalism & Mass Communication Quarterly</i> , 73, 857-877.

Week Eleven (12-16 November)		
Survey Research procedures & considerations representativeness sampling the questionnaire <i>Reading for lectures</i> Ch.7, Survey Research re-read Ch.5, Data, 60-67	Try It! Activity 2 - surveys. Ch.7, p.124-125.	student facilitation Chen, G. (2015) Why do women bloggers use social media? Recreation and information motivations outweigh engagement motivations. <i>New Media & Society</i> , 17, 24-40.

Week Twelve (19-23 November)	Lab Activity	Research Critique
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<p>Interviews & focus groups uses & limits procedures & considerations representativeness co-operation</p> <p>Participant Observation uses & limits procedures & considerations: ethics and access</p> <p><i>Reading for lectures</i> Ch.11, Ethnographic Research</p>	no activity	<p>student facilitation</p> <p>Mahtani, M. (2008). Racializing the audience: Immigrant perceptions of mainstream Canadian English- Language TV News, <i>Canadian Journal of Communication</i>, 33, 639-660.</p>
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Week Thirteen (26-30 November)		
<p>Participant Observation procedures & considerations representativeness contamination field work interpretation</p> <p><i>Reading for lectures</i> reread Ch.6, Warrants, 88-96</p>	<p>Try It! Activity 2 - Observation Ch.11, p.221.</p>	<p>student facilitation</p> <p>Hodson, J., & Vannini, P. (2007). Island Time: The Media Logic and Ritual of Ferry Commuting on Gabriola Island, BC, <i>Canadian Journal of Communication</i>, 32, 261-75.</p>

Week Fourteen (4 December)		
<p>Last lecture course wrap discussion of final exam return of CA proposals</p>	no lab	no lab

COMM 2P50

COMM 2P50
COMMUNICATION THEORY
Winter 2017-18

Lectures: Friday 5:00-7:00 pm

Classroom: AS204

Instructor: Tim Dun Phone: (905) 688-5550 ext. 5365

E-mail: tim.dun@brocku.ca

Please sign your name on e-mails
& include 2F50 in the subject

Office: 313 SBH Hours: Thu. 12:30 - 2:00 pm;
and by appointment

<u>Teaching Assistants</u>	<u>Seminars</u>	<u>E-mail</u>
Kristine Hilimoniuk	2, 3, 7, 9, & 10	kh10pq@brocku.ca
Jennifer Lackey	5, 6, 8 & 11	jl08ev@brocku.ca see
Tim	1	above

COURSE DESCRIPTION

In this introductory course you will gain greater understanding of the role of theory in our lives and how to think critically about theory. You will learn about the media and rhetoric, as well as communication in personal relationships and large organizations.

COURSE OBJECTIVES

The primary goal for this course is to make you more aware of various communication processes. We hope that by learning about communication theory, you will deepen your appreciation for the ways that people connect with each other and the ways in which we make sense of the world. Specifically, successful learners will be able to, illustrate how to apply theories to real and hypothetical situations; define and recognize different types of theories (e.g., critical and objective); evaluate the usefulness of different theories.

REQUIRED MATERIALS

Textbook

Griffin, E., Ledbetter, A., & Sparks, G. (2015). *A First Look at Communication Theory* (9th edition). New York: McGraw Hill.

You may find a paper copy of the current edition at the bookstore, on-line, or used. The current edition is also available as an e-textbook. Here's how to buy the e-book: Go to the Brock bookstore to purchase your access code.

Log onto Sakai and go to COMM 2P50.

Click “MHCampus,” a tab on the left.

Select make an account (unless you already have an MHCampus account).

Enter the code you received from the bookstore. **IMPORTANT:** You can only use the code once; so don’t share it or try it on somebody else’s account!

Lectures and exams are based on the current edition, but it is expensive. You may decide to “get by” with the previous edition (8th). You’ll save money, but will face some challenges. For example, some chapters in the current version are brand new and a few were heavily revised. afirstlook.com has more information about the updates in the current edition. Avoid all editions older than the 8th!

Additional Readings

In the course schedule, readings are referred to by chapter number for the Griffin et al. textbook and by author or URL for additional readings. These additional readings are on- line, either through afirstlook.com or Sakai. Print them and bring them to seminar and lecture on the days shown on the schedule.

EXPECTATIONS OF STUDENTS

The professor and TAs are here to help you learn. If you have concerns about needing a minimum grade to remain a communication major, or to pass the course, or for any other reason, talk with us early in the semester. We would much rather help you get what you want than console you after something goes awry. In addition to office hours, I (Tim) will be available to chat after lecture.

Grading

Work that meets the minimum requirements of an assignment, is done on time, and displays average involvement with the course content is deserving of 65-68 (mid C). Higher grades are awarded to work that goes above and beyond the minimum standards, reflecting superior intellectual effort, excellence in critical analysis, and overall creativity in the approach to the assignment. Unless there is an error (e.g., a miscalculation of your marks), assigned grades at the end of the course are final. Keep track of your grades here, so that you know how well you are doing.

<u>Assignment</u>	<u>Weight</u>	<u>Your Marks</u>
Lecture Participation (Sakai)	1	
5% Seminar Participation and Attendance	1	
5%Application Paragraphs	2	
0% Mid-term Exam (take home)	2	
0% Final Examination	3	

TOTAL

100%

Assignment Summaries

Lecture Attendance and Involvement.

An important part of learning theories is attending lecture to engage with questions, activities and discussion there. During lecture you will earn credit for responding to quick quizzes and polls using an internet-connected device, such as a laptop. There will be polls where all answers earn full credit and questions where only correct responses receive full marks.

IMPORTANT: Students using their laptop to chat, watch videos, or otherwise distract themselves and others, will earn zero credit for the day's lecture. Disruptive students will be asked to leave.

Seminar Participation and Attendance.

Quality participation involves more than just contributing to discussions in seminar. It includes active listening, investing effort in graded and non-graded assignments, participating in class activities, asking appropriate and helpful questions, and integrating the reading into class.

Although constructive comments, suggestions, and genuine questions are commendable, bad-mouthing fellow students, the instructor, TAs, and such are negative forms of class participation. Negative participation and tardiness will significantly lower the participation marks. You must attend the seminar where you registered. Attendance will be taken in seminar. If you miss the roll for any reason, it is your responsibility to inform the seminar leader, but please wait until the end of the period. That is, be sure to check in, but without interrupting the class. Your lowest seminar mark for the term will be dropped (e.g., you could have one absence without penalty).

Marking for seminar participation.

Absent	0
Late	-2 from mark below
Disruptive	0-1
Attentive	4
Minimal contribution	6
Good contributor	7-8
Excellent participation	9-10

The *Introduction Sheet* is included in participation grade and is due in the first seminar. This assignment is designed to help us get to know you. For this assignment, begin with an 8-1/2 X 11-inch page with a recognizable photograph of yourself (e.g., you could put your ID card in a photocopier). Note: If you use an original photograph, please do not give us one that you would like returned, and make sure it is firmly attached to the intro sheet. In addition to the picture, use the rest of the page to introduce yourself, including your hometown and something unique about yourself.

Application Paragraphs.

For most weeks, you will write a short response for each reading (typically two chapters). In each Application Paragraph, you are to use the assigned theory to explain or understand some "real world" communication. Note that you do not need to

understand the reading completely—that will happen through lecture and discussion. Instead, do your best to apply some part of the theory. See the textbook’s website (afirstlook.com) for examples.

ALL of what you write must be IN YOUR OWN WORDS (e.g., paraphrase the textbook), except for where you quote conversations and communication. Also, please submit assigned paragraphs through Sakai, before the start of lecture. Although late, Application Paragraphs will not be accepted, the lowest mark over the semester will be dropped.

Mid-Term Examination.

Although you will take the exam outside of class, using Sakai, you must answer on your own. Exam questions emphasize your comprehension and application of theories as well as how to evaluate theories. Responses will be processed by turnitin.com phrase-matching software, unless you request an alternative exam format from Tim by e-mail before Jan. 30.

Final Examination.

During exam period, there will be a comprehensive exam covering all course material. This test focuses on main ideas and is designed for you to showcase your understanding of what you have learned. Questions may ask you to apply a theory, assess a theory’s strengths and weaknesses, or compare one theory with another.

HOUSE RULES

Religious Observances. Accommodations will be made for students who, by reason of religious obligation, must miss an assignment deadline, or other compulsory academic event. YOUR responsibility is to plan ahead and provide written (e.g., e-mail) notification well advance of the holiday. It is OUR responsibility to accommodate you, so that you may both observe your religious beliefs and complete the necessary coursework. In the past, students typically complete work prior to a religious observance, so that they can celebrate it without the distraction of pending work and so that their assignments are graded along with their classmates’ work.

Students are responsible for a) understanding what academic misconduct is and b) avoiding anything that meets the definition of academic misconduct. The principle of academic integrity, particularly of doing one’s own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, “Academic Misconduct”, in the “Academic Regulations and University Polices” entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties. The Student Development Centre (Schmon Tower 400) offers free workshops on writing and study skills and avoiding plagiarism. Also, students with questions about the proper use and citation of sources, or the details and guidelines for any assignment, should discuss their questions with us.

Intellectual Property Notice: All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of

the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

Missed/Late Assignments: AVOID THIS PROBLEM by asking us questions about assignments as soon as possible. Exams must be taken when scheduled, and Application Paragraphs and work included under participation are not accepted late. Other work has a 5% per day penalty, per department policy.

If you have identified any **disability** that might interfere with your performance in this class, please let us know so that we may accommodate you. We would like to hear from anyone who may require some modification of seating, testing, and so forth.

All electronic resources of this class will be on Sakai. You will need to access Sakai for some readings, assignments and to submit Application Paragraphs. Always write assignments in an off-line word processor. Then, copy and paste into Sakai. If you write directly into the Sakai text box, your work will be lost if you time out or lose your internet connection.

If you require assistance with course planning throughout the school year, please contact the department's Academic Advisor, Penni Lafleur (Office: SBH 309, email: plafleur@brocku.ca).

Written assignments must be typed unless otherwise specified. Keep a copy of all assignments submitted (e.g., on a flash drive), so that if I were to need a second copy, one would be available.

During the week, I normally respond to e-mail within 24 hours—longer on weekends.

Medical Exemption. The University requires that a student be medically examined in Health Services, or by an off-campus physician prior to an absence due to medical reasons from a class, assignment, etc. Students should also supply a signed medical certificate. The Medical Certificate can be found at <http://www.brocku.ca/health-services/policies/exemption>. Missed work may also be excused for documented family emergencies. If you miss an assignment, you are responsible for completing that course work as soon as you return. See your TA or the instructor for more information.

TENTATIVE SCHEDULE (subject to change according to needs of the class)

<u>Date</u>	<u>Topic</u>	<u>To do or read before class</u>
12 Jan.	What is communication? Information Theory	Read syllabus & archived chapter on Information Theory at afirstlook.com
Seminar	First meeting in second week! If you haven't yet, read the archived chapter on Information Theory at afirstlook.com	DUE: Introduction sheet.
19 Jan.	The good the, the bad and the ugly: Evaluating different types of theories.	Griffin, et al.: Chapters 2 & 3
Objective Communication Theory		
26 Jan.	Expectancy Violations Theory Communication Accommodation Theory	Chapters 7 & 31 Watch Griffin's video with the theorist (& continue to watch these all term). DUE: First Application Paragraph on Sakai.
2 Feb.	Social Judgment Theory Functional Perspective	Chapters 14 & 17. Application Paragraphs every week
9 Feb.	Cultivation Theory Agenda-Setting Theory	Chapters 29 & 30
16 Feb.	NO on-campus meeting! Midterm Exam is on Sakai. Timing TBD	Midterm Exam on Sakai
READING WEEK		<i>Relax and enjoy your week!</i>

Interpretive Theories		
2 Mar.	Politeness theory and "face" Symbolic Interactionism	Chapter 5 "Politeness Theory" by Goldsmith (available on Sakai)
9 Mar.	Relational Dialectics Symbolic Convergence Theory	Chapters 11 & 18
16 Mar.	The Rhetoric Wampum as Hypertext	Chapter 22 & "Wampum" by Hass on Sakai
Critical Theories		

23 Mar.	Critical Approach to Organizations Postmodern Approach	Chapter 21 & “Postmodernism” by Kelemen & Rumens (Sakai)
30 Mar.	No class today	Good Friday
6 Apr.	Marxist Theory Standpoint Theory	“Marxist Analysis” by Berger (Sakai) Chapter 35
9 Apr. <u>Monday</u>	Cultural Studies Wrap up	Chapter 27
TBD	Final Examination	<i>Scheduled by Registrar</i>

WRDS 2P14

WRDS 2P14
Technical Writing
Instructor: Colleen Pielechaty
Office: GLN A 140 Extension: 3209
Email: cpielechaty@brocku.ca
Office Hours: Mondays, 12-2 pm
Class time: Thursday, 7-10 pm, PL 410

REQUIRED TEXTS:

Lannon, John, D. Klepp & S. Kelly. Technical Communication. 7th ed. Toronto: Pearson: 2018. Online. Additional notes, slides and articles will be posted on Sakai as needed or available in Brock's e-journals.

Please note: For greater cost-efficiency and usability, an e-text version with a supplementary Mylab Writing independent learning tool will be used in this course. Students can purchase their access card online or in store at The Brock University Campus Store.

COURSE OVERVIEW :

WRDS 2P14 serves students from a wide range of disciplines interested in:

- enhancing their ability to produce effective and efficient multi-modal workplace texts translatable to diverse audiences and accessible across multiple platforms
- taking responsibility for their own learning by connecting new information the course offers with discipline-specific information/skills they already possess
- honing their awareness of specialized languages and discourse practices prized in their own field

Class time will consist of lectures, group discussions, in-class writing, peer editing sessions, collaborative workshops and portfolio-building exercises. Emphasis will be placed on constructing a distinguishable professional identity and on building a technical writing print and e-portfolio. This course integrates traditional document-based approaches to teaching technical genres with more recent calls for writing instruction that explores the situated roles of technical communicators as shapers and producers of workplace discourses/cultures/power within organizations and as managers and co-creators of multi-modal and multi-platform content that emerges and extends beyond organizations.

COURSE OBJECTIVES:

Students in this course will learn how to ...

- write, design, organize, edit and format a variety of technical documents that recur in technical, scientific, corporate and other communities
- analyze audience, purpose, genre and test the usability of various workplace texts
- collaborate effectively, ethically and respectfully with peers to complete group-based writing activities and peer edits
- construct a professional identity and tailor portfolios to target specific job applications
- become more self-reflexive practitioners of technical writing by exploring the discourses and cultural conventions that distinguish and legitimize their organizational community or discipline from others

TEACHING PHILOSOPHIES:

- I am a firm believer in synthesizing theory with real-world activities or simulated practice. Active learning takes place not in isolated abstract discussions alone, but in assimilating critical thinking with doing.
- Students learn best when they are interested and engaged and they "utilize critical thinking skills by looking for meaning in the course content and trying to relate it to personal experiences and ideas" (Philips and Graeff, 2014). I foster such "deep-level learning" (Marton & Saljo, 1976) by creating assignments that offer you choices and encourage you be proactive learners seeking out technical communication texts that best peak your own professional interests.
- Good writing, like good learning, is a collaborative and dialectical process that requires much reflection and engagement with your instructor and peers as you test out new ideas and genres and continuously revise and refine your writing style and personas.

COURSE COMPONENTS and GRADING SCHEME:

Participation: 20 %

This includes attendance and active participation, completion of in-class writing exercises, short quizzes, collaborative workshops, portfolio-building exercises and peer editing sessions. Peer responses should provide: 1) advice and encouragement to the writer 2) accurate grammatical notes and comments. To receive a grade on some assignments, students will be required to submit peer-edited copies. Students are also expected to complete readings, and some assignments, in advance. Attendance is mandatory and complete records will be registered.

See weekly schedule. Be prepared. Please Note: Students must complete all of the following assignments to receive a grade and all late assignments will be penalized 5% per day.

Audience Analysis: From Expert to General Reader 20 %

Select one technical article addressed to an expert audience. You are encouraged to choose an article related to your major and at the most technical level of your understanding. Internet searches of federal government agencies or scientific journals will yield technical articles and reports. If your expert article is lengthy you may focus on only a section of the original.

Step One: Following the guidelines for summarizing information found in Ch. 10 (e-text) write a Technical Summary of the article. Assume that the readers of your summary are at the same technical level as the author(s) of the article. Length = 1page. Value: 5%

Step Two: Following the guidelines in Ch. 10, write an Executive Summary for a manager. Assume that the manager may not understand all the technical jargon and ensure that the level of technicality of this Summary is appropriate for such an audience. Refer to Ch. 14 Definitions (e-text) if you need to explain technical terms. Maximum Length is one page. Value: 5%

Step Three: Select any form of technical marketing genre-web page, ad, informational brochure, fact sheet, business letter-and rewrite the information of the article in a manner which is designed to sell a scientific or technical product or service to a novice audience. For example, you may select a scientist's clinical study of a new drug as your expert text and then rewrite the content as an informational print brochure, an advertorial supplement in a health magazine, or a video script/story board for YouTube. Accompanying your technical marketing document you must also include a concise User Profile (one page or less) that analyzes the novice reader, clarifies how he/she will interact with the text and, hence. Justifies your generic and rhetorical choices. Value: 5%

Step Four: Bring two print copies of your Technical Summary, Executive Summary and Technical Marketing Document to class Week 3-September 20 for a peer editing session. At the end of editing session, original work & evaluation forms will be returned to students. Over the course of the week, students are encouraged to weigh their peer evaluations and make necessary revisions. Please also bring a copy of your technical l article for reference. Value: 5%

Step Five: At the beginning of lecture on October 4, students will submit the following 16 items clearly labeled and organized:

- 1) 1 copy of your original technical article addressed to an expert audience
- 2) 2 copies of your Technical Summary peer reviewed + 2 peer evaluation forms
- 3) 2 copies of your Executive Summary peer reviewed + 2 peer evaluation forms
- 4) 2 copies of your Technical Marketing Genre peer reviewed + 2 peer evaluation forms
- 5) 1 copy of your "Final" Draft of Technical Summary to be marked by instructor
- 6) 1 copy of your "Final" Draft of Executive Summary to be marked by instructor
- 7) 1 copy of your Technical Marketing Genre to be marked by instructor

Technical Writing/Editing Test-(a11 material covered in weeks 1-s) Thurs, Oct. 18 10%

Please Note: Remake Tests are scheduled at the discretion of the instructor in the event where an excused absence results from documented medical conditions, documented bereavement, documented Academic Accommodations for Religious Obligations and/or documented Brock athletic/academic extra-curricular functions.

Collaborative Project: A Multi-Modal Instruction Set or Manual 25 %

Working in teams of four-five, you are to assume you have been hired as a technical communicator for Brock Communications Consulting to complete the following tasks:

Workshop #1 : Getting Started

Your first task in soliciting new clients is to research a minimum of three organizations in your field that have instruction sets or manuals that may need some improvement. Each member will present their three samples to the group outlining the strengths and/or weaknesses of each technical document. Your goal by the end of the team meeting is to submit:

- 1) Internal Memo to your supervisor that outlines a list of criteria you feel effective descriptive writing should convey. Due : at end of workshop
- 2) Progress Report that conveys: A) the Client your team will solicit B) an analysis of the problem and an explanation as to why you selected that organization. Please choose carefully and strategically as you will be working with this one client for the remainder of the project . C) an outline as to how your organizational and market research will proceed and D) clear task allocations for workshops that follow. Your team may decide to assign a lead writer to each writing assignment. Due: at t he end of workshop

Work s hop #2: Making the Pitch

Brainstorm a first draft a Persuasive Proposal directed to your client with the goal of convincing the organization to contract your team to revamp its existing technical document in some way. You may propose a new set of multi-modal technical instructions that better meet the needs of an existing audience or expand your client's market to target a new audience segment, or you may suggest a new interactive video to accompany an existing print manual. Due: Rough Draft at the end of t he workshop

Workshop #3: Writing & Testing the Instruction Set or Manual

Students are to write new Instruction Set or Manual & test its usability. Due: Draft at end of workshop.

Workshop #4 : Prepping the Oral Presentation:

Revise and update your written documents- Internal Memo, Progress Report, Persuasive Proposal, Instruction set or Manual-and prepare for your Oral Presentation in which you will: A) make a persuasive pitch to your client and B) present the new multimodal Instruction Set or Manual and demonstrate its usability. Students should prepare by reading Ch. 24 Oral Presentations .

Due: Rough Outline of your Oral Presentation by end of workshop

Oral Presentation :

During class time in Week 11, each group will present a 15 minute presentation that: A) provides some brief analysis of the organization and the current problem B) presents a persuasive pitch as to why the client should alter their existing technical documents and hire your company C) presents an alternative Instruction set or manual and demonstrates its usability

Submission of Collaborative Project:

Each team will submit the following items accompanied by a title page, contents page and works cited:

- 1) Internal Memo
- 2) Updated Progress Report
- 3) Persuasive Proposal
- 4) Instruction Set or Manual
- 5) Script of your Oral Report and accompanying multi-modal aids

Due: Nov. 27 at end of presentation

Portfolio Project

25° /o

Students will submit a multimodal print and e-portfolio that reflects their development as 21st century technical writers. Throughout the term, students will receive feedback on assignments and in-class writing exercises from the instructor and/or their peers and are expected to revise their work to produce more polished portfolio-ready content.

The print and e-portfolio are not mere archives of your completed work, but distinct genres in and of themselves that should complement one another, yet be tailored to the specific conventions of each medium and tested for their usability. The primary audience for your portfolio project is a potential employer and your cover letter, resume and e-resume should target a specific job posting in your field.

There will be five scaffolding exercises (See Weekly Schedule below) that will help students refine their understanding portfolio genres. Students should also review the "Resources" folder on Sakai for a Portfolio Rubric that provides greater detail as to how this project will be evaluated.

Submitting Your Print Portfolio:

Your Print Portfolio should include...

- Navigational Aids such as: Table of Contents, Headers, subheads , labels, page numbering, & context statements--brief descriptors of portfolio sections, writing situations, tasks, & tools utilized
- Brief Learning Reflections that convey how writing samples demonstrate your various skills
- Cover Letter that refers to a specific job posting in your field & a copy of this job post
- Updated Resume (to protect your privacy you may use fictional Contact Info)
- Technical Summary
- Executive Summary
- Technical Marketing Genre
- Internal Memo
- Progress Report
- Persuasive Proposal
- Instruction Set or Manual
- Oral Presentation Script
- Visual Aids
- Other items (awards, letters of recommendation, revised test material, in-class writing exercises or work you produced outside of this course that demonstrates relevant skills of job post)

Submitting Your E-Portfolio: While the basic elements of the e-portfolio are the same as those of print listed above, your e-version may utilize such conventions as an updated e-resume & bio, hyperlinks, interactive graphics, sound, video and should display major differences in terms of how information is organized and viewed. Aim to create at least 3-4 web pages branching off from your Home Page. In Week 5, we will discuss some potential Web builder templates for beginners such as Wix .com, but advanced web designers capable of writing HTML code are free to use whatever software they like.

Students may submit their e-portfolio by choosing one of the following :

- 1) If you building from an existing e-portfolio you already published, or create one over the term that you wish to release, include a reference to the URL address in your print cover letter
- 2) If you wish to keep your e-portfolio private, submit a URL address and password that would grant your potential employer/ instructor with access or save the e-portfolio to a USB as a PDF file
- 3) If you are a first-time web designer do not panic, you can submit your e-portfolio using a Power Point presentation or some other desk-top publishing program you are comfortable with using
- 4) If needed, you can also submit your e-portfolio in terms of a multi-modal paper prototype-replete with site map, template, descriptors, visuals, intended hyperlinks and navigational flow charts

Due: Print and E-Portfolio Dec . 10, 12-2 pm in GLN A 140

Weekly Schedule:

Unit 1 Understanding the Essentials of Technical Writing

Week 1

September 6 : Introduction to Technical Writing : What is effective technical writing?
How has the role of the technical writer changed?

This introductory lecture provides a brief history of the technical writing profession as well as the recent changes and current challenges affecting the technical writer as a 'discourse worker.'

Readings: Ch.1 Intro... to Technical Communication (Lannon) e-text The Technical Communicator as (Post-Postmodern) Discourse Worker (Wilson & Wolford), Journal of Business and Technical Communication, 2017, Vol. 31 (1) 3-29. Brock a-journal

Portfolio Builder: Assessing Your Personality: Towards Constructing a #1 Portfolio Identity. In this first portfolio-building exercise, students will complete some personality tests and conduct a peer interview with the goal of moving towards an understanding of how to develop their own unique professional identity.

Week 2

September 13: Thinking Critically about Audience and Purpose : Who are you writing for and what is the rhetorical situation? Understanding the appropriate level of technicality to use when writing and how your audience will interact with a text is essential. Students will investigate techniques for profiling audiences as well as methods for communicating across cultures and to multiple intelligences.

Readings: Ch. 2 Preparing to Write: Audience/ Purpose Analysis
Ch. 23 Job-Search Communications (Lannon) e-text

Portfolio Builder: Researching the Technical Communication Job Market #2 To prepare for this in-class exercise, students are to research job postings that may be available to graduates in their field of study and bring print copies of at least three ads to class for a rhetorical analysis/writing exercise. Students should also bring a copy of their current "print" and/or e-resume to class.

Students should also visit the home pages of at least three student e-portfolios and bring print copies to class. Working in small groups, students will share their samples with others and develop a criteria list of what makes an effective home page.

Chapter 23 lists one site where you can view an employment portfolio and provides another e-portfolio Case Study for analysis.

Other samples of student e-portfolios can be found at sites such as:
<https://uwaterloo.ca/centre-for-teaching-excellence/resources/integrative-learning/eportfolios/examples-student-eportfolios>.

Week 3
September 20:

Peer Editing:

Week 4
September 27

Portfolio Builder:
#3

Discourses, Genres and Organizational Cultures as Contexts for Learning Technical Writing
Students will explore how an understanding of language as discourse, genres as social actions and organizations as cultures may assist them in transitioning from academic discourse to the workplace and from one organization to another within an industry. What are the general conventions that characterize technical discourses? How do technical genres call us to act? What might the culture of a certain industry such as engineering or health care reveal about the values of its members?

Readings: Ch. 3 Tools of Inquiry and Discourse (Gee) Sakai Genre Analysis in Technical Communication (Jose Luzon) IEEE Transactions on Professional Communication, Sept. 2005 , Vol.48 (3). Brock e-journal Ch. 9 Organizational Cultures as Contexts for Learning to Write (Ledwell-Brown) sakai

Bring two copies of your Technical Summary, Executive Summary and Technical Marketing Document to class for an in-class peer editing session. Value : 5%

Selecting and Arranging Words in Technical Writing

Students should prepare for class by reading the instructions on pages 45-55, 62-70 , and 88-102 (Kiepp). If you struggle with basic grammar, you may also choose to take the Diagnostic Test of English Skills found on pages 3-6 and, based on your results, review corresponding lessons on pages 8-44. Some class time will be devoted to reviewing basic principles of writing grammatically correct sentences and completing several of the practice sessions found on pages 45-113. This material will appear on Week 6's Test.

Readings: Grammar and Style at Work (Don Kiepp) (found in your e-text's supplementary MyLab Writing; Select "Multimedia Library," "Select All" "Other Extras") pages 45-113.
The Use of Passives and Impersonal Style in Civil Engineering Writing (Susan Conrad) Journal of Business and Technical Communication, 2018. Vol. 32 (1) 38-76.

Understanding Rhetorical Situations-Print vs. E-Portfolios Students will review the similarities and differences between print and e-portfolios and explore potential metaphors and themes for unifying their print and e-portfolios and for creating consistency between sections in each portfolio.

Week 5 October 4 :

Portfolio Builder:

#4

Technical Document Design

Technical documents that rely on visuals-photographs, drawings, charts, maps, diagrams , graphs and tables-offer benefits that words alone cannot. Students will review basic design principles for creating, selecting and arranging appropriate graphics into business and technical documents .

Readings: Ch. 12 Designing Visuals (Lannon) e-text

Ch. 13 Designing Pages and Documents e-text

Designing and Organizing Your Print and e-Portfolio Students will consider how to use design elements to create consistency throughout their electronic and paper portfolios. Building from Week 4's brainstorming about themes and metaphors, students will sketch a design of a site map for each portfolio, create a unifying template and consider a colour scheme.

Audience Analysis Assignment , beginning of class, Value: 20%

Fall Reading Week-October 9-12

Week 6 October 18:

Unit 2

Unit #1 Technical Writing and Editing Test

Students will have the full period to complete test. The test will cover all material reviewed in the first five weeks of classes. Some sections of the test will be devoted to writing documents and editing exercises. Test material may be revised for your portfolio project.

Communicating Collaboratively and Persuasively

Week 7 October 25 :

Workshop #1:

Descriptive Writing

The ability to work with others and explain to them how to carry out a process effectively, efficiently , and safely is important. This class focuses on honing descriptive writing & collaborative working skills.

Readings: Ch. 4 Collaborating at Work (Lannon) e-text

Ch. 16 ...Instructions & Ch. 17 Manuals... 290-301 only,e-text

Getting Started on Your Collaborative Project

Students are to bring three samples of instruction sets or manuals to class. See page 3 above. If you are unfamiliar with the memo and progress report genres, review pages in Ch. 21 Short Reports and Ch. 22 Workplace Correspondence: Letters, Memos and Email (Lannon) or visit the supplementary MyLab Writing site and click on Multimedia Library for samples of memos and progress reports.

Due: Internal Memo and Progress Report, end of workshop

Week 8

November 1

Workshop #2

Week 9: November 8:

Workshop#3

Proposal Writing

A proposal is a persuasive argument. Students will review strategies for delivering persuasive pitches and writing winning proposals. Some attention will be paid to writing grant proposals and how to evaluate a proposal through the funder's eyes.

Readings: Ch. 5 Writing Persuasively (Lannon) etext

Ch.18 Proposals (Lannon) etext

Making the Pitch

Your second task for the Collaborative Project is to write a Persuasive Proposal convincing the client to contract your team to revamp its existing technical document and/or produce new multi-modal technical instructions that better meet the needs of certain audience segments. Teams will also be encouraged to start planning and drafting the client's new instruction set or manual.

Due: Rough Draft of Persuasive Pitch, end of workshop

Writing and Testing Technical Documents

Students will explore some techniques for evaluating and improving the usability of technical documents before each team is given class time to complete the collaborative writing of an instruction set or manual.

Following the checklists for Instructions, on page 288, and Manuals, page 306, as well as your Internal Memo from Week 7, each team will then assess the usability of its own document and make any necessary changes. If time permits, teams will then exchange their technical document with another group and design techniques for evaluating its usability through qualitative and/or quantitative testing procedures. In a Recommendation Report to your supervisor each team will draft a short report that discusses the strengths and weaknesses of the other team's document.

Reading: Ch. 17 ...Usability Testing, pages 301-306 e-text

Due: Rough Draft Instruction Set or Manual, end of workshop

Week 10 November 15:

Workshop #4

Week 11 November 22:

Week 12

November 29:

Delivering Oral Presentations

Students will review some styles and techniques for delivering oral presentations before breaking into their teams to complete the final in-class workshop .

Reading: Ch. 24 Oral Presentation (Lannon) e-text

Your fourth task is to finalize any changes to your written documents and prepare for your Oral Presentation. See instructions below and page 3 above.

Due: Rough Outline of Presentation, end of workshop

Oral Presentations of Instruction Sets or Manual

Each team will deliver a 15 minute presentation that: A) provides a clear problem analysis of their client's current instruction set or manual B) proposes to the client that you understand their reader's needs and are professional, committed and capable of writing an improved instruction set or manual C) delivers the new version and demonstrates its functionality .

Due: 1)Internal Memo 2) Updated Progress Report

3) Persuasive Proposal 4) New Instruction Set or Manual

5) Script of your Oral Report and/or any accompanying multi-modal aids at end of class.

Course Review and Reflections

Reading: Ch. 23 Job Applications (Revisited) e-text

Portfolio Builders: Revising for Portfolio Quality : Peer Editing Session of #5 Cover Letter, Resumes, and Portfolio Content

At the minimum, students are encouraged to bring in a rough draft of their cover letter, print and e-resumes for peer review. Students with their print and/or e-portfolio at an advanced stage will be partnered with others at the same stage for a peer editing session and evaluation of each portfolio's usability.

Due: Rough Drafts of Cover Letter for Print Portfolio, Print and e-Resumes, beginning of class

December 10: Due: Portfolio Project. Submitted to the instructor , GL 140 A 12-2pm

Brock University's Academic Regulations and University Policies

FALL/WINTER 2018-2019 DATES TO WITHDRAW WITHOUT ACADEMIC PENALTY

Duration 1 (September 5, 2018 - April 5, 2019)

Last day to withdraw from a course without academic penalty is January 18, 2019.

Duration 2 (September 5, 2018 - December 4, 2018)

Last day to withdraw from a course without academic penalty is November 6, 2018 .

Duration 3 (January 7, 2019 - April 5, 2019)

Last day to withdraw from a course without academic penalty is March 8, 2019.

Unofficial withdrawal from a course after the above deadlines will result in the assignment of a failing grade in the course.

GRADES

In the Fall/ Winter session, whenever and wherever reasonably possible, instructors shall normally assess and communicate to students a minimum of 15 percent of their final grade by no later than the week prior to the last date for withdrawal without academic penalty. In cases where, due to the nature of the course, this requirement cannot be met, the instructor shall inform students in the course syllabus.

ACADEMIC ACCOMMODATION FOR STUDENTS WITH DISABILITIES

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Student Accessibility Services in the Student Development Centre (4TH floor Schmon Tower ,ext. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

ACADEMIC ACCOMMODATION DUE TO RELIGIOUS OBLIGATIONS

Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements.

MEDICAL EXEMPTION POLICY

The University requires that a student be medically examined in Health Services, or by an off-campus physician prior to an absence due to medical reasons from an exam, lab, test, quiz, seminar, assignment, etc. Students should also supply a signed medical certificate. The Medical Certificate can be found at www.brocku.ca/health-services/policies/exemption.

ACADEMIC INTEGRITY

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the

Undergraduate Calendar, available at [www .brocku.ca / webcal](http://www.brocku.ca/webcal) to view a fuller description of prohibited actions, and the procedures and penalties.

ERSC 2P03

ERSC 2P03
The History of the Earth
Winter Term 2015 I
NSTRUCTOR: Prof. Martin J. Head, MC D425, mjhead@brocku.ca

TEACHING ASSISTANTS: Walid Abomriga (coordinator: walid.abomriga@gmail.com) and Saif El-Silwadi (email: saifsilwadi@gmail.com), both in Mackenzie Chown Complex Room D448 (almost opposite the Earth Sciences General Office). Office hours: Walid = alternate Tuesdays 1.00-2.00 pm; Walid = alternate Wednesdays 10.00-11.00 am; Saif = alternate Wednesdays 12.00-1.00 pm. Office hours are held fortnightly on the same week that the assignment is due (i.e. starting the week of January 12).

TIME AND PLACE: Lectures: Rm D319 (starting January 6, at 11.00 am-12.00 noon each Tuesday and Thursday; BUT: also Fridays March 6 and 13 only, and NO lectures on March 17 and 19). Labs: Rm D319 (alternate Wednesdays starting January 7, Lab 1: 9.00-11.00 am, Lab 2: 12.00 noon-2.00 pm). Make sure you know whether you are in lab 1 or lab 2. On March 25, students must attend both lab sessions. Attendance at labs will be taken.

LAB MANUAL: Ritter, S. & Petersen, M.S., 2015. Interpreting Earth History, 8th Edition. Required text. TEXT: Wicander, R. & Monroe, J.S., 2013. Historical Geology, 7th Edition. Recommended text.

GRADING SCHEME

Lab assignments: $6 \times 7\% = 42\%$

Midterm test: 26%

Final exam: 32%

You need to pass the final exam to pass the course.

LAB ASSIGNMENTS: You may choose to consult one another during labs, but remember that the completed lab assignments are YOUR work alone and do not represent a collective effort. Lab assignments are due the following week, i.e. the following Wednesday, by 4.00 pm. These should be deposited in the dropbox outside Rm D433 (the TAs' office) using the slot marked ERSC 2P03. Penalty for late submission of lab assignments = 10% per working day.

PLAGIARISM: A zero-tolerance approach will be taken regarding plagiarism. Please be sure to read the University's policy on academic misconduct (<http://www.brocku.ca/webcal/2014/undergrad/areg.html#sec69>).

SAKAI: Powerpoint presentations of lectures will be posted as pdfs on SAKAI before the lecture. They will be posted in two versions: black & white (for you to print out and bring to the lecture) and colour (for your reference). Other important resources will also be posted on SAKAI.

WEEK 1

WEEKLY SCHEDULE

January 6 Introduction, and Rocks, fossils & time (Wicander & Monroe, Ch. 5)
January 7 *Lab 1: Relative dating & unconformities, radiometric ages: Ex. 1 parts A, B (p. 9-12); Ex. 2 (p. 21-22). Bring pencil, eraser, ruler, calculator.*
January 8 Rocks, fossils & time (Wicander & Monroe, Ch. 5)

WEEK 2

January 13 Rocks, fossils & time (Wicander & Monroe, Ch. 5) January 14 *Lab 1 assignment due.*
January 15 Biological evolution (Wicander & Monroe, Ch. 7)

WEEK 3

January 20 Hadean and Archean Earth & Life (Wicander & Monroe, Ch. 8)
January 21 *Lab 2: Lithostratigraphy, biostratigraphy, fossilization: Ex. 5 parts A-C (p. 64-69), part F (Table 5.2, p. 77, but GSSPs for Cambrian, Ordovician, Silurian only); Ex. 8 (p. 137) based on specimens provided. Bring pencil, eraser, ruler.*
January 22 Hadean and Archean Earth & Life (Wicander & Monroe, Ch. 8)

WEEK 4

January 27 Proterozoic Earth & Life (Wicander & Monroe, Ch. 9) January 28 *Lab 2 assignment due.*
January 29 Proterozoic Earth & Life (Wicander & Monroe, Ch. 9)

WEEK 5

February 3 Paleozoic Earth (Wicander & Monroe, Ch. 10 & 11)
February 4 *Lab 3: Physical correlation; homologues vs. analogues; continental drift: Ex. 6 part A, q. 1 (p. 81, 85) but using columns 3 and 4 only; Ex. 6 parts B and C (p. 87-90); Ex. 9 parts A- B (p. 138-142); Ex 11A (p. 156, 157). Bring pencil, eraser, ruler, colouring pencils, scissors, paper glue.*
February 5 Paleozoic Earth (Wicander & Monroe, Ch. 10 & 11)

WEEK 6

February 10 Paleozoic Earth (Wicander & Monroe, Ch. 10 & 11) February 11 *Lab 3 assignment due.*

February 12	Midterm test during lecture period READING WEEK (February 16-20)
WEEK 7	
February 24	Overview - History of Phanerozoic life
February 25	<i>Lab 4: facies relationships; index fossils and depositional sequences:</i> Ex. 7 part A (p. 95- 99); Ex. 12 parts A-D (170-202). Bring pencil, eraser, ruler.
February 26 12)	Paleozoic Life history I - marine invertebrates (Wicander & Monroe, Ch. 12)
WEEK 8	
March 3	Paleozoic Life history II (Wicander & Monroe, Ch. 13)
March 4	<i>Lab 4 assignment due.</i>
March 5	Mesozoic Earth history (Wicander & Monroe, Ch. 14)
March 6	Mesozoic Life history I (Wicander & Monroe, Ch. 15)
WEEK 9	
March 10	Mesozoic Life history II (Wicander & Monroe, Ch. 15)
March 11	<i>Lab 5: geologic maps; Canadian Shield; patterns of evolution:</i> Ex. 13 parts A, B (p. 211- 213); Ex. 14 part A (p. 218-220); Ex. 10 part B (p. 149-151). Bring pencil, eraser, ruler, <i>colouring pencils.</i>
March 12	Cenozoic Earth history I. Tertiary Orogeny (Wicander & Monroe, Ch. 16) March 13 Cenozoic Earth history II. Quaternary Glaciation (Wicander & Monroe, Ch. 17)
WEEK 10	
March 18	<i>Lab 5 assignment due.</i>
WEEK 11	
March 24	Cenozoic Life history I (Wicander & Monroe, Ch. 18)
March 25	<i>Lab 6: Group presentation (15-20 minutes each group). Students must attend <u>both</u> lab sessions.</i>
March 26	Cenozoic Life history II (Wicander & Monroe, Ch. 18)
WEEK 12	
March 31	Cenozoic Life history II (Wicander & Monroe, Ch. 18)
April 2	Primate and Hominid evolution (Wicander & Monroe, Ch. 19)
FINAL EXAM	Scheduled during exam period (April 9-22 inclusive)

ERSC 2P05

ERSC 2P05
Instructor: Prof. J. Menzies
Phone: 905 688 5550 Ext. 3865 Office: D421, jmenzies@brocku.ca
Teaching Assistants: Alicia Hore, Frank Popoli, John Taylor
Course Outline: ERSC/Geog 2P05

EARTH SURFACE PROCESSES (GEOMORPHOLOGY)

Course Objectives The central objective of this course is to provide an introduction to the basic principles of geomorphology and to an appreciation of surface topography development and evolution within a global context. Geomorphology is the study of the mechanics of how the land surface develops, why surface landscapes change, where landscape alter and vary such that apparent unique characteristics develop over different parts of the surface of the earth at different times, on different continents at a huge variations of time scale from millions of years to a few seconds. Focus in this course will be on the physical and chemical processes involved in geomorphology, their interaction and constraints and on the broad similarities between landscapes and styles of landscape evolution on a global scale.

To provide students with a theoretical and practical introduction to Geomorphology. Students are introduced to key areas through lectures, readings, which include books, and academic journals. Course assignments will also be used to enhance students' practical and theoretical knowledge.

To develop students' conceptual, evaluative and diagnostic skills in understanding geomorphology.

To develop students' skills in analysis, synthesis and evaluation as applied to lecture material and lab assignments.

Course Textbook: Ritter, D.F, Kochel, C.R. & Miller, J.R. (2011) Process Geomorphology (5th Ed) Waveland Press.

Course Requirements

Participation (10%)

Participation grades are awarded for contribution during Labs and the Field Trip. To receive participation grades, students must be in attendance at Labs and the Field Trip, and then must make a (quality not just quantity) contribution to the discussion. Lateness, early departure or absences during Labs will lead to a deduction from participation grades. Please do not eat during classes (unless due to a medical condition). Throughout the course, please check Sakai and your Brock email. Sign-in at each Lab and the Field Trip. Please do not bring a laptop to class - it is disruptive for other people.

Test 1 (25%) and Test 2 (25%) (No make-up Tests unless under critically extenuating circumstances with full documentation)

There will be TWO tests based on course material to date, e.g. material from Lectures and Labs. The format will be explained in class. If any Test is missed a medical note and an explanation must be given within 3 days of the test date.

Labs (40%) All Labs must be attended. All Labs Assignments must be handed in no later

than 14 days after the submission date, otherwise a mark of zero will be recorded. If any Lab is missed a medical note and an explanation must be given within 3 days of the actual Lab date.

Labs will cover the following topics, if possible - given the vagaries of weather etc, not necessarily in the following order: cirque development, drumlin *en echelon* lab, clast morphology, river ordering, striation statistics, river longitudinal profiles, topographic map interpretation, field trip to Lake Erie shores and environs. Each Lab will be worth 5%. Each submitted Lab Assignment must be accompanied by a Statement of Integrity Form (see below) and mandatory attendance at the time of the Field Trip.

Special Note - All components in the course are essential parts of the course

A passing grade on each course grade component must be received in order to pass the course.

Notification of 15% of Final Grade: will be communicated to students by Wednesday, October 29th, 2014

REGULATIONS, RESTRICTION & PREREQUISITES: Please see the University Calendar.: (<http://www.brocku.ca/webcal/2014/undergrad/>)

PLAGIARISM: Please consult the Brock University Undergraduate Calendar regarding plagiarism. The Policy on Plagiarism will be Strictly Enforced.

ACADEMIC ACCOMMODATION FOR STUDENTS WITH DISABILITIES:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Services for Students with Disabilities in the Student Development Centre (4th floor Schmon Tower, ex. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

ACADEMIC ACCOMMODATION DUE TO RELIGIOUS OBLIGATIONS:

Brock University acknowledges the pluralistic nature of the undergraduate and graduate Communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements.

PEDAGOGIC REGULATIONS:

The following statement is drawn from the Faculty Handbook Academic Regulations:

3. Registration

3.1 Registration and Course Changes

3.1.4 Students may not register in courses scheduled (in whole or in part) at the same time of day without written approval of each instructor. Senate 442

(http://www.brocku.ca/university-secretariat/facultyhandbook/section3#_genIndex3)

NOTE: Tuesday Nov. 4th, 2014 - Last date for withdrawal without academic penalty and last day to change from credit to audit status.

Course Outline Topics:

Process Geomorphology.....	Chapter 1 Endogenic & Exogenic Agents	Chapter 2
Weathering	Chapters 3, 4	
Mass Movement	Chapter 4	
Drainage Basins	Chapter 5	
Fluvial Processes & Forms	Chapters 6, 7	
Wind Processes & Forms	Chapter 8	
Glaciers - Physics	Chapters 9, 10	
Glacial Processes & Forms	Chapter 10	
Periglacial Processes & Forms	Chapter 11	
Karst Processes & Forms	Chapter	
12 Coastal / Marine Processes & Forms.....	Chapter 13	

Course Structure: The course will be composed of lectures, labs and a field trip.

Mark Allocation:

In-class Test (I)	25% (3 rd Oct.)
In-class Test (II)	25% (14 th Nov.)
Labs/Field Work	40%
Course Participation & Involvement	10%
	100%

Emails to Instructor and Teaching Assistant: Think carefully before sending an email. **DO NOT** email about absences from class unless your absence will be longer than 1 week, or for a critically extenuating reason. **DO NOT** email with questions that can be answered by reading the course outline, reading material on Sakai, or by attending class. Emails that are not Brock emails will not be acknowledged. Expect at least a one-week delay for any email response. The subject line in an email must have the course code (ERSC/GEOG 2P05) and must include your full name and student number.

STATEMENT OF ACADEMIC INTEGRITY

Please read and sign the following statement and submit a copy of this Form with each of your Lab Assignments. If this form is missing, the assignment will not be graded.

I, the undersigned, confirm that I understand that all the following constitutes academic misconduct according to Brock University's policy on academic misconduct, which in turn is consistent with general academic practice:

- Quoting someone's words without using quotation marks
- Quoting someone's words without acknowledging the source
- Citing someone else's ideas in my own words but without citing the source
- Using someone else's organization of ideas
- Using data derived by someone else's work
- Allowing someone else the opportunity to borrow material from my assignment (e.g., by letting them have access to my assignment paper when they are writing their own paper)
- Writing the assignment paper for another student, or doing some of the work for them
- Allowing someone else (or paying someone else) to write part or all of my lab assignment or do some of the work for me. The exceptions to this are that it is acceptable to allow someone to type the paper for me or make editorial comment on it. If someone types the paper for me, or if I incorporate an editorial suggestion, and there are errors in the typing or the suggestion was misguided, I take full responsibility for those errors.
- Submitting this work to or utilizing data from another course.

I confirm that I have not done any of the above forms of academic misconduct.

Name:

Signature

Date: (dd/mm/yyyy)

GEOG 2P07/ERSC 2P07

GEOG 2P07
Introduction to Geospatial Technologies
Ian Wood,
Fall Term 2018

Administrative Information

Instructor E-mail: iwood@brocku.ca (correspondence must be from a Brock e-mail account)

Office Hours: Tuesdays 11- 12 noon

Office Location: Mackenzie Chown, C-Block, Room C320

Website: See information posted on Isaak, Brock's Sakai-based Learning Management System

Lecture: Tuesdays, 9-11 AM, Thistle Complex, Room 242 (TH242)

Lab Times: Lab Session Day/Time (in CA 217) Teaching Assistant Office Hrs/Location

1 T 3 - 5 PM Ian Wood In lab each week

2 T 1 - 3 PM Ian Wood In lab each week

3 M 3 - 5 PM Ian Wood In lab each week

4 F 9 - 11 AM Brooke Kapeller In lab each week

6 F 1 - 3 PM Brooke Kapeller In lab each week

7 M 1 - 3 PM Ian Wood In lab each week

Lab Location: Cairns Family Health and Bioscience Research Complex, Room 217 (CA 217)

TA E-mail: bkapeller@brocku.ca (correspondence must be from a Brock e-mail account)

Course Description

Concepts and applications of geographic information systems (GIS), global positioning systems (GPS) and remote sensing. Properties of digital maps, airborne data and satellite imagery. Principles of map compilation and design. Practical experience in computer mapping, image interpretation and GIS analysis.

Course Objectives

The main objective of this course is to teach you the theory and practice of geospatial technologies (also known as “geomatics”). Among other activities, the course will involve:

- lectures covering the theoretical aspects of geospatial technologies;
- the practical application of geomatics approaches to geographical problems (using ArcGIS 10.4 and ENVI 5.3, and other types of software); and exploration of geospatial approaches to a range of applications.

Course Learning Goals

- To develop the knowledge and critical understanding of the key concepts, theories, methods and current advances in geospatial technologies.
- To acquire the ability to evaluate the appropriateness of different geospatial approaches to the study of real-world problems.
- To develop knowledge of the scientific research process; from problem identification and the synthesis of background literature to data acquisition, processing and analysis, and the interpretation and presentation of results.
- To acquire the fundamental skills of operating geospatial software.
- To develop the ability to communicate information, both orally and in written formats, about geospatial technologies.
- Acquire the knowledge base required for future relevant geomatics-based courses (e.g., GEOG 3P05 and GEOG 3P07).

Course Information

NOTE: Cell phones, iPods or other types of electronic devices are not to be used in the lecture hall, laboratory and/or any examination rooms. Students that use any such devices during a midterm and/or final exam will be awarded a grade of zero on their midterm and/or final exam. Use of a personal laptop computer is permitted in the lecture hall. In the event that the use of such equipment becomes disruptive to other students or the instructor of the course, students will not be permitted to continue using such devices.

Attendance

Lectures will be held on Tuesdays, 9-11 AM, Thistle Complex, Room 242. The meeting time of your lab section depends on the section that you have registered into. According to Brock University's Academic Regulations and University Policies II.(G), students are expected to attend all lectures and laboratory periods in which they are registered. For more information: www.brocku.ca/webcal/2018/undergrad/areg.html#sec1

Assignments

All laboratory assignments are to be completed *individually*.

You must give credit to all information sources used to answer questions on lab assignments. Citations must be made using the American Psychological Association (APA) Style Guide for citations (Note: this guide has been posted on Sakai for your use).

Assignments must be typed with a minimum font size of 12 points. They must also be written in complete sentence format. Assignments should be proofread for spelling and grammar before they are submitted. Please include your full name, student number, full TA name, course code, and lab session number on all the work you submit for this course. You must staple your lab assignment together. TAs and the Instructor are not responsible for lost pages of lab assignments that are submitted unbound or bound with paper clips. Please number each page of your lab assignment.

Soft copies of lab assignments (i.e., those submitted via e-mail) will *not* be accepted in this course. Failure to follow these assignment instructions will result in a grade deduction (or a grade of zero, depending on the severity of the problem) on course assignments.

Computer Lab and Account Access

You will have access to the machines and printers located in the Cairns Building (CA 217) during regularly scheduled lab times. Additional time will be required outside of lab time for independent study, to complete assignments, and to develop necessary skills.

You must test your lab account in the first week of the term. Also, make good use of your time in the lab each week. This is your opportunity to ask questions about assignments, seek clarification from your TA to better understand his/her expectations of you, and to obtain useful information from your TA. Do not assume that the lab room (CA 217) will always be available for your use outside of the regularly scheduled lab times. Outside of the lab hours, you may be able to use the computers in the Computer Commons to access the course data and software. Please consult with the Information Technology Services (ITS) website (<https://brocku.ca/information-technology/info/computer-labs-and-printing/lab-hours/>) for other computer lab locations, information on lab computer availability (in real time) and hours of operation. These schedules may change so please consult this website on a regular basis.

Important University Dates

The date for withdrawal from a D2 course without academic penalty is Tuesday, November 6, 2018. Students are encouraged to review other important university deadlines and dates posted on the Brock University website (see <http://www.brocku.ca/webcal/2018/undergrad/sche.html#sec4>).

Evaluation Required Element	Worth (%)	Description of Element
Labs*	50%	You must complete all of the lab assignments in this course (a total of four labs; Lab Assignments 1 and 4 are worth 10% each and Lab Assignments 2 and 3 are worth 15% each).
Midterm Exam	20%	To be held in class on Tuesday, October 23, 2018. Midterm grades will be posted at least one week before the date for withdrawal without academic penalty (November 6, 2018).
Final Exam†	30%	The final exam will be held during the exam period (Friday, December 7 to Thursday, December 20, 2018).

GEOG 2P08/ERSC 2P08

GEOG 2P08
CLIMATE CRISIS
WINTER 2020

INTELLECTUAL PROPERTY NOTICE

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

Instructor: Dr. Michael Pisaric,

MC C321

Email: mpisaric@brocku.ca Phone:
905-688-5550 ext. 6152

Office hours: Tuesday 1-2pm; Wednesday 3-4pm; Friday 1-2pm or by appointment

Lectures: Tuesday 10-11am (TH 325)

Wednesday 10-11am (TH 325) Friday 10-11am (STH 203)

Textbook: Dressler, A. 2016. Introduction to Modern Climate Change. Cambridge University Press. 2nd edition.

We will also make use of the various reports on climate change issued by the Intergovernmental Panel on Climate Change (IPCC) and others.

IPCC, 2018: Summary for Policymakers. In: *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., et al. (eds.)]. World Meteorological Organization, Geneva, Switzerland, 32 pp.*

Course description: This course is about the global climate system and how it is changing. It examines the major physical processes that control the earth's climate and the nature and causes of climatic variation and change. Both natural and anthropogenic sources of climate and atmospheric change will be examined. There is abundant evidence indicating that the composition of the global atmosphere is being altered significantly by human activities, resulting in global climate change. Thus, we give special attention in the course to the contemporary greenhouse effect and changes to the atmosphere.

Course objectives: By the end of the course, students will be able to:

- Identify the components of the global climate system and how changes

- in these components lead to global climate change.
- Differentiate natural and anthropogenic factors that lead to climate change.
- Compile and analyse climate data to identify recent climate trends.
- Analyse and display climate data to compare regional variation in climate during the 20th century.

Grading: Mini assignments (4 x 2.5% = 10%)

Quiz #1 (10%) - January 28, 2020

Quiz #2 (20%) - February 26, 2020

Quiz #3 (20%) - March 20, 2020

Final Exam (40%)

Assignments and Tests: Each student will complete 4 short assignments during the semester. Most (if not all) of these assignments will be submitted via the Sakai webpage for the course. Most of the assignments are very short and you should be able to complete them in 1 hour or less. Detailed instructions regarding the assignments will be provided in lecture. There will be three (3) quizzes held during one of the regularly scheduled class times near the last week of each month. The exact dates are listed in the course schedule above. You are expected to be in attendance for each of the tests during the semester. Makeup tests will not be permitted unless appropriate documentation is provided. A formal examination will be held during the April examination period. The date, time and place will be determined by the University.

Policy for assignments: Online assignments will be open and available to complete for one week. After one week, if your assignment is not submitted, you will receive a grade of zero. If an assignment is not to be completed online, the following policy applies: Late assignments will be penalized 15% a day, including weekends. After three days, the assignment will not be accepted unless proper documentation is provided (medical note from a health care practitioner).

TENTATIVE LECTURE OUTLINE

The schedule will be subject to change at the discretion of the instructor. Full references for journal articles are given below.

<i>Date</i>	<i>Lecture Topic</i>	<i>Reading</i>
Jan. 7	Syllabus/schedule/course introduction	
Jan. 8	The Atmosphere	Christopherson Chp. 2,
Jan. 10		Chp. 3
Jan. 14	The atmosphere	Christopherson Chp. 4
Jan. 15		Dessler Chp. 3
Jan. 17	Redistributing heat - atmosphere and ocean circulation	Christopherson Chp. 6

Jan. 21	Forcing and feedbacks in the climate System	Dessler Chp. 6
Jan. 22		
Jan. 24		
Jan. 28	Quiz #1	
Jan. 29	Evidence that the climate is changing	Dessler Chp. 2
Jan. 31		
Feb. 4	Paleoproxies	Dessler Chp. 2
Feb. 5		
Feb. 7		
Feb. 11	Causes of climate change	Dessler Chp. 7
Feb. 12		
Feb. 14		
Feb. 18	Reading week	
Feb. 19	Reading week	
Feb. 21	Reading week	
Feb. 25	Future climate change	Dessler Chp. 4
Feb. 26	Quiz #2	Dessler Chp. 8
Feb. 28		
Mar. 3	Environmental impacts of climate change	Dessler Chp. 9
Mar. 4		
Mar. 6		
Mar. 10	Human dimensions of climate change	**Scott et al. 2019
Mar. 11	The Olympics and World Cup	
Mar. 13		
Mar. 17	Human dimensions of climate change	Dessler Chp. 11
Mar. 18	Mitigation	Dessler Chp. 12
Mar. 20	Quiz #3	
Mar. 24	Human dimensions of climate change	Dessler Chp. 11
Mar. 25	Adaptation	
Mar. 27		
Mar. 31	Target 1.5/2°C	Dessler Chp. 14
Apr. 1		
Apr. 3	Exam review and wrap up	

***Daniel Scott, Robert Steiger, Michelle Ruddy & Yan Fang (2019) The changing geography of the Winter Olympic and Paralympic Games in a warmer world, Current Issues in Tourism, 22:11, 1301-1311, DOI: 10.1080/13683500.2018.1436161*

To link to this article: <https://doi.org/10.1080/13683500.2018.1436161>

Academic Policies

Academic Integrity: Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties. Information on what constitutes academic integrity is available at <https://brocku.ca/academic-integrity/>

Plagiarism software: This course may use Turnitin.com, phrase-matching software. If you object to uploading your assignments to Turnitin.com for any reason, please notify the instructor to discuss alternative submissions.

Intellectual Property Notice: All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

Special Accommodation: The University is committed to fostering an inclusive and supportive environment for all students and will adhere to the Human Rights principles that ensure respect for dignity, individualized accommodation, inclusion and full participation. The University provides a wide range of resources to assist students, as follows:

- (a) If you require academic accommodation because of a disability or an ongoing health or mental health condition, please contact Student Accessibility Services at askSAS@brocku.ca or 905 688 5550 ext. 3240.
- (b) If you require academic accommodation because of an incapacitating medical condition, you must, as soon as practicable, inform your instructor(s) of your inability to complete your academic work. You must also submit a Brock University Student Medical Certificate (found at <https://brocku.ca/registrar/toolkit/forms>). The University may, at its discretion, request more detailed documentation in certain cases. If you are unable to write a scheduled examination due to an incapacitating medical condition, you must follow the process set out in the Faculty Handbook III:9.4.1.
- (c) If you are experiencing mental health concerns, contact the Student Wellness and Accessibility Centre. Good2Talk is a service specifically for post-secondary students, available 24/7, 365 days a year, and provides anonymous assistance: <http://www.good2talk.ca/> or call 1-866-925-5454. For information on wellness, coping and resiliency, visit: <https://brocku.ca/mental-health/>
- (d) If you require academic accommodation on religious grounds, you should make a formal, written request to your instructor(s) for alternative dates and/or means of satisfying requirements. Such requests should be made during the first two weeks of any given academic term, or as soon as possible after a need for accommodation is known to exist.
- (e) If you have been affected by sexual violence, the Human Rights & Equity Office offers

support, information, reasonable accommodations, and resources through the Sexual Violence Support & Education Coordinator. For information on sexual violence, visit Brock's Sexual Assault and Harassment Policy or contact the Sexual Violence Support & Response Coordinator at humanrights@brocku.ca or 905 688 5550 ext. 4387.

- (f) *If you feel you have experienced discrimination or harassment on any of the above grounds, including racial, gender or other forms of discrimination, contact the Human Rights and Equity Office at humanrights@brocku.ca.*

Research Assistance

If you are in need of research assistance, the James A. Gibson library has a geography research guide available at: <http://researchguides.library.brocku.ca/GEOG>. The guide provides a starting point for your research as well as a contact subject librarian.

Referencing Guideline: a reference guide can be found at:

<http://www.brocku.ca/library/help-lib>

Plagiarism is a serious offence and will not be tolerated. All plagiarism offences will be immediately reported to the Dean's office. Assignments **MUST** be completed individually.

Important Dates:

First day of Winter term classes (undergraduate)	January 6, 2020	Last day for late registration - web registration closes (D3)	January 17, 2020
Family Day - Holiday/University Closure	February 17, 2020	Reading Week (no classes)	February 17-21, 2020
President's Holiday - Holiday/University Closure	February 18, 2020	Last day to withdraw from a Winter D3 course (without academic penalty / no grade)	March 6, 2020
Last day of lectures	April 3, 2020	Snow/Reading days	April 6 & 7, 2020
Examinations begin	April 8, 2020	Good Friday - Holiday/University Closure	April 10, 2020
Examinations end	April 23, 2020		

ERSC 2P15

ERSC 2P15: Introduction to Oceanography

Date: Applied to WS (outline and dates pertain to WS 2017, provided to students at start of WS term in January 2018)

INSTRUCTOR: Dr. Michael MacKinnon, MC D442 (Office)
email: mccmac09@bell.net // mmackinnon@brocku.ca

LAB ASSISTANTS: TBA

Lectures: Three 1-hour Lectures. Day and location: TBA

Labs: Two Sections- 2-hour Lab sessions

Course Text Book (Recommended but optional):

Hardcopy: Essentials of Oceanography, 12th edition and e-version 12E (2017) Alan P. Trujillo; Harold V. Thurman). ISBN-13: 9780134073545 Publ. Pearson (Paper, 624 pp): Hardcopy in bookstore. Rentals should also be available. Note: Eleventh Edition (2013- ISBN-13: 9780321814050) is also recommended.

LAB MANUAL (Required): Pipkin et al., 2003: Laboratory Exercises in Oceanography, 3rd Ed. (available in bookstore); Laboratory Exercises in Oceanography [Paperback]. Pipkin, Gorsline, Casey and Dunn Publisher: W. H. Freeman; Third Edition (October 27, 2000) // ISBN-10: 0716737426 // ISBN-13: 978-0716737421

Grading Scheme: (N.B., Late Penalty- up to 10% per working day past deadline)

▣Labs: Four Lab Exercises @ 6% (24%). Note: Instructors will check for “cheating” or “plagiarism”. Suggestions of such may lead to a mark of zero on specific questions or possibly whole assignment. Take care and if you have questions see instructors. Excerpt of Brock U policy on academic misconduct is attached. Late assignments will be accepted if approved for valid reasons.

▣Tests and Exams (56% + up 5% Bonus)

•Mid-Term Test: early February (10%)- In Class (50 minutes). Will include information up to Feb 9

•Lab Quiz: early April (10%)- In Class (50 minutes)

•Final Exam TBA (36%)

•Bonus Quizzes: Un-announced short tests to be conducted during lab period (up to 5% bonus to your grade)

▣Seminar Presentation in mini-Conference Format (20%)

•Topic Selection (2%): provide brief one sentence statement of what presentation will focus on. This will be reviewed to prevent duplicates- submitted by end of January

•Seminar Abstract (up to 250 words) (3%)- describe what your seminar will cover. Submit by mid February

•Hard copy of Presentation in PowerPoint (this will be graded as to content and originality) (7%)- submit by end of February. You can format this as 2 or 4 slides per page, in BW or preferably colour. N.B., you may still modify and change the electronic version you will be presenting.

•Present in PowerPoint Format (8%): Grading with peer-assessment will commence in mid March. Oral presentations should be a maximum of 12 minutes. Should be in PowerPoint format. You will use your allotted time to outline your topic and show its

relevance to Oceanography. You will have 3 minutes for questions. Times to be assigned by Lab Section and topic groupings between March 20 and April 5.

Final Exam (36%): TBA

INTRODUCTION to OCEANOGRAPHY

Oceans cover over 70% of our planet and play an important role in many aspects of life as we know it. They provide many of our resources, including food, minerals, hydrocarbons, and power. They control both weather and climate. Oceans act as a giant buffer to both natural and anthropogenic stressors. Oceans are important to human activities such as exploration, transportation, resource extraction and recreation. Ocean processes can be hazardous, such as erosion, wave action, tides, hurricanes, and seismic activity. Life on Earth evolved in our oceans, yet now, human actions may be threatening them and our planet's ecosystems. Atmosphere and hydrology depend on ocean interactions. Until the 19thC, little was known about the vast expanses in ocean depths beyond its shallow coastal areas. With application of scientific methods, ocean secrets can now be monitored and tested rather than being based on anecdote and supposition. Oceanography is the science that describes origins, composition and abiotic and biotic processes that define our oceans. Formalization of ocean studies began in the 1870's with the three-year HMS Challenger Expedition.

The objective of this course is to overview the four major sciences that comprise oceanography, namely geology, chemistry, biology and physics. Through lectures and integrated lab assignments, interdisciplinary aspects of ocean studies will highlight how these various sciences interact. You will have two weeks to complete lab assignments. These will demonstrate practical applications and techniques, from contour mapping to using physical and chemical data to understand marine processes, including biological productivity and marine ecology. You are encouraged to work cooperatively and to seek insights from the TAs and from the instructor during lab sessions. Labs are based on the assigned manual. There will be a lab quiz in the final week of classes that will test your understanding of concepts and techniques explored through lab assignments. You will be required to prepare and present a special seminar based on your selected aspect of ocean systems. This will be presented to your peers in the format of a "scientific" meeting.

Course lectures will be posted on Sakai. The following course outline indicates general topics to be covered (note: areas covered are more completely described in the assigned textbook). Depending on timing, some re-jigging of actual dates may occur, and will be noted in an updated syllabus as required. Assignment, lab and exam dates and contact information are provided. As noted, there will be penalties for late or missed assignments. Should you need clarification on anything, see me or the TAs during lab periods or contact us by email or in my office (9-12 on M, T, and W). Academic integrity by students is expected. Aspects of the Brock University Policy of academic misconduct, including plagiarism, are appended at the end of this document.

LECTURES: TBA

LABS: Section 1 and Section 2- TBA

Week 1: Jan 8-12

M Jan. 8 Lecture 1: Course Introduction and Overview

T Jan. 9 Lab (Section 1): no Lab. Labs start Jan 16- Lab Manual Required

T Jan. 9 Lecture 2: Blue Planet

W Jan. 10 Lecture 3: History of Oceanography
R Jan. 11 Lab (Section 2): no Lab. Labs start Jan 18- Lab Manual Required

Week 2: Jan 15-19

M Jan. 15 Lecture 4: History of Oceanography /Origin of Ocean Basins
T Jan. 16 Lab #1 Intro (Section 1): Bathymetry; Charts; Seafloor Spreading & Plate Tectonics (Pipkin Ex. 1-5- selected questions) Due Jan 30
T Jan. 16 Lecture 5: Ocean Basins
W Jan. 17 Lecture 6: Plate Tectonics
R Jan. 18 Lab #1 Intro (Section 2): Bathymetry; Charts; Seafloor Spreading & Plate Tectonics (Pipkin Ex. 1-5- questions) Due Feb 1

Week 3: Jan 22-26

M Jan. 22 Lecture 7: Ocean Basins // Marine Sedimentation
T Jan 23 Lab 1 (Section 1): Materials of Sea Floor; Seismic-Reflection Profiling; Temperature & Salinity; Remote Sensing (Pipkin Ex. 1-5 selected questions)
T Jan. 23 Lecture 8: Marine Sedimentation
W Jan. 24 Lecture 9: Properties of Seawater
R Jan 25 Lab 1 (Section 2): Materials of the Sea Floor; Seismic-Reflection Profiling; Temperature & Salinity; Remote Sensing (Pipkin Ex. 1-5 selected questions)

Jan. 26 SEMINAR TOPIC SELECTION: provide title and one sentence description of what you want to present (any aspect of oceanography you are interested in). Submit by email (mccmac09@bell.net) by 17:00 Friday, Jan 26.

Week 4: Jan 29-Feb 2

M Jan. 29 Lecture 10: Properties of Seawater
T Jan. 30 Lab #2 Intro (Section 1): Seismic-Reflection Profiling; Temperature & Salinity; Remote Sensing; Water masses; Surface Currents (Pipkin Ex. 6, 7, 8, 9, 14- selected questions)- Due Feb 13
Lab 1 (Section 1)- to be delivered to Lab TA's
T Jan 30 Lecture 11: Water Masses
W Feb 1 Lecture 12: Water Masses
R Feb 2 Lab #2 Intro (Section 2): Seismic-Reflection Profiling; Temperature & Salinity; Remote Sensing; Water masses; Surface Currents (Pipkin Ex. 6, 7, 8, 9, 14- selected questions)- Due Feb 15
Lab 1 (Section 2)- to be delivered to Lab TA's

Week 5: Feb 5-9

M Feb. 5 Lecture 13: Ocean Circulation/Atmospheric Circulation
T Feb. 6 Lab #2 (Section 1): Seismic-Reflection Profiling; Temperature & Salinity; Remote Sensing; Water masses; Surface Currents (Pipkin Ex. 6, 7, 8, 9, 14- selected questions)
T Feb. 6 Lecture 14: Atmospheric Circulation
W Feb. 7Lecture 15: Surface Ocean Circulation
R Feb 8 Lab #2 (Section 2): Seismic-Reflection Profiling; Temperature & Salinity; Remote Sensing; Water masses; Surface Currents (Pipkin Ex. 6, 7, 8, 9, 14- selected questions)

Feb.13 SEMINAR ABSTRACT: Seminar abstract to be submitted. Provide short summary of your intended presentation. Limit to maximum of 250 words. Ensure title, presenter, and area of

Ex. 4- 1, 3, 4, 6, 8, 9

Ex. 5- 1-5, 7, 9

Lab 1 Due: Jan 30/Feb 1

LAB 2: Intro on Jan 30 & Feb 1 // Feb 6 & 8- Seismic-Reflection Profiling; Temperature & Salinity; Remote Sensing; Water masses; Surface Currents (Pipkin Ex. 6, 7,8, 9, 14- selected questions).

Ex. 6- 1, 4-6

Ex. 7-all

Ex. 8- 1-4, 5a

Ex. 9- 1-3, 5-8

Ex. 14- 1,3

Lab 2 Due: Feb 13/15

LAB 3: Intro on Feb. 14 & 16 // Feb 27 & Mar 1: Waves; EL Nino; Tides, Waves in Shallow Water (Pipkin Ex. 10,11, 12, 17- selected questions).

Ex. 11- 1

Ex. 17- 1-4

Ex. 10- 1a-c, 2-4

Ex. 12- 1-3, 5

Lab 3 Due : Mar 13 & 15

LAB 4: Intro on Mar 6 & 8: Beach Erosion; Hurricanes Estuaries; Distribution of Marine Life; Productivity; Marine Ecosystems (Pipkin Ex. 13, 21, 15, 16, 18- selected questions)

Ex. 13- 1,2

Ex. 21- 1-3

Ex. 15- 1 a,b,e,f,g; 2

Ex. 16- 1, 2, 4, 6

Ex. 18- 10-12

Lab 4 Due: Mar 20 & 22

Special Topic Seminars: ~12-15-minute presentations on selected topics (10-15 slides). Prepare in PowerPoint Format. Bring compatible USB to load or access from your Brock account to lab computer/projector in MCD319 (animations and video can be accessed as required but remember time constraints). Lab Instructors will be available for advice and assistance on formatting and style. Presentation schedules will be posted on Sakai. Check for conflicts and inform instructor ASAP. Times will be as follows:

Session 1: Mar (1A-)

Session 2: Mar (2A-)

Session 3: Mar (3A-)

Session 4: Mar (4A-)

Session 5: Apr (5A-)

Session 6: Apr (6A-)

Session 7: Apr 10 (if required) (7A-)

Testing:

- Mid term Exam: mid-February (50 minutes- in class)
- LAB EXAM: early April (50 minutes- in class)

Final Exam: TBA (2 hours)

Brock University Policy on Academic Misconduct

- A. Definitions
Academic misconduct may take many forms and is not limited to the following:
- B. Exams and Tests
 - Impersonation of a candidate in an exam or test.
 - Copying from another student or making information available to other students knowing that this is to be submitted as the borrower's own work.
 - Use of unauthorized material.
 - Submission of a take-home examination written by someone else.
- C. Laboratories
 - Copying a laboratory report or allowing someone else to copy one's report.
 - Using another student's data unless specifically allowed by the instructor.
 - Allowing someone else to do the laboratory work.
 - Using direct quotations or large sections of paraphrased material in a lab report without acknowledgment.
 - Faking laboratory data.
- D. Essays and Assignments
 - Submission of an essay written in whole or in part by someone else as one's own.
 - Preparing an essay or assignment for submission by another student.
 - Copying an essay or assignment or allowing one's essay or assignment to be copied by someone else.
 - Using direct quotations or large sections of paraphrased material without acknowledgment.
 - The buying or selling of term papers or assignments.
 - The submission of the same piece of work in more than one course without the permission of the instructors.
 - Submitting whole or part of a computer program with or without minor modifications as one's own.
 - Individual instructors or Departments/Centres will point out areas of specific concern not covered above. Students should be encouraged to consult instructors in case of doubt.
- E. Plagiarism means presenting work done (in whole or in part) by someone else as if it were one's own. Associate dishonest practices include faking or falsification of data, cheating or the uttering of false statements by a student in order to obtain unjustified concessions.
Plagiarism should be distinguished from co-operation and collaboration. Often, students may be permitted or expected to work on assignments collectively, and to present the results either collectively or separately. This is not a problem so long as it is clearly understood whose work is being presented, for example, by way of formal acknowledgment or by footnoting.
Instructors should inform students what constitutes acceptable workmanship, proper form of citation and use of sources.

False or Misleading Representation

- Failure to disclose prior academic records required for admission decisions or other academic purposes.
- Obtaining medical or other certificates under false or misleading pretences.

Altering documents or certificates, including but not restricted to, health claims, tests, and examinations.

Submitting false credentials for any purpose.

Forging or falsifying Brock University documents, including but not restricted to hard copy or electronic.

ERSC 2P61

ERSC 2P61
Environmental Geoscience
Winter 2017 D3
Lectures: Mon. Wed. Fri. 12:00-13:00 MCD 308 Labs: Wed. 2-5 PM MC D319
Instructor: Dr. Dan McCarthy, MC D423, X3864 (dmccarthy2@brocku.ca)
Office Hours: Mondays @ 1PM (or by appointment)
Teaching Assistants: TBA

Environmental Geoscience

Natural geological processes and anthropogenic impacts, flooding, landslides, earthquakes, volcanic activity, global warming and climate change. Hydrogeology and human activity, surface and groundwater supply and use, solid waste and hazardous waste disposal. Mineral and energy resources, pollution and alternatives. Professional environmental geosciences practices.

Lectures, seminar, 4 hours
per week. Prerequisite: ERSC
1F01.

Textbook: There is no required text for this course. However, beside each lecture in the list below you will see a chapter indicated. This refers to a chapter in the Keller text (5th edition) that covers the lecture topic. Not all of the lecture material is found in the Keller text, but there is pretty good overlap between the lectures and what is found in that book. Newer and older editions of that book, study guides, exam preparation questions and plenty of related material can be found in the Brock Library and online. You are strongly encouraged to make use of that material.

E. Keller, *Introduction to Environmental Geology* 5th Ed. ISBN-10:
0321727517 • ISBN-13: 9780321727510
©2012 • Prentice Hall • Paper, 792 pp
03/08/2011

Published

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Marking Scheme: (*late penalty: -10% for all or part of a working day*)

Labs: Four Labs worth 30% total
Labs 1, 3, 4 @ 6% each = 18%, Lab 2 @ 12%

Powerpoint “Poster”: 15% total (due Mar. 31)

Exams:
Test 1
Feb. 7 =
10%
Test 2
Mar. 14
= 10%

Final Exam (April Examination Period) = 35% *Students must pass this final exam to pass the course.*

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Lecture Schedule (Tentative)

Week 1 Jan. 8

Jan. 10 No Lab

Lecture 1- Introduction- Fundamental Concepts (Chapter 1)

Lecture 2- Geosphere Materials- Minerals (Chapter 3)

Lecture 3- Geosphere Materials- Rocks (Chapter 3)

Week 2 Jan. 15

Jan. 17 Lab 1 - Earth Materials & Processes

Lecture 4- Dynamic Earth- Plate Tectonics (Chapter 2)

Lecture 5- Earth Systems- Ecology & Geology (Chapter 4)

Lecture 6- Natural Hazards; Risk Assessment/ Risk Perception (Chapter 5)

Week 3 Jan. 22

Jan. 24 Lab 2- Tectonic & volcanic hazards (Lab 1 due by 2PM)

Lecture 7- Earthquakes (Chapter 6)

Lecture 8- Earthquakes (contd.); Tsunami (Chapter 7)

Lecture 9- Volcanic Activity (Chapter 8)

Week 4 Jan. 29

Jan. 31 *No new lab this week.*

Lecture 10- Volcanic Activity (contd.); Review

Lecture 11- Rivers & Flooding (Chapter 9)

Week 5 Feb. 5

Feb. 7 - Test 1 during lab period & No new lab. (Lab 2 due by 2PM)

Lecture 12- Rivers & Flooding (Chapter 9)

Lecture 13a- Predicting/ Forecasting Hazards; Flood Control

Week 6 Feb. 12

Feb. 14 - Lab 3 - Flooding, Flood prediction, Flood Control

Lecture 13b- Predicting/ Forecasting Hazards; Flood Control

Lecture 14- Unstable Land- Slope Processes, Landslides, & Subsidence (Chapter 10)

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READING WEEK Feb. 19-23 No Classes

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Week 7 Feb. 26

Feb. 28 - Lab 4 - Hydrology; Hydrogeology; Water resources; Water pollution (Lab 3 due by 2PM)

Lecture 15- Coastal Processes (Chapter 11)Lecture 16- Water resources (Chapter 13)

Lecture 17- Water resources (contd.); Water Pollution (Chapter 14)

Week 8 Mar. 5

Mar. 7 - No Lab - *Managing Mining Impact & Remediation (Lab 4 due by 2PM)*

Lecture 18- Water Pollution (contd.)

Lecture 19- Global Climate Change (Chapter 18)

Lecture 20- Global Climate Change (contd.); Review

Week 9 Mar. 12

Mar. 14 Test 2 during lab period

- *Lecture 21- Mineral Resources; Mining & the Environment (Chapter 15) -*

*Lecture 22- Mineral Resources; Mining & the Environment (contd.)*Week 10 Mar. 19

Mar. 21 *No more labs.*

Lecture 23- Energy Resources & Environment; (Chapter 16)

Lecture 24- Energy Resources & Environment (contd.)

Lecture 25 - Geology, Society & the Future (Chapter 19) Energy Resources & Environment;

Case Studies:

Keystone XL pipeline; Oil Sands; Fracking

Week 11 Mar. 26

Mar. 26 Energy & Society

Mar. 28 *NO LECTURE/No Lab - Finish your "PowerPoint"*

Mar. 30 *University Closed (Good Friday/Passover)*

Week 12

April 2 "PowerPoint" *due electronically in lab by 2PM*

April 4 & 6 *Review for Final Exam & Course Evaluation*

April 9 *Makeup day for March 30 (Good Friday/Passover) classes (Friday schedule).*

Last day for Fall/Winter Session duration 1 and duration 3 classes.

April 10-11

Snow/Reading day. The day of the week missed will determine the replacement schedule of classes.

Final Exam (3 hr duration, date set by Registrar)

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Important Dates, Cautions and Academic Discipline

January 19: Last day for duration 3 late registration and course changes without permission of the instructor. Brock Registration System closes for duration 3 adds; last day to drop courses without financial penalty. After this date, manual course change requests are required. Last date for withdrawal without academic penalty and last day to change from credit to audit status for duration 1 courses.

Feb. 19-23: Reading Week.

March 9: Last date for withdrawal without academic penalty and last day to change from credit to audit status for duration 3 courses.

Friday, April 9: Last day of Fall/Winter Session duration 1 and duration 3 classes. Makeup day for March 30 (Good Friday) classes (Friday schedule)

Thursday April 12 to Wednesday April 25: Final Examinations for Fall/Winter duration 1 and duration 3 courses.

Very Important Note: All students are expected to know and comply with the Brock Student Code of Conduct <http://www.brocku.ca/student-discipline/code-of-conduct>

Late Penalties:

Late penalties will not be applied if there are verifiable medical or compassionate excuses. If you have a medical or compassionate excuse please contact the professor. Please keep your work as evidence of completion. *Work that is submitted one hour late or up to 24 hours late will be subject to the same 10% late.*

penalty. If work is submitted more than 24 hours after a submission deadline it must be submitted to the Teaching Assistant in person. In cases where plagiarism is suspected, Turn-it-In http://www.turnitin.com/en_us/home will be used as an investigative tool. Students who are concerned about the use of Turn-it-in should discuss their concerns with the instructor before they submit their assignments.

ERSC 2P9PT (formerly 2P18)

**ERSC 2P18
Introduction to Plate Tectonics
Winter 2020**

Instructor Name: Frank Fueten
Email: ffueten@brocku.ca
Office Location: D429
Contact: Please stop by my office or email me
Teaching Assistants: TBA
Liaison Librarian: Ian Gordon

Times and Locations:

Lecture - Tuesday, Thursday, 9-10 am, MCD 308

Lab - Tuesday, 2-5 pm, MCD 308

Note: Classes at Brock University end ten minutes ahead of the hour or half hour to facilitate transfer time.

Course Calendar Description:

Add Calendar description or omit.

Introduction to Plate Tectonics

(also offered as GEOG 2P18)

Topics include plate boundary settings, plate motion, driving forces, earthquakes and volcanic activity and detailed case studies. Labs focus on the analysis of geological maps.

Lectures, lab, 5 hours per week.

Course Prerequisites (if any):

Prerequisite(s): one ERSC credit numbered 1(alpha)00 to 1(alpha)99 or GEOG 1F91.

Learning Objectives/Outcomes:

To gain a comprehensive understanding of Plate Tectonics, the fundamental principal that governs geological process on Earth.

Geological map tell the story of the geological history of the area they depict. The labs will focus on the fundamentals of interpreting the 3D geometry of geological maps.

Recommended Readings or Texts:

W. Frisch et al., Plate Tectonics, DOI 10.1007/978-3-540-76504-2_1,

© Springer-Verlag Berlin Heidelberg 2011

Note: this is available as e-book from library

If you want to own copy: https://www.amazon.ca/Plate-Tectonics-Continental-Mountain-Building/dp/3540765034/ref=sr_1_1?keywords=Frisch+Plate+Tectonics&qid=1574367524&sr=8-1

Course Communications:

Email me for questions or appointments

Notification to the class will be sent out via Sakai (so, please check your Brock email)

Evaluation Components and Due Dates

Evaluation Component	Grade Weight	Due Date
Progress Exam	20%	as assigned
Library Assignment	10%	as assigned
Quick Quizzes	05%	as assigned
Labs	25%	as assigned
Final Lab Exam	20%	
Presentation PPT	5%	
Essay	10%	
Participation	5%	
TOTAL	100%	

Late Submission Policy:

The penalties for late submission of assigned coursework (e.g., papers, assignments, weekly reflections) are 10% per day, unless accompanied by medical documentation. See Medical Exemption Policy and the medical health certificate at <https://brocku.ca/registrar/toolkit/forms/>

Relationship between attendance and grades:

Students are expected to attend all classes and must submit all assignments in order to pass this course.

Important dates: (check the section on sessional or important dates in the relevant online University calendar at <http://brocku.ca/webcal/>)

March 6, 2020 is the date for withdrawal from the course without academic penalty.

Feb. 28, 2020 is the date you will be notified of 15% of your course grade (Note: this date should be at least one week before the date for withdrawal listed above).

February 17 - 21, 2020 is/are the scheduled reading week(s).

April 3, 2020 is the last day of lectures.

April 8-23, 2020 is/are set aside for formal examination periods.

Academic Policies

Academic Integrity:

Statement for undergraduate courses

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties. Information on what constitutes academic integrity is available at <https://brocku.ca/academic-integrity/>

Plagiarism software:

If plagiarism software is used (Turnitin.com), a statement to that effect must be included on the outline including an option to opt out.

Sample statement regarding Turnitin.com

This course may use Turnitin.com, phrase-matching software. If you object to uploading your assignments to Turnitin.com for any reason, please notify the instructor to discuss alternative submissions.

Intellectual Property Notice:

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

Special Accommodation:

The University is committed to fostering an inclusive and supportive environment for all students and will adhere to the Human Rights principles that ensure respect for dignity, individualized accommodation, inclusion and full participation. The University provides a wide range of resources to assist students, as follows:

a) If you require academic accommodation because of a disability or an ongoing health or mental health condition, please contact Student Accessibility Services at askSAS@brocku.ca or 905 688 5550 ext. 3240.

b) If you require academic accommodation because of an incapacitating medical condition, you must, as soon as practicable, inform your instructor(s) of your inability to complete your academic work. You must also submit a Brock University Student Medical Certificate (found at <https://brocku.ca/registrar/toolkit/forms>). The University may, at its discretion, request more detailed documentation in certain cases. If you are unable to write a scheduled examination due to an incapacitating medical condition, you must follow the process set out in the Faculty Handbook III:9.4.1.

c) If you are experiencing mental health concerns, contact the Student Wellness and Accessibility Centre. *Good2Talk* is a service specifically for post-secondary students, available 24/7, 365 days a year, and provides anonymous assistance: <http://www.good2talk.ca/> or call 1-866-925-5454. For information on wellness, coping and resiliency, visit: <https://brocku.ca/mental-health/>

d) If you require academic accommodation on religious grounds, you should make a formal, written request to your instructor(s) for alternative dates and/or means of satisfying requirements. Such requests should be made during the first two weeks of any given academic term, or as soon as possible after a need for accommodation is known to exist.

e) If you have been affected by sexual violence, the Human Rights & Equity Office offers support, information, reasonable accommodations, and resources through the Sexual Violence Support & Education Coordinator. For information on sexual violence, visit Brock's Sexual Assault and Harassment Policy or contact the Sexual Violence Support & Response Coordinator at humanrights@brocku.ca or 905 688 5550 ext. 4387.

f) If you feel you have experienced discrimination or harassment on any of the above grounds, including racial, gender or other forms of discrimination, contact the Human Rights and Equity Office at humanrights@brocku.ca.

Sequence and Dates of focus/activities/readings

Modules	Focus/topic
1	01_Plate Tectonics-background_overview
2	02_Rocks
3	03_Breaking rocks

4	04_Earth Cross section
5	05_Mid-ocean ridges
6	06_Transform Faults
7	07_Subduction Zones
8	08_Continent - Continent Collision
9	09_Hotspots (geology)
10	10 Terranes
11	11 Supercontinents
12	12 Rifts - When Continents break apart
13	13 Plate Tectonics - the early years
14	14 Geology of Ontario

ERSC 2P23

ERSC 2P23
Mineralogy I: Minerals, Rocks and their Geologic Context
Fall 2019

Instructor: Mariek Schmidt (mschmidt2@brocku.ca)

Phone: X3527

Office: D414

Office hours: Tuesday 1-2 pm; Thursday 11 am-12 pm

Teaching Assistants:

Taghi Farmani (mfarmani@brocku.ca)

Laura Lee Tobicoe (ltobicoe@brocku.ca)

Time and Place:

Lecture: Tuesday and Thursday 9-10 am, Friday 9-10 am (optional lecture period); Room D309

Lab: Tuesday 10 am to 1 pm; Room D309

Content:

“Mineral identification; mineral chemistry; igneous, metamorphic, and sedimentary mineral assemblages and textures; and their significance for interpreting geologic context. Labs focus on hand sample techniques for mineral and rock identification and interpretation”

Readings:

Mandatory textbook:

Perkins, D., 2011, Mineralogy, 3rd ed., Prentice Hall

Available for purchase at Brock bookstore; \$45 used on Amazon.ca

*** Must be brought to lab.*

Strongly recommended: Field guide to rocks and minerals

* National Audubon Society Field Guide to North American Rocks and Minerals (National Audubon Society Field Guides) (Paperback)

* A Field Guide to Rocks and Minerals (Peterson Field Guides) (Paperback)

* Minerals of the World (Princeton Field Guides) (Paperback) by Ole Johnson

All lectures and other readings will be posted on Sakai.

Materials for lab:

Handlens (available for purchase)

Colored pencils

3-ring binder (optional)

Grading:

Midterm exam: 15%

Final exam: 22%

Lab quizzes: 14% (7 quizzes, 2% each)

Labs: 24% (8 labs, 4% each)

Lab final: 20%

Mineral ID card: 5%

**Late assignments will be deducted 10% for each day late and may be handed in no later than one week after the original due date.

** The last day to withdraw without academic penalty is Nov. 4, 2019.

Schedule (Subject to change!!):

9/5 Introduction (Perkins, Ch. 1, p. 3-5)

9/10 Physical properties of minerals (Perkins, Ch. 3)

Lab 1: Physical Properties of Minerals I

9/12 Physical properties of minerals, continued (Perkins, Ch. 3)

9/17 Atoms and bonding (Perkins, Ch. 1, p. 5-14)

Lab 2: Physical Properties of Minerals II

9/19 Origin and abundance of elements (Perkins, Ch. 1, p. 17-20)

9/24 Crystallization - crystal growth (Perkins, Ch. 2, p. 26-31)

Lab 3: Bond strength and coordination numbers

9/26 Crystallization - defects

10/1 Mineral classification (Perkins, Ch. 2, p. 32-42)

Lab 4: Mineral classification and historical context

10/3 Igneous rocks (Perkins, Ch. 5)

10/8 Igneous rocks and silicate minerals (Perkins, Ch. 5)

Lab 5: Igneous minerals and rocks

10/10 Igneous rocks and silicate minerals (Perkins, Ch. 5)

Thanksgiving and Reading Week: October 14-18

- 10/22 Sedimentary minerals and rocks (Perkins, Ch. 6)
Lab 6: Sedimentary minerals and rocks
- 10/24 Sedimentary minerals and rocks (Perkins, Ch. 6)
- 10/29 Mid-term examination
**No lab scheduled*
- 10/31 Metamorphic minerals and rocks (Perkins, Ch. 7)
- 11/5 Metamorphic minerals and rocks (Perkins, Ch. 7)
Lab 7: Metamorphic minerals and rocks
- 11/7 Economic minerals and ore deposits (Perkins, Ch. 8)
- 11/12 Economic minerals and ore deposits (Perkins, Ch. 7)
Lab 8: Economic minerals and ore deposits
- 11/15 Mineral stability and phase diagrams
- 11/19 Mineral evolution (Hazen et al., 2008)
**No lab this week. Study time for lab final*
- 11/21 Mineral evolution (Hazen et al., 2008)
- 11/26 Introduction to symmetry and crystal forms (Perkins, Ch. 9)
Lab final exam
- 11/28 Introduction to symmetry and crystal forms (Perkins, Ch. 9)
- 12/3 Last class, wrap up.

**Final exam will be scheduled. TBD.*

Students with disabilities or illness:

Students who require accommodations related to a permanent disability are encouraged to contact the Student Development Centre Services for Students with Disabilities (4th floor Schmon Tower, ext. 3240).

Short-term accommodations related to illness or family emergencies may be worked out. Any request for accommodations must include appropriate documentation (e.g., doctor's note, proof of death of a close family member). Make-up labs may be scheduled for students who missed a lab *for good reason*.

Academic integrity:

All students should become familiar with Brock's Academic Integrity Policy.

COMM 2P91

COMM 2P91
Social Media

Winter 2019 D3 Instructor Name: Dr. Matthew Wells | mattwells.j@gmail.com Office
Location: Scotiabank Hall Rm. 337
Teaching Assistant: Sierra Sheppard | ssheppard@brocku.ca Liaison Librarian: Laurie
Morrison | lmorrison@brocku.ca

Times and Locations:

Lectures are on Wednesdays from 11:00am -1:00 pm, TH242, beginning January 9th.

Seminars (begin the week of January 14th):

1. *Thursdays (Section 1): 10:00-11:00 am in TH 315*
2. *Mondays (Section 2): 10:00-11:00 am in TH 315*
3. *Mondays (Section 3): 3:00-4:00 pm in TH 315*
4. *Mondays (Section 4): 2:00-3:00 pm in TH 315*
5. *Tuesdays (Section 5): 12:00-1:00 pm in TH 315*
6. *Mondays (Section 6): 9:00-10:00 am in TH 315*
7. *Fridays (Section 7): 1:00-2:00 pm in TH 315*

Office hours occur from 1:00-2:00 pm on Wednesdays after lecture. The first 15 minutes are available on a “first come first serve basis” after class and from 1:15 onwards, priority will be given to students who request a meeting by email in advance.

Course Calendar Description:

Theory, philosophy and politics of Social Media as a communicative mode. Topics include critical theory in a Social Media context, changing perceptions of reader narrative, and Social Media compared with other electronic textuality.

Course Prerequisites (if any):

Prerequisite(s): one of COMM 1F90, CPCF 1F25, PCUL 1F92, IASC 1F01 (1F00) or permission of the instructor.

Learning Objectives/Outcomes:

The learning objectives for this course are for students to:

- (g) Develop their abilities to contextualize the production and reception of social media
- (h) Gain an introduction to *critical theory* in relation to social media
- (i) Develop exposure to scholarly debates concerning *participatory* and *commodified* cultures online
- (j) Establish an understanding of concepts relevant to social media, such as gift culture, engagement, appraisal of the residual, audiences and communities, social movements and networks, narrative and transnational spread.
- (k) Demonstrate introductory level hypertext markup language (HTML) and audio-visual media production skills
- (l) Develop applied communication skills through written assignments as well as through group work, and online class forums

Required Readings or Texts:

The textbook is:

- Jenkins, H., Ford, S. and Green, J. (2013). *Spreadable Media: Creating Value and Meaning in a Networked Culture*. New York: New York University Press.

In addition to the textbook, required readings and screenings are assigned in the week-to-week course schedule. You should also expect to be familiar with materials including videos, podcasts, or texts that were utilized within lecture or seminar or that were assigned in relation to assignments.

Students are expected to have completed these readings prior to each week's lecture. At times, it may be necessary to bring copies to lecture or seminar.

Course Communications:

Essential course information will be shared in class, via Sakai and by Brock email. Twitter will also be used to create a class-convened conversation (#COMM2P91). Questions that are of interest to the entire class should be communicated through Sakai. Email should be used for individual issues and the instructor will attempt to reply within 2 business days. In-depth questions need to be addressed through office hours, or an individual appointment.

Updates:

If there are errors or omissions on this syllabus the class will be notified.

Equipment:

Students may need to use equipment for this course (i.e., a computers, video editing or other software, a phone or camera capable taking video). Options for using university equipment or borrowing devices will be provided. Students who are utilizing university resources may need to plan in advance to ensure access to needed resources.

Evaluation Components and Due Dates

Assignments and evaluation components of the course will be discussed in class and more detailed guidelines will be posted to Sakai.

Evaluation Component	Grade Weight	Due Date
– Meme Making	5.0%	Wednesday, January 23
– Test	10.0%	Wednesday, February 6
– Annotated Bibliography	20.0%	Wednesday, March 13
– Podcast and Report (Group)	25.0%	Wednesday, March 27

Evaluation Component	Grade Weight	Due Date
– Seminar Participation Report (this includes inclusion your best 3 seminar assignments, your attendance and active engagement)	15.0%	Wednesday, April 3
– Final Exam	25.0%	
TOTAL	100.0%	

Assignment Submission Instructions

Please refer to each assignment’s handout for instructions on electronic and/or hard copy submission.

Students are expected to follow both assignment instructions and the CPCF departmental guidelines for essays when handing in written work (see:

<http://www.brocku.ca/social-sciences/departments-and-centres/cpcf/student-success/essay-style-guidelines>).

Late Submission Policy:

Assignments are due at the start of lecture and no later than 11:15 am, unless the assignment instructions specify otherwise.

Late work will receive a grade of “0” unless one of the following circumstances applies:

- The late work is accompanied by medical documentation that aligns with the delay in submitting the assignment. See Medical Exemption Policy and the medical health certificate at <http://www.brocku.ca/health-services/policies/exemption>
- The student requires an accessibility accommodation which is documented through Student Accessibility Services at Brock
- The student can demonstrate extenuating, or emergency level circumstances for failing to submit work that will be evaluated solely at the instructor’s discretion

Students with extenuating or emergency circumstances *before* a deadline, should contact the instructor as soon as possible, to request an extension. Students may also contact the instructor *after* the deadline if an extraordinary or emergency level situation prevented them from submitting their assignment. The instructor will assess each situation on a case-by-case basis and accept work when there is a compelling reason to justify late submission. Please note that students may be asked to provide evidence or documentation to support the instructor’s discretionary decision about whether to accept late work.

Relationship between attendance and grades:

Students are expected to attend lecture and seminar. Attendance is tracked in seminar only and will factor into the grade for the Seminar Participation Report. Being late, leaving early, or missing seminar twice over the semester will negatively impact your participation grade. Students who need to miss lecture or seminar for reasons consistent with accessibility, medical or religious exemption purposes can consult with their instructor or TA for accommodations.

Important dates: (check the section on sessional or important dates in the relevant online University calendar at <http://brocku.ca/webcal/>)

March 8 is the date for withdrawal from the course without academic penalty.

March 1 is the date you will be notified of 15% of your course grade.

February 18-22 is Family Day and the scheduled reading week.

No dates are set aside as makeup days due to holidays. Please consult with the instructor at the beginning of the term if you require accommodation to arrange makeup dates.

April 8-9 are set aside for designated reading days (these may be used to cover classes missed because of adverse weather).

April 10-24 are set aside for formal examination periods.

Academic Policies

Academic Integrity:

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Polices" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.

Please see the CPCF in-depth statement on Academic Integrity at the end of this syllabus. Each student in COMM 2P91 will be expected to submit a signed copy of the CPCF Pledge of Academic Integrity before work will be graded and returned (see: http://www.brocku.ca/webfm_send/4333 or the copy at the end of this document).

Academic Accommodation:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Services for Students with Disabilities in the Student Development Centre (4th floor Schmon Tower, ex. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

Academic Accommodation due to Religious Obligations:

Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements.

Medical Exemption Policy:

The University requires that a student be medically examined in Health Services, or by an off-campus physician prior to an absence due to medical reasons from an exam, lab, test, quiz, seminar, assignment, etc. The Medical Certificate can be found at:

<http://www.brocku.ca/health-services/policies/exemption>

Week-to-Week Lecture Schedule

Week	Focus and activities/assessment	Weekly schedule
1 - Jan. 9	Introduction to the course	
2 - Jan. 16	Introduction to Social Media	<ul style="list-style-type: none"> - Fuchs, C. What is a Critical Introduction to Social Media? In <i>Social Media: A Critical Introduction</i>. (pp. 1-27) London, UK: Sage <ul style="list-style-type: none"> - Available online: http://fuchs.uti.at/wp-content/introductionSocMedia.pdf - O'Reilly, T. (2012). What is Web 2.0. In Ed. M. Mandiberg <i>The Social Media Reader</i>. (pp. 32-52). New York, NY: NYU Press. <ul style="list-style-type: none"> - Available online: https://ia802603.us.archive.org/35/items/TheSocialMediaReader/Mandiberg-
3 - Jan. 23	Spreadable Media Due: Meme Maker Assignment (5%)	<ul style="list-style-type: none"> - Spreadable Media <ul style="list-style-type: none"> • How to Read this Book (p. ix-xv) • Introduction: Why Media Spread (p. 1-46) - McHugh, S. (2017, August 31). Truth to power: how podcasts are getting political. <i>The Conversation</i>. Retrieved from: http://theconversation.com/truth-to-power-how-podcasts-are-getting-political-81185
4 - Jan. 30	Gift Culture	<ul style="list-style-type: none"> - Spreadable Media <ul style="list-style-type: none"> - Where Web 2.0 Went Wrong (Ch. 1, pg. 47- 84) - Benkler, Y. (2012). Sharing Nicely: On Shareable Goods and the Emergence of Sharing as a Mode of Economic Production. In Ed. M. Mandiberg <i>The Social Media Reader</i>. (pp. 17-23). New York, NY: NYU Press. <ul style="list-style-type: none"> - Available online: https://ia802603.us.archive.org/35/items/TheSocialMediaReader/Mandiberg-theSocialMediaReader-cc-by-sa-nc.pdf

5 - Feb. 6	Social Media Appraisal and Audits <i>Test (during lecture time slot 10%)</i>	<ul style="list-style-type: none"> - Spreadable Media Reappraisal of the Residual (Ch. 2, p 85-112) - Queensbury, K. A. (2015, 18 Nov). Conducting a Social Media Audit. <i>Harvard Business Review</i>. Retrieved online: https://hbr.org/2015/11/conducting-a-social
6 - Feb. 13	Fake News and Social Bots	<ul style="list-style-type: none"> - Lazer, D.M.J., Baum, M.A., Benkler, Y., Berinsky, A.J., Greenhill, K.M., Menczer, F., Metzger, M.J., Nyhan, B., Pennycook, G., Rothschild, D., Schudson, M., Sloman, S.A., Sunstein, C.R., Thorson, E.A., Watts, D.J., Zittrain, J.L. (2018). The science of fake news. <i>Science</i>, 359(6380), 1094-1096. <ul style="list-style-type: none"> - Available online: https://disruptor.es/wp-content/uploads/2018/03/US-2018-SCI-MAG-FAKE-NEWS-090318-1.pdf - Quandt, T. (2018). Dark participation. <i>Media and Communication</i>, 6(4), 36-48. <ul style="list-style-type: none"> - Available online: https://www.cogitatiopress.com/mediaandcommunication/article/viewFile/1519/1519 - Allcott, H., and Gentzkow, M. (2017). Social media and fake news in the 2016 election.
Feb. 20	No classes reading week	
7 - Feb. 27	Social Media and Engagement	<ul style="list-style-type: none"> - Spreadable Media <ul style="list-style-type: none"> • The Value of Media Engagement (Ch. 3, p. 113-152) - Dunham, K. (2014, 27 May). The Beginner's Guide to Social Media Metrics: Engagement. Retrieved online: https://blog.hootsuite.com/beginners-guide-engagement/ - Rosen, J. (2012). The People Formerly Known as the Audience. In Ed. M. Mandiberg <i>The Social Media Reader</i>. (pp. 13-16). New York, NY: NYU Press. <ul style="list-style-type: none"> • Available online: https://ia802603.us.archive.org/35/item

8 - March 6	Fame and Shame on Social Media	<ul style="list-style-type: none"> • Marwick, A.E. (2016). You may know me from YouTube: (micro-)celebrity in social media. In P.D. Marshall and S. Redmond (Eds.), <i>A Companion to Celebrity</i> (pp. 333-350). Chichester, UK: John Wiley & Sons. <ul style="list-style-type: none"> ◦ Available on Sakai • Colapinto, C., and Benecchi, E. (2014). The presentation of celebrity personas in everyday twittering: managing online reputations throughout a communication crisis. <i>Media, Culture & Society</i>, 36(2), 219-233. <ul style="list-style-type: none"> ◦ Available on Sakai • Ronson, J. (2015, Feb. 12). How one stupid Tweet blew up Justine Sacco's Life. <i>The New York Times Magazine</i>. Retrieved from: https://www.nytimes.com/2015/02/15/magazi
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9 - March 13	Content Strategy and Live Media <i>Due: Annotated Bibliography (20%)</i>	<ul style="list-style-type: none"> • Spreadable Media <ul style="list-style-type: none"> ◦ Designing for Spreadability (Ch. 5, p 195- 228) • Gandolfi, E. (2016). To watch or to play, it is in the game: the game culture on Twitch.tv among performers, plays and audiences. <i>Journal of Gaming & Virtual Worlds</i>, 8(1), 63-82. <ul style="list-style-type: none"> ◦ Available on Sakai • Stephen, B. (2018, Dec. 21). Fortnite was 2018's most important social network. <i>The Verge</i>. Retrieved from: https://www.theverge.com/2018/12/21/18152012/f
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10 - March 20	Feminist Activism on Social Media	<ul style="list-style-type: none"> • Jane, E.A. (2017). Feminist digilante responses to a slut-shaming on Facebook. <i>Social Media + Society</i>, 3(2), 1-10. <ul style="list-style-type: none"> ◦ Available online: https://journals.sagepub.com/doi/pdf/10.1177/2056305117705996 • Mendes, K. (2015). <i>SlutWalk: feminism, activism, and media</i>. New York: Palgrave Macmillan. <ul style="list-style-type: none"> ◦ SlutWalk, Community and Cyberactivism (Ch. 7, pp. 159-186), available on Sakai • Schuster, J. (2013). Invisible feminists? Social media and young women's political participation. <i>Political Science</i>, 65(1), 8-24. <ul style="list-style-type: none"> ◦ Available on Sakai • Codrea-Rado, A. (2017, Oct. 16). #MeToo floods social media with stories of harassment and assault. <i>The New York Times</i>. Retrieved from:
11 - March 27	Transnational Applications Due: Podcast and Report (25%)	<ul style="list-style-type: none"> • Spreadable Media <ul style="list-style-type: none"> ◦ Thinking Transnationally (Ch. 7, p 259-291) • Sundaram, R. (2010). <i>Pirate modernity: Delhi's media urbanism</i>. London and New York: Routledge.
12 - April 3	Exam Review Due: Seminar Participation Report (15%)	<ul style="list-style-type: none"> • Spreadable Media <ul style="list-style-type: none"> ◦ Conclusion (pp. 291-306)

Statement on: Academic Misconduct

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at brocku.ca/webcal, to view a fuller description of prohibited actions, and the procedures and penalties which may be applied.

Academic misconduct includes plagiarism (presenting the words and ideas of another person as if they were your own), submitting the same work for two different assignments, and other forms of cheating such as using crib notes during a test or fabricating data for a lab assignment.

Instructors and teaching assistants in the Department thoroughly investigate all suspected cases of academic misconduct.

The penalties for documented cases of academic misconduct can be severe. The Department may recommend that a grade of zero be given for the assignment, and a failing grade if not a grade of zero be given for the course. In addition, a note will be attached to the student's academic transcript. A second offense can result in suspension from the University. The disciplinary process is administered initially at the Department level and in cases where academic penalty is assigned will be referred to the offices of the Dean of Social Sciences.

Make yourself aware of the issues involved. Read the section of the Undergraduate Calendar that pertains to academic misconduct. You are reminded that the Student Development Centre (Schmon Tower, Room 400) offers workshops on writing skills, and issues surrounding plagiarism.

For further information on all aspects of your academic program, including course planning, you may consult with the Department's Academic Advisor: Penni Lafleur, SBH 344, ext. 5308, plafleur@brocku.ca

Year 3

IASC 3P01

Course Number: STAC/IASC/MLLC/VISA 3P01 Term/Year/Duration: Fall 2020, Duration 2
Course Title: Media Transformations and the Creative Arts

Instructor Name: XX Email: XX Liaison Librarian: Justine Cotton <jcotton@brocku.ca>
<<https://researchguides.library.brocku.ca/>>

To comply with the Covid-19 measures adopted by Brock University, courses scheduled in Fall 2020 are entirely online and will be facilitated/taught via Sakai. Please check your Sakai account and your Brock email address regularly.

Course Calendar Description: The trajectory and influences of new media on the development of and discourses in 20th Century and contemporary creative production including the arts, broadcast, film, video, and electronic arenas such as the internet, games and interactive media. Overview of fundamental concepts, practices and language. Consideration of aesthetics, production, script and story, direction, authorship, collaborative process and distribution.

Additional Description: STAC 3P01 draws upon a variety of examples from the fine and performing arts, cinema, broadcast, popular music, popular media and culture. This online course involves lectures, readings, assignments, online quizzes and discussion forums, audio and film screenings, exploring a myriad of histories and influences of new media and technologies in the creative arts.

In order to be adequately prepared to engage in the online requirements, course materials and assignments, students should expect to spend at least three hours of study, reading, and/or preparation time outside of regularly scheduled class hours per week. Students are responsible for familiarizing themselves with material in all components of the course, and engagement with these aspects (including online lectures, assignments, quizzes and film screenings) is expected.

Students are also asked to be conscious of time limits for submitting quizzes, and to prepare their text for forum discussion posts in a separate document before submitting them online. This will help to save student's work as a 'backup', in case there are any technical difficulties or browser time outs when using the Sakai platform.

Learning Objectives/Outcomes: Upon completion of this course, students should demonstrate an increasing ability to:

- evaluate different issues related to media transformations and the creative arts;
- explore the relationship(s) between cultural production, new media and technology;
- demonstrate a critical understanding of the arts, culture, media and technologies;
- further develop critical writing, research, experiential learning and viewing skills.

Faculty of Humanities

Centre for Studies in Arts and Culture (STAC)

Required Readings or Texts: STAC 3P01 readings are available either through online links and/or as .pdf's in the Readings folder in the Resources section on Sakai. A list of the readings is included at the end of the Course Outline and also under each individual weekly unit.

Ubuweb: <http://www.ubuweb.com> Ubuweb is an online media resource for avant-garde film, sound art, concrete and sound poetry. You may find their archive helpful to your experience in the course.

Course Communications and 'Office' hours': I will hold a weekly office hour on Wednesdays from 9-10:30am in the General Discussion forum on Sakai for any questions students may have that would be beneficial to share as a group. During this time, I will be monitoring the forum and be available to answer any posts by students in this space. Office Hours will take place each week for the duration of the course unless otherwise noted.

For other inquiries related to questions about the course that cannot be answered by consulting the Course Syllabus/ Sakai, or questions that are of a personal concern not to be shared with others, please email me directly at XXX

Please remember to identify which course you are writing about (STAC 3P01) in either the subject line/body of your email, and to sign the email with your first and last name as well. Email exchanges about Brock courses are considered to be professional communication and should be composed accordingly. This does not mean they need to be uncomfortably formal, however, they should be polite and proofread for clarity. Grades will not be discussed through email correspondence.

I will strive to answer email relating to STAC 3P01 within 48 hours of receiving it. Please note, however, that this applies only to regular working hours - email will not be checked on weekends or holidays, last minute emails about assignments may not receive a timely response.

All email communication must be made from a Brock account. All announcements (class cancellation, inclement weather, other issues) will be made through Sakai Announcements. All reading assignments and guidelines for assignments will be posted on Sakai.

Evaluation Components and (Due) Dates/ Fall 2020

Assignments / Tests Grade Weight (Due) Date

Forum Discussions 50% (10 posts) various dates (see syllabus)

Quizzes 30% (6 quizzes x 5%) various dates (see syllabus) STAC _Interiors_ Creative Critical Writing Assignment 20% 2 December, 9am

Total 100%

Detailed instructions will be provided before each assignment. A note about Wikipedia: While Wikipedia can be a useful source for learning more information about a topic, it is NOT a credible source in academic assignments.

Late Submission Policy: The penalties for late submission of assigned coursework (e.g., papers, assignments, weekly reflections) are 5% per day. For exceptions, please see 'Compassionate Medical Absences' below.

Relationship between online participation and grades: Students are expected to participate actively in online classes and must submit all assignments in order to pass this course. Active online participation may include forum and/or chat exchanges in which you will demonstrate that you have read and understood the material assigned; and advance the discussion by following up on ideas proposed by others in the group.

Tentative schedule

A NOTE ABOUT THE READINGS The course readings offer a combination of critical and theoretical approaches to analyzing media transformations in the arts, as well as more specific readings relating to particular artists, artworks, and cultural periods. The course readings are a key aspect of the course and students are required to have completed the assigned reading(s). Below is a list of the course schedule with the weekly readings, which are available either as links in each weekly unit or in the Readings Folder on Sakai.

9 September Week 1 Introduction to Media Transformations in the Creative Arts Welcome to the course! Introductory lecture, review syllabus, course objectives & expectations, discussion of forums & introductions (see below) Introductory Forum Opens: students are asked to introduce themselves on the course forum and share their name, major, reason for taking this course, and something interesting about themselves. After reviewing the Course Outline, students are also encouraged to share an area of interest in the course that appeals to them. Remember to provide a comment post on two other students posts - these comments can take the form of welcoming them to the course, or commenting on something that you find interesting about their post (a similar major, or interest in taking 3P01).

16 September Week 2 Historicizing Art, Media, Technology: Methods & Approaches Reading: Marshall McLuhan, "The Medium is the Message" (Readings - Sakai) Edward A. Shanken, "Historicizing Art & Technology: Forging a Method & Firing a Canon" (Readings - Sakai) Quiz#1 opens

23 September Week 3 The Power of the Image: Photography in the Age of Digital Distribution Reading: Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction" (Readings - Sakai) Forum 2 opens Quiz #2 opens

30 September Week 4 The Culture of Noise: Sound Art, Cut Ups, and the Avant-Garde Reading: Luigi Russolo, "The Art of Noises: Futurist Manifesto" (Readings - Sakai) Film Screening: "Cutting Up The Cut Up" (BBC 2015) (link provided in lecture material on Sakai) Forum 3 opens Quiz #3 opens

7 October Week 5 Performing Intermedia: Interventions and Installation Art Reading: Dick Higgins, "Synesthesia and Intersenses: Intermedia" (Sakai), Allan Kaprow, "How To Make a Happening" (Readings - Sakai) Film Screening: selections of FluxFilms, Warhol Screen Tests (links in lecture material on Sakai) Forum 4 opens Quiz #4 opens

12 - 16 October Reading Week (no online classes)

21 October Week 6 Tripping The Light Fantastic: Light Shows and the Sensorium of Psychedelic Art Reading: excerpts from *Psychedelia and Other Colours* (Rob Chapman, 2015) (Readings - Sakai) Film Screening: "San Francisco" (Anthony Stern 1968), The Joshua Light Show "Liquid Loops" (1969) John Dunbar, "Liquid Reflections" (1967) (links in lecture material on Sakai) Forum 5 opens Quiz #5 opens

28 October Week 7 Subcultural Expression: The Materiality of Youth Culture Reading: Mary Celeste Kearney, “Brought to You by Girl Power: Riot Grrrl’s Networked Media Economy” (Readings - Sakai), Kim Gordon, selections from Is It My Body? Selected Texts (Sternberg Press 2014) (Readings - Sakai) Film Screening: NFB, RiP! A Remix Manifesto (2008) (link in lecture material on Sakai) Forum 6 opens

4 November Week 8 “The Media is the Message”: Political Protest and Activist Art Reading: Michael William Doyle, “Staging the Revolution: Guerilla Theatre as a Countercultural Practice 1965-68,” (link provided in lecture material on Sakai); Louis Kaplan, “John and Yoko’s Media War for Peace” (Readings - Sakai) Film Screening: John and Yoko Bed In For Peace (Bag Productions, 1969) (link provided on Sakai) Forum 7 opens Quiz #6 opens

11 November Week 9 The Visual Culture of Sound: Music Videos & Sound-Images Reading: Joseph Tate, “Radiohead’s anti-videos: works of art in the age of electronic reproduction” (Sakai) Film Screening: selection of music videos (links in lecture material on Sakai) Forum 8 opens

18 November From Materiality to Immateriality: Week 10 The Internet, Social Media & Cultural Production Reading: Oliver Grau, “Intermedia Stages of Virtual Reality in the Twentieth Century - Art as Inspiration of Evolving Media” (Readings - Sakai) Forum 9

25 November Week 11 Media Transformations: Wrap Up of Themes and Approaches Reading: no reading this week Forum 10 opens, complete by 2 December, 9am

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2 December Final Week - Submission of Assignments Week 12

Please complete all forum posts, quizzes, and Creative Critical Writing Assignment in the course by 2 December at 9am. These assignments must be completed and/or uploaded to the Assignments section on Sakai by this date and time, the last date in the course

ASSIGNMENTS

FORUM PARTICIPATION (10 forum posts = 50% cumulative)

Corresponding with the dates provided in the Course Schedule, students will have a series of twelve forum post discussion questions to be answered in the Forums section on Sakai; these questions will reflect content from that week's unit. The forums allow for the course as a group to connect and discuss topics related to the course, and to learn from each other's responses similar to an inperson seminar or tutorial.

The forum discussion questions will refer to course material whenever possible and may be linked to readings, film screenings, course and lecture content, as well as your daily experiences with media transformations in the arts. In your posts, reference course readings, examples discussed in lecture material, film screenings, quizzes, to help support your answers. Forum posts should be written using elements of personal reflection, critical thinking and adhere to MLA format whenever possible (think of the posts as short essay answer questions).

Posts will be assessed for engagement with the question and course material, spelling, grammar, and punctuation. Engagement with the online forums (including posting responses to the weekly assigned questions and also commenting on and contributing to the discussion of other students posts, at least two per forum) contributes to a larger group discussion in the course.

Forum grades will be assessed as a cumulative effort at the end of the course, meaning students will receive one final grade for their consistent efforts throughout the term (this includes the successful completion of each assigned forum along with commenting on two student posts).

Instructions will be provided in each of the twelve forums on Sakai. Each forum post response should be approx. 300-400 words minimum unless otherwise noted. Peer comment posts should be between 75-100 words minimum x 2 per each forum.

Due date: forum discussion posts open on the Wednesday of each weekly unit they are assigned for and should be completed each week by the following Wednesday at 9am. Please consult the Course Schedule for the corresponding forum due dates. All forum posts must be completed by 2 December, 9am (the last date in the course).

QUIZZES (6 Quizzes x 5% = 30%)

Throughout the term, students will be asked to complete eight online quizzes (available on Sakai). These quizzes correspond with information presented in each weekly unit for the course, and are multiple choice as well as true or false style questions.

Completion of the quizzes will require time management and use of resources from the course. The quizzes open on the Wednesday of each week they are assigned in the Course Schedule at 9am and should be completed by the following Wednesday at 9am. Students will need to complete each quiz

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during a set space of time while keeping their browser open and answering questions (you will not be able to save your quiz and complete it later).

Each quiz is worth 5% for a total of 40% of a student's overall grade. Students are expected to complete the quizzes during the weekly time duration each quiz is available online (see the Course Outline for details). All quizzes must be completed by 2 December, the last date in the course.

Due date: quizzes open on the Wednesday of each week they are assigned at 9am, and are to be completed by the following Wednesday at 9am. Once each quiz is open, it will remain available until 2 December, the last date in the course (for time management, it is advised each quiz is completed by the following Wednesday). Please consult the Course Schedule about these dates.

STAC _Interiors_ - CREATIVE CRITICAL WRITING ASSIGNMENT (20%)

For the Creative-Critical Writing Assignment, students are asked to virtually visit a curated online platform titled "_Interiors_" which will launch in September as STAC's 2020-121 main research project (curated by Dr. Catherine Parayre, Nicholas Hauck, Derek Knight, Marcie Bronson (former curator, Rodman Hall), and Alexandra Fraser (Toronto-based independent curator)).

Students will write a two page Creative Critical Assignment responding to Professor Derek Knight's photography contribution to the exhibition (Art from a Hotel Bedroom: Derek Knight 'Trieste 1, II, III). The Creative Critical Assignment will respond to the piece while providing a compare and contrast of images, along with visual analysis elements.

More specifics will be provided about the assignment in Sakai in the weeks leading up to its completion for 2 December, the last date in the course. The written assignment must adhere to MLA style guide conventions. Selected pieces by students can also be published both on the website and also *ti<* (see description below):

ti< is a peer reviewed, open access journal sponsored by Modern Languages, Literatures and Cultures (MLLC) and Brock University. *ti<* publishes creative work combining text and image. *ti<* is primarily interested in creative work by students, their instructors, as well as by artists and writers whose work combines literature and the visual arts. All languages are welcome, including endangered languages. No translation is needed.

<https://journals.library.brocku.ca/index.php/ti>

Important dates:

Reading week (Fall semester): October 12-16 2020

November 2, 2020 is the date for withdrawal from the course without academic penalty.

October 26, 2020 is the date you will be notified of 15% of your course grade.

Academic Policies

Academic Integrity: Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at

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<http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties. Information on what constitutes academic integrity is available at <https://brocku.ca/academic-integrity/>

Intellectual Property Notice:

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

COMPASSIONATE MEDICAL ABSENCES: If you require academic consideration because of an incapacitating medical condition, please inform your instructor(s), as soon as possible, of your inability to complete your work. Given our challenging times related to COVID-19, requests for extensions on assignments due to illness or caring for others with illness will be given case by case consideration for extensions. If you are unable to write a scheduled examination due to an incapacitating medical condition, you must follow the process set out in the Faculty Handbook III:9.4.1.

Special Accommodation:

The University is committed to fostering an inclusive and supportive environment for all students and will adhere to the Human Rights principles that ensure respect for dignity, individualized accommodation, inclusion and full participation. The University provides a wide range of resources to assist students, as follows:

a) If you require academic accommodation because of a disability or an ongoing health or mental health condition, please contact Student Accessibility Services at askSAS@brocku.ca or 905 688 5550 ext. 3240.

b) If you require academic accommodation because of an incapacitating medical condition, you must, as soon as practicable, inform your instructor(s) of your inability to complete your academic work. You must also submit a Brock University Student Medical Certificate (found at <https://brocku.ca/registrar/toolkit/forms>). The University may, at its discretion, request more detailed documentation in certain cases. If you are unable to write a scheduled examination due to an incapacitating medical condition, you must follow the process set out in the Faculty Handbook III:9.4.1.

c) If you are experiencing mental health concerns, contact the Student Wellness and Accessibility Centre. Good2Talk is a service specifically for post-secondary students, available 24/7, 365 days a year, and provides anonymous assistance: <http://www.good2talk.ca/> or call 1-866-925-5454. For information on wellness, coping and resiliency, visit: <https://brocku.ca/mental-health/>

d) If you require academic accommodation on religious grounds, you should make a formal, written request to your instructor(s) for alternative dates and/or means of satisfying requirements. Such requests should be made during the first two weeks of any given academic term, or as soon as possible after a need for accommodation is known to exist.

e) If you have been affected by sexual violence, the Human Rights & Equity Office offers support, information, reasonable accommodations, and resources through the Sexual Violence Support & Education Coordinator. For information on sexual violence, visit Brock's Sexual Assault and Harassment Policy or contact the Sexual Violence Support & Response Coordinator at humanrights@brocku.ca or 905 688 5550 ext. 4387.

f) If you feel you have experienced discrimination or harassment on any of the above grounds, including racial, gender or other forms of discrimination, contact the Human Rights and Equity Office at humanrights@brocku.ca.

Requirements for Written Assignments 1. All research assignments must adhere to MLA style, in-text citation, Works Cited.

2. All written assignments will be marked with attention to style, grammar, and spelling.

Disclaimer About Sensitive Material Due to the nature and the themes of this course, there will occasionally be inclusion of sensitive material presented in lectures, films, readings, and discussion (i.e.: themes surrounding issues of sexuality, politics, religion, etc.). By remaining in the course, a student is understood to have given their informed consent to exposure to such materials.

Grading Below is an excerpt from the Brock University Undergraduate Calendar that outlines the grades assigned in undergraduate courses. As of May 2010, the following grades are awarded for undergraduate courses:

A - 90 to 100 Reserved for students where work is of outstanding quality that provides clear evidence of a rare talent for the subject and of an original and/or incisive mind.

A - 80 to 89 Awarded for excellent, accurate work in which evidence of a certain flair for and comprehension of the subject is clearly perceptible.

B - 70 to 79 Indicates competent work that shows a sound grasp of the course goals without being distinguished.

C - 60 to 69 Represents work of adequate quality which suffers from incompleteness or inaccuracy.

D - 50 to 59 Given where the minimum requirements of a course are barely satisfied.

F - 49 or lower Means that minimum requirements have not been met and no credit has been given for the course.

See the University Calendar (Academic Regulations and University Policies, Section VI) for more information on Grading and Student Evaluation at Brock University.

Course Bibliography

Benjamin, Walter. "The Work of Art in the Age of Mechanical Reproduction" Walter Benjamin <https://www.marxists.org/reference/subject/philosophy/works/ge/benjamin.htm> Berghaus, Günter. "Performances in Cyberspace." *Avant-garde performance: live events and electronic technologies*. New York: Palgrave Macmillan, 2005. 236-257. Chapman, Rob. *Psychedelia and Other Colours*. London: Faber and Faber, 2015. Doyle, Michael William. "Staging the Revolution: Guerilla Theater as a Countercultural Practice, 1965-68." *Imagine Nation: The American Counterculture of the 1960s and '70s*. E eds. Peter Braunstein and Michael William Doyle. New York: Routledge, 2002. 71-91. Gordon, Kim. *Is It My Body? Selected Texts*. Berlin: Sternberg P, 2014.

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Grau, Oliver. "Intermedia Stages of Virtual Reality in the Twentieth Century: Art as Inspiration of Evolving Media." *Virtual Art: From Illusion to Immersion*. Cambridge: MIT Pr, 2003. 141-169. Higgins, Hannah. *Fluxus Experience*. Berkeley: U of California P, 2002. 17-33, 88-99. Kaplan, Louis. "John and Yoko's Media War for Peace." *Imagining Resistance: Visual Culture and Activism in Canada*. Eds. J. Keri Cronin and Kirsty Robinson. Waterloo: Wilfred Laurier UP, 2011. 55-73. Kaprow, Allan. *How To Make a Happening*. Primary Information, 2009. Kearney, Mary Celeste. "Brought to You by Girl Power: Riot Grrrl's Networked Media Economy." *Girls Make Media*. New York: Routledge, 2006. 51-89. Marinetti, F.T. from "The Futurist Manifesto." *Modernism: An Anthology*. Ed. Lawrence Rainey. United Kingdom: Blackwell, 2005.3-6. ——. <http://www.italianfuturism.org/manifestos/foundingmanifesto/> McLuhan, Marshall. "The Medium is the Message." *The Anthropology of Media: A Reader*. Eds. Kelly Askew and Richard R. Wilk. United Kingdom: Blackwell, 2002. 18-26. Russolo, Luigi.

“The Art of Noises: Futurist manifesto.” *Audio Culture: Readings in Modern Music*. Eds. Christoph Cox and Daniel Warner. New York: Continuum, 2004. 10-14. Shanken, Edward A. “Historicizing Art and Technology: Forging a Method and Firing a Canon.” *Media Art Histories*. Ed. Oliver Grau. Cambridge: MIT P, 2007. 44-67. Tate, Joseph. “Radiohead’s anti-videos: works of art in the age of electronic reproduction.” *The Music and Art of Radiohead*. Ed. Joseph Tate. Aldershot, UK: Ashgate, 2005.

Extended Reading List

Arn, Robert. “The Form and Sense of Video/ Michael Snow and Video: The Archaeology of an Image.” *Artscanada*. October 1973: 15-24. Barnard, Malcolm. *Approaches to Understanding Visual Culture*. New York: Palgrave, 2001. Barnett, Sylvan. *A Short Guide to Writing About Art*. 9th ed. Upper Saddle River, N.J.: Pearson/Prentice Hall, 2008. Bürger, Peter. *Theory of the Avant-garde*. Tr. Michael Shaw. Minneapolis: U of Minnesota P, 1984. Kirk, Andrew. “Appropriating Technology: The Whole Earth Catalog and Counterculture Environmental Politics.” *Environmental History* 6.3 (2001). 374-394. Comer, Stuart, ed. *Film and video art*. London: Tate, 2009. Frith, Simon. *Performing Rites: On the Value of Popular Music*. Cambridge, Mass.: Harvard UP, 1996. Gayford, Martin. *Modernists & Mavericks: Bacon, Freud, Hockey and The London Painters*. London: Thames & Hudson, 2018. Hanhardt, John G. *The Worlds of Nam June Paik*. New York: Guggenheim Museum, 2000. Hansen, Mark B.N. *New Philosophy for New Media*. Cambridge, MA: MIT P, 2006. Lovejoy, Margot. *Postmodern Currents: Art and Artists in the Age of Electronic Media*. Upper Saddle River, NJ: Prentice Hall, 1997. McLuhan, Marshall. *Understanding Media: The Extensions of Man*. New York: McGraw Hill, 1964. ---, with Quentin Fiore. *The Medium is the Massage*. New York and Toronto: Random House, 1967. Mirzoeff, Nicholas. *An introduction to Visual Culture*. New York: Routledge, 2009. Rose, Gillian. *Visual Methodologies: An Introduction to the Interpretation of Visual Materials*. California: SAGE Publications, 2007. Rush, Michael. *New Media in Late 20th Century Art*. New York: Thames & Hudson, 1999. Wagman, Ira. “The Suspicious and the Self-Promotional: About Those Photographs We Post on Facebook.” *Visual Communication and Culture: Images in Action*. Ed. Jonathan Finn. Toronto: Oxford UP, 2012. 145-154

ERSC 3P94 Planetary Sciences

New proposed course, outline tentative

ERSC 3P94
Planetary Sciences

Tools for planetary Exploration, Planetary Processes, terrestrial planets, icy and rocky satellites, small bodies, Planetary Frontiers

Lectures, Seminar

Course outline:

Topics to be covered:

Tools and Techniques

Geological Reasoning, Terrestrial Analogs, Relative Stratigraphy

Data from Orbit, landers and rovers

Planetary Processes

Formation of Meteorites, Impact Cratering

Endogenic process, tectonism, Magmatism and Volcanism

Surface process, Atmospheric, water and ice, Chemical and mass wasting

Terrestrial planets

Overview, early phases, divergences

Icy and rocky satellites and small bodies

Overview, of satellites of each out planet

Similarities and differences

Small bodies and dwarf planets

Planetary Frontiers

Terraforming, colonization, commercialization of space, the search for life

Text book: Planetary Geology; Editors: Rossi, Angelo Pio, van Gasselt, Stephan (Eds.), Springer, 1st ed. 2018, LXV, 433 p. 166 illus., 112 illus. in color.

Assessment: Mid-Term, Biweekly abstract on assigned reading, seminar presentations, major essay.

3P04 Science Communication

Proposed course, outline tentative

ERSC 3P04, Science Communication

Sample Course Outline

Description

This course provides an overview of the history, theory, best practices, and key issues in science communication, particularly in Earth and Planetary sciences. This course examines the role of the science communicator in public engagement, policymaking, and academic and popular communication. It considers the issues and challenges of science communication in a range of fields, including politics, business, and journalism. Science communication on the Internet and social media will also be examined. Finally, the course addresses overcoming challenges to effective science communication, including risk, pseudoscience, and misinformation.

Suggested Topics

- What is science communication? What roles do science communicators play in government, private business, and journalism?
- The history and current state of science communication
- Knowledge translation: Communicating effectively to non-specialist audiences
- “The Medium is the Message”: Medium theory and science communication
- Science journalism: Historical and contemporary writers and broadcasters
- Creating relationships and engagement between NGOs, governments, or corporations and stakeholders: Effective public relations for science communication
- The role of the science communicator in politics and policymaking
- Going beyond the abstract: Using stories in science communication
- Principles of effective science communication for writing and presentations
- Communicating science risk to the public
- Countering misinformation, disinformation, and pseudoscience
- From scientific publication to popular science: limitations and advantages
- Cosmos, earthquakes, life and dinosaurs: An overview of Earth and Planetary Sciences in popular books and films
- Social media, podcasts, and blogs in the work of science communication
- The mass media coverage of science: Positives and negatives
- Scholarly science communication: Researching, writing, publishing journal articles and reports
- Models of science communication: Deficit, dialogue, and public participation

ERSC 3P01

ERSC 3P01
Structural Geology

Times and Locations:

ERSC 3P01 Lab	W	1400-1700	MCD308
ERSC 3P01 Lectures	M F	900-1000	MCD308

Note: Classes at Brock University complete ten minutes ahead of the hour or half hour to facilitate transfer time.

Instructor Name: Frank Fueten

Email: ffueten@brocku.ca

Contact: ***please don't call me***

Teaching Assistants: TBA

Liaison Librarian: Ian Gordon

<http://researchguides.library.brocku.ca/profile.php?uid=51286>

Course Calendar Description:

Measurement and effects of stress and strain. Genesis of brittle and ductile structures and their classification. Methods of structural analysis.

Course Prerequisites: ERSC 2P17

Learning Objectives/Outcomes:

- 1) Gain better understanding of structural geology.
- 2) Become familiar with real geological data (maps).
- 3) Improve scientific writing skill.

Required Readings or Texts:

Text: Davis and Reynolds; Structural Geology of Rocks and Regions

http://www.amazon.ca/Structural-Geology-Rocks-Regions-George/dp/0471152315/ref=sr_1_fkmr1_1?ie=UTF8&qid=1407935846&sr=8-1-fkmr1&keywords=davies+and+Reynolds+Structural+Geology

Note: either the second or third editions will do. Both cover the bulk of the content; the main difference are as follows:

Cleavage/Foliations are Chapter 8 (ed.2); Chapter 9 (ed. 3)

Shear Zones are Chapter 9 (ed.2); Chapter 10 (ed. 3)

And yes, both versions have errors

Course Communications:

In the event of class cancellations, an announcement will be made through Sakai - unless the internet is down, I've been abducted by aliens, or am otherwise indisposed.

Course Assignments and Due Dates

Assessment	Grade Weight	Due Dates
Individual Labs	15%	as assigned
Mid term Exam (Lab portion)	15%	In lab tba
Mid term (Lecture portion)	15%	In lab tba
Essay	15%	Monday April 9, 2018
Abstract	05%	Wed April 4, 2018
Final Lab Exam	15%	TBA
Take Home Exam	15%	TBA
Participation	05%	

Late Submission Policy:

The penalties for late submission of assigned coursework (e.g., papers, assignments, weekly reflections) are 10% per day, unless accompanied by medical documentation or discuss prior with the TA. See Medical Exemption Policy.

Important dates: (check the [online University calendar](#) for makeup days due to holidays)

3/9/2018 is the date for withdrawal from the course without academic penalty.

Academic Policies

Academic Integrity:

Statement for undergraduate courses

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.

Statement for graduate courses

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section XVII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in

the Graduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.

*If plagiarism software is used (ie. Turnitin), a statement to that effect must be included on the outline including an option to opt out.

Turnitin.com sample statement

This course may use Turnitin.com, phrase-matching software. If you object to uploading your assignments to Turnitin.com for any reason, please notify the instructor to discuss alternative submissions.

If students are being evaluated on collaborative assignments or activities, include a statement indicating what constitutes inappropriate collaboration.

Academic Accommodation Statement:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Services for Students with Disabilities in the Student Development Centre (4th floor Schmon Tower, ex. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

Academic Accommodation due to Religious Obligations:

Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements.

Medical Exemption Policy:

The University requires that a student be medically examined in Health Services, or by an off-campus physician prior to an absence due to medical reasons from an exam, lab, test, quiz, seminar, assignment, etc. The Medical Certificate can be found at: <http://www.brocku.ca/health-services/policies/exemption>

Sequence and Dates of focus/activities/readings

Note all dates are approximate and may vary

Week 1:

Introduction, (Chapter 1)
Week 2

Kinematic Analysis (Strain) (Chapter 2)
Week 3

	<i>Kinematic Analysis (Strain)</i>	<i>(Chapter 2)</i>
Week 4		
	<i>Dynamic Analysis (Stress)</i>	<i>(Chapter 3)</i>
Week 5		
	<i>Dynamic Analysis (Stress)</i>	<i>(Chapter 3)</i>
Week 6		
	<i>Deformation Mechanisms & Microstructures</i>	<i>(Chapter 4)</i>
Week 7		
	<i>Joints</i>	<i>(Chapter 5)</i>
Week 8		
	<i>Faults</i>	<i>(Chapter 6)</i>
Week 9		
	<i>Folds</i>	<i>(Chapter 7)</i>
Week 10		
	<i>Cleavage/Foliations</i>	<i>(Chapter 8 or 9)</i>
Week 11		
	<i>Shear Zones</i>	<i>(Chapter 9 or 10)</i>
Week 12		
	<i>Review or catch-up</i>	

Essay Details:

Topic: - Structure topic of your choice based on 3 journal references (no web pages).

First page of the 3 journal papers that will be used are due before reading week.

(We will try to avoid duplication in the class)

All essays must contain:

- Abstract
- Introduction
- topic (explanation of principle/ examples from literature)
- Discussion or Conclusion
- References *(at least three papers from scientific journals)*
- Figures

All essays must be word-processed. Ten (10) pages of text is the maximum length.

Note: the Abstract is the same abstract that is worth 5% of the grade and due earlier. This forces you to decide on a topic earlier in the term. I will ask you to decide on a topic by the end of September and will want to see your 3 references before reading week.

Possible Essay Topics:

Most subheadings in the text can be used as an essay topic. Any geological topic of primarily structural in nature is acceptable as a topic. Some examples that could be used are: Transpression, fracture propagation, dike propagation, stress in the lithosphere, paleopiezometry, superplasticity, creep models, strain hardening, strain softening, pseudotachylites, rheological models, deformation of ice, deformation mechanism maps, recrystallization during deformation, pressure solution cleavage, boudinage, stylolites, sheath folds, thrust faulting, comparison of two strain techniques, rotation of garnets during deformation, discussion of development of some particular microstructure.

ERSC 3P03

ERSC 3P03
Paleontology and Paleobiology
M, W 10-11 AM; Lab F 2-5 PM
Instructor: Francine McCarthy, MC D418, X4286 (fmccarthy@brocku.ca)
Teaching Assistants: Aaron Alderson, Autumn Heyde

Reference book (on 1-day reserve in library): MJ Benton & DAT Harper (2009) *Introduction to Paleobiology and the Fossil Record*

Marking Scheme: (note: late penalty: -10%/ working day; no labs accepted after assignments are returned)

Labs- 7*5% each- 35%

Term Tests February 8, March 1 - 10% each

Book report - Sci fi novel *Calculating God*, by Robert Sawyer OR Field trip attendance (Port Colborne Quarry, Mar. 30) and report- 6%- April 3

Lab Exam April 5 - 14%

Final Exam - 25% (to be scheduled by Registrar)

Week 1

Jan. 7- Lecture 1: Introduction- the fossil record (Ch. 1, 3)

Jan. 9- Lecture 2: Fossils in time and space- biostratigraphy and biogeography (Ch. 2) (AH)

Jan. 11- Lab 1: Fossilization; Overview of Earth History; Classification and Cladistic Analysis (Autumn)

Week 2

Jan. 14- Lecture 3: Origin of Life; Origin of Eukaryotes, Predation & Metazoans (Ch. 8, 10) (AH)

Jan. 16- Lecture 4: Review of Earth History; Macroevolution and the tree of life (Ch. 5) (AH)

Jan. 18- Lab 1 (con't)

Week 3

Jan. 21- Lecture 5: Macroevolution and the tree of life (evolution and the fossil record) (con't)

Jan. 23- Lecture 6: Basal Metazoans: sponges & corals (Ch. 12) (AA)

Jan. 25- Lab 1 due 2PM Lab 2: Basal Metazoans; skeletonization & reefs (Aaron)

Week 4

Jan. 28- Lecture 7: Spiralian I: Lophophorate Animals- bryozoans & brachiopods (Ch. 13) (AA)

Jan. 30- Lecture 8: Lophophorate Animals (con't); Spiralian II: Molluscs (Ch. 13); Review (AA)

Feb. 1- Lab 3: Bryozoans & Brachiopods; evolution; homologs vs. analogs (Autumn); Lab 2 due 5PM

Week 5

Feb. 4- TERM TEST 1 (Lectures 1 through 8, labs 1, 2)

Feb. 6- *Lecture 9: Molluscs (con't) (AA)*

Feb. 8- *Lab 4: Molluscs; paleoecology & functional morphology (Aaron); Lab 3 due 5PM*

Week 6

Feb. 11- *Lecture 10: Functional Morphology (Ch. 7); tests returned*

Feb. 13- *Lecture 11: Fossilized behaviour: trace fossils (Ch. 19) (AA)*

Feb. 15- *no new lab; Lab 4 due 5PM*

READING WEEK

Week 7

Feb. 25- *Lecture 12: Ecdysozoa: Arthropods (Ch. 14) (AA)*

Feb. 27- *Lecture 13: Arthropods (con't); Terrestrialization (AA)*

Mar. 1- *Lab 5: Arthropods; trace fossils; Terrestrialization (Aaron)*

Week 8

Mar. 4- *Lecture 14: Deuterostomes I: Echinoderms (Ch. 15) (AH)*

Mar. 6- *Lecture 15: Deuterostomes II: Hemichordates & early chordates; Fish, Amphibians (Ch. 15) (AH)*

Mar. 8- *Lab 6: Deuterostomes: Echinoderms; Hemichordates & Chordates (Autumn); Lab 5 due 5PM*

Week 9

Mar. 11- *Lecture 16- Deuterostomes III: Amniotes (Ch. 16, 17)*

Mar. 13- *Lecture 17- Extinction, Mass Extinctions & the fossil record (Ch. 7)*

Mar. 15- *(no new lab) Lab 6 due 5PM*

Week 10

Mar. 18: *Term Test #2 (Lectures 9 through 17, labs 4 through 6)*

Mar. 20- *Lecture 18- Microfossils (Ch. 9) (AA +AH)*

Mar. 22- *Lab 7: Micropaleontology; paleoecology; biostratigraphy (Aaron & Autumn); prepare for field trip or read novel*

Week 11

Mar. 25- *Lecture 19- Microfossils (con't) (AA +AH)*

Mar. 27- *Lecture 20- Paleoeecology & paleoclimatology (Ch. 4)*

Mar. 29- *Lab 7 (con't): Micropaleontology; paleoecology; biostratigraphy; Lab 7 due 5PM*

Mar. 30 *Field Trip- Port Colborne Quarry Saturday 1-4PM (Autumn) or read sci-fi novel (Aaron)*

Week 12

Apr. 1- *NO LECTURE; prepare field trip or book report; review for lab exam*

Apr. 3- *Lecture 21- Review (Lab 7 returned); Review for lab exam; Field trip or book reports due*

Apr. 5- *2:30 & 3:45 Lab Exam*

GEOG 3P05/ ERSC 3P05

GEOG 3P05
Introduction to Geographic Information Systems

Instructor Name: Dr. Kevin Turner Teaching Assistant: Brooke Kapeller
Email: kturner2@brocku.ca Email: bkapeller@brocku.ca
Contact: 905-688-5550 ext.
Office: MC C330
Office Hours: Monday 1:00 pm - 3:00 pm (please email to set up a meeting)

Times and Locations:

Lecture: Tuesday, 12:00 pm - 1:50 pm, in ST107

Lab (Section 1, Brooke): Tuesday, 12:00 pm - 1:50 pm,

in CA217 Lab (Section 3, Kevin): Wednesday, 2:00 pm

- 3:50 pm in CA 217 Course Calendar Description:

Principles and use of geographic information systems (GIS) as a tool for investigating and communicating spatial patterns in natural and anthropogenic systems. Techniques include data acquisition, data management, spatial analysis, application development and cartographic display.

Additional Description:

Course content strikes a balance among GIS concepts, theoretical background, and hands-on use of analytical techniques using industry-standard GIS software (e.g., ArcMap). Lecture material will provide students with theoretical and practical examples of how GIS is used, while labs will provide a forum for students to implement their own spatial analysis to solve research questions. Students will be introduced to data acquisition techniques, data management, georeferencing, geoprocessing, spatial modeling, spatial statistics, and cartography.

Course Prerequisites:

GEOG 2P07

Learning Objectives/Outcomes:

The aim of this course is to introduce students to how to implement the steps required to utilize GIS as a decision-making tool. Students will learn how to access, display and analyze both vector and raster spatial datasets. Additionally, students will gain an understanding of 'responsible' mapping through critical examination of existing maps as well as their own work.

Required Readings or Texts:

The following textbooks is required for this course in either hard copy or e-copy. It

provides valuable resources that effectively summarize course content in both lectures and labs. Keep in mind that lectures will expand on the content of the textbook, for example, by providing examples of how techniques in GIS are being used to make decisions. If price is an issue, you should opt for the e copy. Please inquire in the bookstore for details.

Jensen, R.J., and Jensen, R.R. (2013) Introductory Geographic Information Systems. Pearson Education Ltd. Illinois, USA. ISBN: 978-0-13-614776-3 (hard copy) or 978-0-321-88535-7 (e version)

Course Communications:

Course updates will be communicated through posted ‘Announcements’ on Sakai, which is forwarded to each student’s Brock email address. Updates may include availability of additional course resources or class/lab cancellations (e.g., in the event inclement weather). Course resources including lecture notes and lab assignments will be posted as ‘Resources’ in Sakai. A Forum will be created in Sakai for students to post online examples of how GIS is being used, in an effort to earn participation marks. Sakai will also be used to provide a forum for students to ask and answer questions when completing lab assignments, which students can earn additional participation marks for helping to resolve. Regarding any additional questions, students should either email the course or lab instructor directly or stop by for a chat during office hours.

Course Timetable

Week	Lecture and Laboratory Schedule		Jensen text Readings
Beginning			
Jan. 7	Lecture	Introduction to GIS	Ch. 1
(Week 1)	Lab	No lab this week	
Jan. 14	Lecture	Georeferencing; Cartography Using a GIS	Ch. 2 and 10
(Week 2)	Lab	Lab 1: Introduction to ArcMap	
Jan. 21	Lecture	Data for GIS / Data Quality	Ch. 3 and 4
(Week 3)	Lab	No lab this week	
Jan. 28	Lecture	Spatial Data Models and Databases	Ch. 5
(Week 4)	Lab	Lab 2: Data Acquisition and Processing (Lab 1 due)	
Feb. 4	Lecture	Spatial Analysis of Vector and Raster Data	Ch. 6
(Week 5)	Lab	Lab 3: Spatial Analysis of Vector Data (Lab 2 due)	
Feb. 11	Lecture	Network Analysis	Ch. 7
(Week 6)	Lab	Work period for lab 3. Midterm (Lab 3 due during lecture)	
Feb. 18	Reading Week		
Feb. 25	Lecture	Statistics and Spatial Data Measurements	Ch. 8 and 9
(Week 7)	Lab	Lab 4: Raster and Network Analysis (Midterm due at start of	

Mar. 4	Lecture	GIS Hardware/Software and Programming	
(Week 8)	Lab	Lab 5: Automating tasks in GIS (Lab 4 due)	
Mar. 11	Lecture	Guest Lecture: Web GIS	Ch. 11
(Week 9)	Lab	Work Period	
Mar. 18	Lecture	Getting creative with GIS: A northern Canadian Case Study	
(Week 10)		Work Period (Lab 5 due)	
Mar. 25	Lecture	Future Considerations	Ch. 12
(Week 11)	Lab	Work Period	
Apr. 1	Lecture	Review (Final Assignment due)	
(Week 12)	Lab	No lab this week	

Course Evaluation

Required Element	Worth (%)	Description
Labs	45%	You must complete all of the lab assignments in this course (5 labs x 9% each).
Mid-term exam	10%	To be provided in lab on the week of Feb. 25.
Final assignment	20%	
Final exam	20%	The final exam will be held during the exam period.
Participation	5%	Marks may be awarded for participation during class, labs, and online (Sakai).

Assignments, Mid-term, and Participation:

ArcMap is the software that will be used for the majority of lab assignments. This is an industry standard product that is used internationally for GIS applications.

Lab 1 will show students the basic analysis features and mapping capabilities of ArcMap. Lab 2 will take students outside to perform some GPS surveying and back to the lab to process the data. Lab 3 provides students with opportunities to develop more technical skills with vector spatial analysis. Lab 4 will give students a chance to work with raster data and perform various analytical tasks including network analysis. GIS and the utility of computer programming will be the focus of Lab 5. Note that no prior computer programming experience is required.

Lab assignments are to be submitted as hard copies at the beginning of the following lab or as specified in the course schedule above. Please note that there is only one week to complete labs 1, 3, 4 and 5. There are two weeks to complete lab 2.

Final assignments should be worked on throughout the term during lab work periods. Students may choose their own topics, and must address a question of spatial context. The assignment will include a map and 6 - 7 page written report. Students can have a partner, but must provide a breakdown of who completed what tasks. The final

assignment is due at the beginning of the last class.

The mid-term exam will be held in the lab. Students will be asked to provide a mapping product and answer short answer questions to resolve a hypothetical problem.

Participation marks may be granted during lectures and labs, as well as when students engage in discussions on Sakai regarding course material. For example, students are encouraged to post links to interesting online examples of how GIS is being used. Students are also encouraged to post any questions they have with course material (e.g., lab assignments), which may be answered by the instructor or other students looking for participation marks.

Late Submission Policy:

The penalties for late submission of assigned coursework are 10% per day, unless accompanied by medical documentation. See Medical Exemption Policy. If handing in a late assignment, please submit it to the lab instructor's mailbox. Ensure that the date of submission is noted on the cover. Note that lost, deleted, or stolen computer files, printer problems, and/or any other computer-related problems will not warrant exemption from late penalties.

Relationship between attendance and grades:

Students are expected to attend all classes and labs and must submit all assignments.

Important dates:

February 18: Family Day

February 18-22: Reading

Week February 19:

President's Holiday

March 8: Last day to withdraw from a Winter D3 course (without academic penalty/no grade) April 5: Last day of lectures

April 8 and 9: Snow/reading days

April 10-24: Exams

April 19: Good

Friday

Academic Policies

Academic Integrity:

Statement for undergraduate courses

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic

Regulations and University Polices” entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties. Students are also reminded that the Student Development Centre (Schmon Tower, Room 400) offers free workshops on writing and study skills and on avoiding plagiarism. More information on plagiarism (and how to avoid it) can be found at: <http://www.brocku.ca/library/help-lib/writing-citing/plagiarism>.

Academic Accommodation Statement:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Services for Students with Disabilities in the Student Development Centre (4th floor Schmon Tower, ex. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

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Medical Exemption Policy:

The University requires that a student be medically examined in Health Services, or by an off-campus physician prior to an absence due to medical reasons from an exam, lab, test, quiz, seminar, assignment, etc. The Medical Certificate can be found at: <http://www.brocku.ca/health-services/policies/exemption>

GEOG 3P07/ ERSC 3P07

GEOG 3P07:
Remote Sensing
Dr. Marilyne Jollineau, Winter Term 2019

Administrative Information

Office Location: Mackenzie Chown, C-Block, Room C325
8. mail: mjollineau@brocku.ca (Brock e-mail accounts only)
Office Hours: By appointment only
Website: Course information can be found on Isaak (Sakai)
Lecture: Mondays from 9-11 AM in Thistle Hall, Room 257 (TH 257)

<u>Labs and Location</u>	<u>Lab #</u>	<u>Time (Cairns 217)</u>	<u>Teaching Assistant</u>	<u>Office Hours</u>
2 (CRN 217)	Wed	12-2 PM	Marilyne Jollineau	in lab room

Course Description

Theory and practice of remote sensing. Multispectral, hyperspectral, thermal, radar and laser imaging of the Earth's surface from airborne and spaceborne platforms. Image interpretation and image-analysis techniques. Lectures, labs, 4 hours per week.
Prerequisite: GEOG 2P07 or permission of the instructor. Also offered as ERSC 3P07.

Course Goal

The main goal of this course is to teach you the theory and practice of remote sensing. Among other activities, the course will involve:

- lectures covering the theoretical and practical aspects of remote sensing;
- the practical application of a range of remote-sensing techniques to analyze problems of a geographical nature (using ENVI 5.5 and other types of software); and
- in-class discussions of remote-sensing methods of solving geographical problems.

Course Learning Objectives

- To develop the knowledge and critical understanding of the key concepts, theories, methods and current advances in remote sensing.
- To acquire the ability to evaluate the appropriateness of different remote-sensing approaches to the study of real-world problems.
- To develop the knowledge and skills needed to undertake the scientific research process; from problem identification and the synthesis of background literature to data acquisition, processing and analysis, and the interpretation of results.
- To acquire the fundamental skills of operating remote-sensing software.
- To develop the ability to communicate information, both orally and in written formats, about remote sensing of the environment.

Course Information

Lectures will be held on Mondays 9-11 AM, Thistle Hall, Room 257 (TH 257).

According to Brock University's Academic Regulations and University Policies (see www.brocku.ca/webcal/2018/undergrad/areg.html#sec58), students are expected to attend all lectures and laboratory periods in which they are registered.

NOTE: Cell phones, iPods or other types of electronic devices are not to be used in the lecture hall, laboratory and/or any examination rooms. Students that use any such devices during a midterm and/or final exam will be awarded a grade of zero on their midterm and/or final exam. Use of a personal laptop computer is permitted in the lecture hall. In the event that the use of such equipment becomes disruptive to other students or the instructor of the course, students will not be permitted to continue using such devices.

All laboratory assignments in this course are to be completed *individually*. You must give credit to all information sources used to answer questions on lab assignments. Citations must be made using the American Psychological Association (APA) Style Guide for citations (Note: this guide has been posted on Sakai for your use). Assignments must be typed with a minimum font size of 12 points. They must also be written in complete sentence format. Assignments should be proofread for spelling and grammar before they are submitted. Please include your full name, student number, full TA name, course code, and lab session number on all of the work you submit for this course. You must staple your lab assignment together. TAs are not responsible for lost pages of lab assignments that are submitted unbound or bound with paper clips. Please number each page of your lab assignment. Soft copies of lab assignments (i.e., those submitted via e-mail) will *not* be accepted in this course. Failure to follow these assignment instructions will result in a grade deduction (or a grade of zero, depending on the severity of the problem) on course assignments. You will have access to the machines and printers located in the new Cairns Building (CRN 217) during regularly scheduled lab times. Additional time will be required outside of lab time for independent study, to complete assignments, and to develop necessary skills. You must test your lab account in the first week of the term. Also, make good use of your time in the lab each week. This is your opportunity to ask questions about assignments, seek clarification from your TA to better understand his/her expectations of you, and to obtain useful information from your TA. Do not assume that the lab room (CRN 217) will always be available for your use outside of the regularly scheduled lab times. Outside of the lab hours, you may be able to use the computers in the Computer Commons to access the course data and software. Please consult with the Information Technology Services (ITS) website (brocku.ca/information-technology/info/computer-labs-and-printing/lab-hours/) for other computer lab locations, information on lab computer availability (in real time) and hours of operation. These schedules may change so please consult this website on a regular basis.

Important University Dates

The date for withdrawal from a D3 course without academic penalty is March 8, 2019. Students in this course will be aware of (at least) 15% of their final grade on or before March 4, 2019. Students are encouraged to review other important university deadlines and dates posted on the Brock University website (see brocku.ca/important-dates/).

Course Evaluation	Worth (%)	Description of Element
Labs*	40%	You must complete all lab assignments in this course (a total of four labs; labs are worth 10% each).
Midterm Exam	25%	To be held in class on Monday February 11, 2019.
Final Exam	35%	The final exam will be held during the exam period (April 10-24, 2019).

* Lab assignments must be submitted at the *beginning* of the lab session in which you are registered. A penalty of 10% per day is assessed for any assignment that is submitted after the lab session begins on the due date for any reason other than one supported by *sufficient* medical documentation. It should be noted that lost, deleted, or stolen computer files, printer problems, and/or any other computer-related problem that results in a late lab submission will not warrant exemption from late penalties.

NOTE: The University endeavours to accommodate students whose studies become interrupted, or who may be unable to complete academic work, due to an incapacitating medical condition. In these situations, the student must complete a Brock University Student Medical Certificate (see brocku.ca/healthservices/policies/exemption) and include any relevant medical documentation to support his/her request for academic accommodation based on medical grounds. The University may, at its discretion, request more detailed documentation in certain cases.

Final exams are scheduled on every day of the week, except Sundays. It is your responsibility to make sure that you are present for the final exam. The exam schedule is normally posted by mid-March.

Laboratory Assignments

Laboratory work will necessitate the purchase of some form of external backup media (a 16GB USB memory key or some other form of external backup media is recommended). You are responsible for maintaining regular backups of your work. Do not backup files to your X: drive space (this could impact your e-mail account since you have less storage space on this drive). Thus, additional hard-drive space has been created for you (based on your user name) under the folder labeled GEOG 3P07 on the W: drive. The W: drive is not an alternative to a USB key. It is simply an environment for you to work in with ample hard-drive space (your files will not be deleted from this space but they will also NOT be backed up by ITS. So, if something happens to that drive, which is entirely possible, you will lose all of your work for the term). Please note that it is your responsibility to save your work to a secure location. All assignments submitted for evaluation in this course will be returned during the lab session in which you are registered. The collection of graded lab assignments for other students in the course will not be permitted.

Course Timetable

Week Beginning	Lecture and Laboratory Schedule	Suggested Readings
Jan. 7 (Week 1)	Lecture Introduction to Course	Ch. 1
	Lab <i>Labs start the week beginning January 21, 2017 (in Cairns 217)</i>	
Jan. 14 (Week 2)	Lecture The Remote-sensing Process; Digital Data Acquisition and Data Quality Assessment	Ch. 4
	Lab <i>Labs start the week beginning January 21, 2017 (in CRN 217)</i>	
Jan. 21 (Week 3)	Lecture Satellite Platforms and Sensors; Data Preprocessing	Ch. 5 and 6
	Lab Introduction to Lab 1 (due the week beginning February 4)	
Jan. 28 (Week 4)	Lecture Transformations of Image Data (Part I)	Ch. 7 (7.1-7.6)
	Lab Lab 1 Help Session (Note: students are expected to attend lab during	
Feb. 4 (Week 5)	Lecture Transformations of Image Data (Part 2)	Ch. 7 (7.7-7.15)
	Lab <i>Lab 1 is due at the beginning of your lab session this week. Lab assignment 2 is introduced in lab this week. (Lab 2 due</i>	
Feb. 11 (Week 6)	Lecture MIDTERM EXAM: in-class exam on Monday February 11, 2019	<i>Review readings to</i>
	Lab Lab 2 Help Session	
Feb. 18-22	*** Winter Reading Week ***	
Feb. 25 (Week 7)	Lecture Digital Image Classification (Part 1)	Ch. 7 (7.7-7.23)
	Lab <i>Lab 2 is due at the beginning of your lab session this week. Lab assignment 3 is</i>	
Mar. 4 (Week 8)	Lecture Digital Image Classification (Part 2)	Ch. 8 (8.1-8.8)
	Lab <i>No lab session this week.</i>	
Mar. 11 (Week 9)	Lecture Accuracy Assessment and Microwave Remote Sensing	Ch. 8 (8.9-8.16)
	Lab Lab 3 Help Session	
Mar. 18	Lecture Digital Change Detection	<i>Review of suggested readings to date.</i>
	Lab <i>Lab 3 is due at the beginning of your lab session this week. Lab assignment 4 is introduced in</i>	
Mar. 25	Lecture Thermal, LiDAR and Other Forms of Remote Sensing	
	Lab Lab 4 Help Session	
Apr. 1	Lecture Course Summary and Exam Review	

(Week	Lab	Lab 4 is due at the beginning of your lab session this	
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Suggested Course Readings

Lillesand, T.M, R.W. Kiefer, and J.W. Chipman, 2015. *Remote Sensing and Image Interpretation*. Seventh Edition, New York, USA: John Wiley and Sons Inc., 72063 pp. ISBN: 978-1-118-34328-9.

This textbook is on reserve in the Maps, Data, and GIS Library.

Supplemental Reading List

In addition to electronic resources, several remote-sensing textbooks are available in the James Gibson Library. Academic journal titles are also available (in print or electronically) through the library. Some examples include:

International Journal of Remote Sensing * *ISPRS Journal of Photogrammetry and Remote Sensing* * *Photogrammetric Engineering and Remote Sensing* * *Remote Sensing* * *Remote Sensing of Environment* *

Students with Special Needs

As part of Brock University’s commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the University Community with disabilities. If you require accommodations related to a permanent disability to participate in this course, you are encouraged to contact the Student Development Centre Services for Students with Disabilities (4th Floor, Schmon Tower, ext. 3240) and discuss these accommodation(s) with the professor. If you are a student with special needs and you require examination accommodations, please consult the Services for Students with disabilities Office early in the academic term.

Academic Integrity

Because academic integrity is vital to the well-being of the university community, Brock University takes academic misconduct very seriously. Academic misconduct includes plagiarism, which involves presenting the words and ideas of another person as if they were your own, and other forms of cheating, such as using crib notes during a test or fabricating data for a lab assignment. The penalties for academic misconduct can be very severe. A grade of zero may be given for the assignment or even for the course, and a second offense may result in suspension from the University. Students are urged to read the section of the Brock University Undergraduate Calendar that pertains to academic misconduct (see www.brocku.ca/webcal/2018/undergrad/areg.html#sec68). Students are also reminded that the Student Development Centre (Schmon Tower, Room 400) offers free workshops on writing and study skills and on avoiding plagiarism.

More information on academic misconduct (and how to avoid it) can be found at: www.brocku.ca/academic-integrity.

ERSC 3P12

ERSC 3P12
Stratigraphy
Winter 2018-2019

Prof. M. J. Head, Mackenzie Chown Complex, Rm D425, mjhead@brocku.ca

TEACHING ASSISTANTS:

Farzaneh Haj Soltan (fhhajsoltan@yahoo.com), MCC, Rm D415

Taghi Farmani (tf18gg@brocku.ca), MCC, Rm D448

TEXT BOOKS: None.

LECTURES (room D319):

Wednesdays and Thursdays, 11.00-12.00 noon.

Possibly the occasional Monday 11.00-12.00 noon as necessary, with advance notice given.

First lecture: January 9, 2019.

Last lecture: nominally April 4, 2019 (April 8 and 9, snow/reading days).

All lecture presentations are placed on SAKAI.

LABS (room D308, NOT as for lectures):

Thursdays, 2.30-4.30 pm (not 2.00-4.00 pm as scheduled). All students will attend Lab 1, a 1-hour introduction, on January 10. The class will then be split into two groups, A and B.

Schedule as follows:

Lab 1 - Groups A and B on January 10.

Lab 2 - Group A on January 17, Group B on January 24.

Lab 3 - Group A on January 31, Group B on February 7.

Lab 4 - Group A on February 14, Group B on February 28.

Lab 5 - Group A on March 7, Group B on March 14.

Lab 6 - Groups A and B on March 21.

Attendance at labs is MANDATORY.

MIDTERM TEST in Rm D319, February 13 during scheduled lecture; 50 minute duration.

FINAL EXAM During the exam period April 10-24 inclusive (to be announced by Registrar's Office); 2 hour duration.

Lab Assignment - Subsurface Project

Deadline for submission of report: March 28 (at 4.00 pm).

Grade Distribution

- Midterm test 25%
- Subsurface Project 25%
- Participation 10%
- Final exam 40%

There is a deduction of 10% per working day for late submission of the Subsurface Project. You may choose to consult one another during labs, but remember that all collected data, interpretations, correlations, and the completed lab assignments are YOUR work alone and do not represent a collective effort. An automatic phrase-matching system is not routinely used for ERSC 3P12 lab assignment, but any suspect content will be checked.

N.B. All lecture materials downloaded from SAKAI are the intellectual property of Prof. Head / Brock University and are strictly for the personal use of students enrolled in this course.

Academic Policies

Academic Integrity:

Statement for undergraduate courses

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Polices" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.

Intellectual Property Notice:

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

Academic Accommodation for Students with Disabilities:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Student Accessibility Services in the Student Development Centre (4th floor Schmon Tower, ex. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

Academic Accommodation due to Religious Obligations:

Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements.

Medical Exemption Policy:

The University will accommodate students whose studies become interrupted, or who may be unable to complete academic work, due to an incapacitating medical condition. In these situations, the student must complete the Brock University Student Medical Certificate or Brock University Student Health Services Medical Certificate (or in case of a concussion, the Brock University Student Health Services Medical Concussion Certificate) and include any relevant medical documentation to support his/her request for academic accommodation based on medical grounds. The University may, at its discretion request more detailed documentation in certain cases.

ERSC 3P24

ERSC/Geog 3P24
GLACIAL GEO(MORPHO)LOGY
Prof. J. Menzies, Phone: 905 688 5550
Ext. 3865, Office: D421,
jmenzies@brocku.ca

Teaching Assistants: Jamie Sapera
js18ks@brocku.ca Jonathan Walmsley jw08yh@brocku.ca

Course Description: This course aims to introduce students to a practical guide to many aspects of glacial geology/geomorphology. Glacial geology/geomorphology provides a window into past and modern glacial processes and environmental conditions permitting reconstruction of past environments and environmental change.

Course Textbook: *Past Glacial Environments: John Menzies & Jaap van der Meer (eds.), Elsevier*

Course Objectives:

An introduction to elementary glacier physics and to the interaction of glaciers and the earth's surface. Studies will examine the processes of erosion, transportation and deposition within the many glacial sub-environments in both modern and past glacial environments. Emphasis will be placed upon understanding glacial sedimentology within a glaciodynamic framework.

- To provide students with a theoretical and practical introduction to Glacial Geology/ Geomorphology. Students are introduced to key areas through lectures, readings, which include books, and academic journals. Course assignments will also be used to enhance students' practical and theoretical knowledge.
- To build on the knowledge of glacial geology/geomorphology introduced in ESRC/Geog 2P05.
- To develop students' conceptual, evaluative and diagnostic skills in understanding glacial soils & sediments.
- To develop students' skills in analysis, synthesis and evaluation as applied to lecture material and lab assignments.

Course Requirements:

Test 1 (25%) (No make-up Tests unless under critically extenuating circumstances with full documentation)

Test 2 (25%) (No make-up Tests unless under critically extenuating circumstances with full documentation)

The TWO tests based on course material to date, e.g. material from Lectures and Labs. The format will be explained in class. If any Test is missed a medical note and an explanation must be given within 3 days of the test date.

Labs (25%) All Labs must be attended. All Labs Assignments must be handed in no later than 14 days after the submission date, otherwise a mark of zero will be recorded. If any Lab is missed a medical note and an explanation must be given within 3 days of the actual Lab date.

Labs will cover the following topics, if possible - given the vagaries of weather etc., not necessarily in the following order: till provenance, till fabrics, lithofacies analyses, a field trip to Lake Erie Bluffs near Mohawk Bay.

Each submitted Lab Assignment must be accompanied by a Statement of Integrity Form (see below) and mandatory attendance at the time of the Field Trip.

Essay (25%) An essay on “The Worldwide Impact of Global Climate Change on Glaciers and Ice Sheets”.

The essay should be no longer than 4000 words, must be word processed and where necessary neatly illustrated. The essay must be submitted by email to your Teaching Assistant. No essay will be accepted after the final submission date without a medical certificate (Essay final submission date (last day of classes) is Tuesday 27th November.)

Special Note - All components in the course are essential parts of the course. A passing grade on each course grade component must be received in order to pass the course.

RESTRICTION & PREREQUISITES: Please see the University Calendar.: (<http://www.brocku.ca/webcal/2018/undergrad/>)

PLAGIARISM: Please consult the Brock University Undergraduate Calendar regarding plagiarism. The Policy on Plagiarism will be Strictly Enforced.

ACADEMIC ACCOMMODATION FOR STUDENTS WITH DISABILITIES: As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Services for Students with Disabilities in the Student Development Centre (4th floor Schmon Tower, ex. 3240). [<https://brocku.ca/news/departments/129>]. You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

In-class Test (II)	25% (20 th Nov.)
Labs/Field Work	25%
Essay	25% (27 th Nov.)
	100%

Emails to Instructor and Teaching Assistant: Think carefully before sending an email. DO NOT email about absences from class unless your absence will be longer than 1 week, or for a critically extenuating reason. DO NOT email with questions that can be answered by reading the course outline, reading material on Sakai, or by attending class. Emails that are not Brock emails will not be acknowledged. Expect at least a one week delay for any email response. The subject line in an email must have the course code (ERSC/Geog 3P24), and must include your *full name and student number*.

STATEMENT OF ACADEMIC INTEGRITY

Please read and sign the following statement and submit a copy of this Form with each of your Lab Assignments. If this form is missing, the assignment will not be graded.

I, the undersigned, confirm that I understand that all the following constitutes academic misconduct according to Brock University's policy on academic misconduct, which in turn is consistent with general academic practice:

- Quoting someone's words without using quotation marks
- Quoting someone's words without acknowledging the source
- Citing someone else's ideas in my own words but without citing the source
- Using someone else's organization of ideas
- Using data derived by someone else's work
- Allowing someone else the opportunity to borrow material from my assignment (e.g., by letting them have access to my assignment paper when they are writing their own paper)
- Writing the assignment paper for another student, or doing some of the work for them
- Allowing someone else (or paying someone else) to write part or all of my lab assignment or do some of the work for me. The exceptions to this are that it is acceptable to allow someone to type the paper for me or make editorial comment on it. If someone types the paper for me, or if I incorporate an editorial suggestion, and there are errors in the typing or the suggestion was misguided, I take full responsibility for those errors.
- Submitting this work to or utilizing data from another course.

I confirm that I have not done any of the above forms of academic misconduct.

COMM 3P62

Faculty of Social Sciences

Department of Communication, Popular Culture, & Film
276 of 547

COMM 3P62 Public Relations and Integrated Marketing Communication Winter 2020

Instructor Name: Dr. Duncan Koerber Email: Sakai "Messages" Office Location: Scotiabank Hall 343 Office Hours: Fridays 1:00-1:50pm Teaching Assistants: Deb Marshall, dmarshall@brocku.ca Megan Johnson, mj13gg@brocku.ca

Times and Locations: Lecture: Fridays, 2 p.m. to 3:50 p.m., South Block 202 Seminar 1: Mondays, 11 a.m. to noon, Thistle 315; TA: Duncan Koerber Seminar 2: Thursdays, 11 a.m. to noon, Thistle 315; TA: Deb Marshall Seminar 3: Wednesdays, 10 a.m. to 11 a.m., Thistle 315; TA: Deb Marshall Seminar 4: Tuesdays, 10 a.m. 11 a.m., Thistle 315; TA: Deb Marshall Seminar 5: Wednesdays, 9 a.m to 10 a.m., Thistle 315; TA: Deb Marshall Seminar 6: Tuesdays, 9 a.m to 10 a.m., Thistle 315; TA: Megan Johnson

Course Calendar Description:

Examination of the public relations process; role, functions, historical evolution and relevance to effective marketing communication strategy.

Learning Objectives/Outcomes:

By the end of this course, students should be able to: • Understand the role of Public Relations in contemporary professional life • Analyze and evaluate Public Relations campaigns • Create and implement Public Relations campaigns

Required Readings and Materials:

1) Kelleher, Tom. Public Relations. Oxford University Press, 2018. 2) Top Hat software (for lecture participation).

Course Communications: All communication with me should take place in class, in office meetings, or through the messaging feature of the Isaak/Sakai course website. I will try to respond to messages within 48 hours (weekends not included). If you are asking about an assignment fewer than 48 hours before it's due, you may not receive an answer before the submission deadline. In the case of an emergency, traffic delays, sickness, car trouble, or inclement weather affecting my attendance in the classroom, I will send an announcement through the Sakai website as soon as possible before the class.

Evaluation Components and Due Dates

Note: All work is due in seminar, except the test, which is written in lecture.

Evaluation Component Grade Weight

Due Date

Top Hat Lecture Participation 10% Every week Seminar Participation 5% Every week Seminar Exercises 5% Every week Social Media Campaign Interim Report 15% Week 4 Test 35% Week 10 (In lecture) Social Media Campaign Group Presentation 30% Last 5 Weeks Total 100%

Assignment Descriptions

Top Hat Lecture Participation: Top Hat is online software that allows me to engage with students during the lecture. This is helpful in large classes like this one. In between my lecture slides, I will post questions about the material or general discussions. You will get points for answering those questions or contributing to discussions. Some answers earn participation points, while other answers earn correctness points (right/wrong answers). You can use Apple or Android smartphones and tablets, laptops, or text messages to send your answers.

You can visit the Top Hat Overview (<https://success.tophat.com/s/article/Student-TopHat-Overview-and-Getting-Started-Guide>) within the Top Hat Success Center which outlines how you will register for a Top Hat account, as well as providing a brief overview to get you up and running on the system. An email invitation will be sent to you by email, but if don't receive this email, you can register by simply visiting our course website: <https://app.tophat.com/e/241582>

Seminar Exercises and Seminar Participation: Attend every seminar and complete the exercises to earn a high mark in this category. Each exercise will earn points. TAs will determine how participation will be assessed.

Social Media Campaign Group Presentation: Each group will plan and then present a social media PR campaign for a Brock organization or event. See the detailed report sheet on the Isaak/Sakai site under "Resources" for specific details.

Social Media Campaign Interim Report: Each group will submit a three-page interim report on the plans for the social media campaign and presentation. See the detailed report sheet on the Isaak/Sakai site under "Resources" for specific details.

Test: This multiple-choice test will cover all textbook readings and lecture slides up to and including the lecture before the test (Week 9, Crisis Communication). Do all the readings and attend all the lectures to do well on this test. A study guide will be provided.

Late Submission Policy:

Exercises must be completed in seminar – they cannot be submitted late. If you don't attend seminar, you get zero on the exercise.

The penalty for late submission of other assigned coursework is 10% per day, unless accompanied by medical documentation. See Medical Exemption Policy and the medical health certificate at <https://brocku.ca/registrar/toolkit/forms/>

Medical health certificates do not absolve you from doing the work. You still have to submit the work. Talk to your TA about arrangements.

The relationship between attendance and grades:

Students are expected to attend all lectures and seminars and must submit all assignments to pass this course.

Important dates:

February 29, 2020 is the scheduled Family Day/Reading Week break.

February 1, 2020, is the date you will know at least 15% of your course grade.

March 6, 2020, is the date for withdrawal from the course without academic penalty.

Academic Policies

Academic Integrity:

Statement for undergraduate courses Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties. Information on what constitutes academic integrity is available at <https://brocku.ca/academic-integrity/>

Intellectual Property Notice:

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

Special Accommodation:

The University is committed to fostering an inclusive and supportive environment for all students and will adhere to the Human Rights principles that ensure respect for dignity, individualized accommodation, inclusion and full participation. The University provides a wide range of resources to assist students, as follows:

a) If you require academic accommodation because of a disability or an ongoing health or mental health condition, please contact Student Accessibility Services at askSAS@brocku.ca or 905 688 5550 ext. 3240.

b) If you require academic accommodation because of an incapacitating medical condition, you must, as soon as practicable, inform your instructor(s) of your inability to complete your academic work. You must also submit a Brock University Student Medical Certificate (found at <https://brocku.ca/registrar/toolkit/forms>). The University may, at its discretion, request more detailed documentation in certain cases. If you are unable to write a scheduled examination due to an incapacitating medical condition, you must follow the process set out in the Faculty Handbook III:9.4.1.

c) If you are experiencing mental health concerns, contact the Student Wellness and Accessibility Centre. Good2Talk is a service specifically for post-secondary students, available 24/7, 365 days a year, and provides anonymous assistance: <http://www.good2talk.ca/> or call 1-866-925-5454. For information on wellness, coping and resiliency, visit: <http://brockmentalhealth.ca/mental-well-being/>.

d) If you require academic accommodation on religious grounds, you should make a formal, written request to your instructor(s) for alternative dates and/or means of satisfying requirements. Such requests should be made during the first two weeks of any given academic term, or as soon as possible after a need for accommodation is known to exist.

e) If you have been affected by sexual violence, the Human Rights & Equity Office offers support, information, reasonable accommodations, and resources through the Sexual Violence Support & Education Coordinator. For information on sexual violence, visit Brock's

Sexual Assault and Harassment Policy or contact the Sexual Violence Support & Response Coordinator at humanrights@brocku.ca or 905 688 5550 ext. 4387.

f) If you feel you have experienced discrimination or harassment on any of the above grounds, including racial, gender or other forms of discrimination, contact the Human Rights and Equity Office at humanrights@brocku.ca.

Sequence and Dates of focus/activities/readings

Week #/Lecture Dates Lecture Focus/Topic Assignment Due Readings

1 January 10 Course Introduction, Themes, Expectations

2 January 17 Public Relations and Ethics

Kelleher, Chapter 1

3 January 24 Public Relations Models

Kelleher, Chapter 2

4 January 31 Convergence and Integrated Communication

Social Media Campaign Interim Report

Kelleher, Chapter 3

5 February 7 Relationship Management

Kelleher, Chapter 4

6 February 14 Research + Planning

Kelleher, Chapter 5 + Chapter 6

FAMILY DAY & READING

WEEK BREAK

7 February 28 Implementation + Evaluation

Kelleher, Chapter 7 + Chapter 8

8 March 6 Writing + Multimedia and Mobile

Social Media Campaign Group Presentation

Kelleher, Chapter 9 + Chapter 10

9 March 13 Crisis Communication Social Media Campaign Group Presentation

Kelleher, Chapter 12

10 March 20 Test (in lecture)

Social Media Campaign Group Presentation

11 March 27 Global PR Social Media Campaign Group Presentation

Kelleher, Chapter 13

12 April 3 Careers Social Media Campaign Group Presentation

Kelleher, Chapter 14

COMM 3P18

Department of Communication, Popular Culture and Film

Audience Studies (COMM/PCUL/FILM 3P18)

Instructor and teaching assistant

Prof. Jennifer Good (jgood@brocku.ca)

Teaching Assistant: Andrea Stefanik (astefanik@brocku.ca)

How to contact us

1. Send an email: We can usually respond in a day or two. If you do not receive a response within two days, please resend

the message. We receive a lot of emails and on occasion a message does not arrive, gets buried, etc.

2. Visit virtual office hours:

Prof. Good: Tuesdays 11:00am-12:00pm; Thursdays 3:00pm-4:00pm (and by appointment)

Andrea Stefanik: Wednesdays 11:00am-12:00pm

Office hours will take place in Teams meeting room.

3. Ask questions after Monday's class: We are always preoccupied before class but after class we will stay in the Teams

"space" and be available if you have questions, concerns or just want to check in.

Course readings

Sullivan, J. (2013 or 2020). *Media Audiences: Effects, users, institutions and power* (1st or 2nd ed.). Sage Publications Inc.,

New York, NY.

Weekly journal articles: The journal articles are available via the course Sakai site. If you are having difficulty with the

link, the articles can also be found on the *Communication and Mass Media Complete* database. The expectation is that you

will have read the textbook chapter and journal article and watched the week's video *prior to* class.

Course thoughts and questions

In communication, popular culture and film research and writing, the audience can be taken for granted. Assumptions can

be made about the roles of audience members, what audience members are thinking, doing, experiencing, who has the

power, etc. In this course, the audience is our focus and we will take nothing for granted about audiences! We will explore

- and "stir up" - our understanding of audiences by becoming more aware of our participation as consumers and

producers of audience content, and also by exploring and grappling with audience theorizing and research.

In the course we will ask questions such as:

- What is the history of audiences?
- In what ways are people empowered agents in their roles as audience members?
- In what ways are audience members affected by their various audience roles? What are the implications?
- How and why do people differ as audience members?
- How do different kinds of content and reception of that content affect audience members?
- How has technology changed audiences?
- What theories help us to make sense of audiences?
- How are audiences measured and researched?
- What are your experiences as a consumer and a producer of audience content?
- How do we understand audience power and agency?
- What are COVID audiences?!

Course outcomes

We are almost always - perhaps always! - receiving content as an audience member; and we are increasingly content

producers as well as we appeal to and interact with other audience members. After your time at Brock, whether you

continue as a graduate student, head to a job or embark on other adventures, your life will involve, and in many ways be

dependent upon, audiences. Your ability to critically think about audiences is vital. By the end of this course, therefore,

you should be able to:

- Understand and question the evolution and definitions of audiences;
- Think critically about the power relationships inherent in audiences;
- Make sense of and evaluate audience-related theories and research;
- Offer well-informed insights regarding the history, present (including the COVID present) and future of audiences.

A few thoughts about the online version of the course

The 2020 version of Audience Studies (3P18) is a mix of synchronous and asynchronous online content. Each week there

will be “before class,” “during class” and “after class” content. The “before class” content will be readings (a chapter

from the textbook and a journal article) and a video for you to watch with some highlights I want to share. The “during

class” content will be a synchronous time to highlight ideas, ask you some questions and interact (each Monday from

10:00am ~ 11:30am). The “after class” content will be work on various assignments (see below).

A quick look at grade composition (due dates and details can be found at the end of the syllabus)

1. Paper: My best, worst, most interesting, or otherwise 10%

noteworthy audience experience EVER

2. Weekly class Top Hat participation 10%

3. Functioning blog link 3%

4. Audience analysis blog #1 15%

5. Audience analysis blog #2 20%

6. Audience analysis blog peer feedback and grade 15%

7. Audiences in the time of COVID forum participation 12%

8. Take-home exam 15%

100%

*NOTE

- Assignments must be submitted by the start of class. After the start of class, the assignment is -5%. By Monday @

midnight, the assignment is -10%. The late penalty is 5% for each late day (before midnight) thereafter. The

weekend counts as one day.

- There is a course Sakai site.

- There will be Top Hat participation opportunities in each class. You will receive 1% for each class in which you

participate. You can receive up to a total of 10% for Top Hat participation throughout the semester.

- Asking someone to answer Top Hat questions for you or answering someone else’s Top Hat questions is

academic misconduct.

- Everyone is required to carefully read, check all of the boxes and sign the Pledge of Academic Integrity (please

see the last page of the Syllabus).

Calendar

(Class meets online Monday 10:00am ~ 11:30am)

Date and what's due Before, during and after class

Week 1: Monday September 14

Before class

Read:

- Syllabus

Watch: Greetings and syllabus highlights

During class

- Welcome to 3P18
- Top Hat participation and questions

After class

- Work on your “My best, worst, most interesting and otherwise noteworthy audience experience(s) EVER” paper
- Audiences in the time of COVID forum participation

Week 2: Monday September 21

Before class

Read:

- Sullivan Chapter 1: History and concept of the audience (1-24).
- Livingstone, S. (2010). Giving people a voice: On the critical role of the interview in the history of audience research. *Communication, Culture & Critique*, 3(4), 566-571.

Watch: To be posted (TBP)

During class

- Explore highlights
- Top Hat participation and questions

After class

- Work on your “My best, worst, most interesting and otherwise noteworthy audience experience(s) EVER” paper
- Audiences in the time of COVID forum participation

Week 3: Monday September 28

Before class

Read:

- Sullivan Chapter 2: Effects of media messages (25-52).

- Brown, W. (2015). Examining four processes of audience involvement with media personae: Transportation, parasocial interaction, identification, and worship. *Communication Theory*, 25, 259-283.

Watch: TBP

During class

- Explore highlights
- Top Hat participation and questions

After class

- Create a blog and submit the blog link to Sakai
- Audiences in the time of COVID forum participation

Week 4: Monday October 5

Before class

Read:

- Sullivan Chapter 3: Public opinion and audience citizenship (53-76).
- Kornfield, R., & Tomab, C. (2020). When do online audiences amplify benefits of self-disclosure? The role of shared experience and anticipated interactivity. *Journal of Broadcasting & Electronic Media*, 64(2), 277-297.

Watch: TBP

During class

- Explore highlights
- Top Hat participation and questions

After class

- Write in your blog
- Audiences in the time of COVID forum participation

Monday October 12

is Thanksgiving!

Tuesday October 13 -

Friday October 16 is

Reading Week!

Enjoy!

(Don't forget to read!)

Week 5: Monday October 19

Before class

Read:

- Sullivan Chapter 4: Media ratings and target marketing (77-104).
- Buzzard, K. (2015). The rise of market information regimes and the historical development of audience ratings. *Historical Journal of Film, Radio and Television*, 35(3), 511-517. (*Read p. 511 to halfway down p. 514)
- Andreeva, N. (2020). TV Ratings Climb as People Rediscover Live Linear Viewing Amid Corona-Imposed Stay at Home
[<https://deadline.com/2020/03/tv-ratings-climb-people-rediscover-livelinear-viewing-coronavirus-imposed-stay-at-home-1202887224/>]

Watch: TBP

*Due to Sakai before class: “My best, worst, most interesting or otherwise noteworthy audience experience(s) EVER” paper

*Due to Sakai before class: Functioning blog link (do not password protect!)
paper

During class

- Explore highlights
- Top Hat participation and questions

After class

- Write in your blog
- Audiences in the time of COVID forum participation

Week 6: Monday October 26

Before class

Read:

- Sullivan Chapter 5: Uses and gratifications (107-131).
- Pantic, M. (2020). Gratifications of digital media: What motivates users to consume live blogs. *Media Practice and Education*, 21(2), 148-163.

Watch: TBP

During class

- Explore highlights
- Top Hat participation and questions

After class

- Write in your blog
- Audiences in the time of COVID forum participation

Week 7: Monday November 2

Before class

Read:

- Sullivan Chapter 6: Interpreting and decoding mass media texts (133-160).
- Granelli, S., & Zenor, J. (2016) Decoding “The Code”: Reception theory and moral judgment of *Dexter*. *International Journal of Communication*, 10, 5056-5078.

Watch: TBP

During class

- Explore highlights
- Top Hat participation and questions

After class

- Write in your blog
- Audiences in the time of COVID forum participation

*NOTE: Monday November 2

is the last date for withdrawal

without academic penalty, and the

last day to change from credit to

audit status for duration 2 courses,

without academic penalty.

*Due to Sakai before class:

Audience Studies Blog Part 1

(Weeks #2-5)

Week 8: Monday November 9

Before class

Read:

- Sullivan Chapter 7: Reception contexts and media rituals (161-185).
- Kim, K., Cheong, Y., & Kim, H. (2016). The influences of sports viewing conditions on enjoyment from watching televised sports: An analysis of the FIFA World Cup audiences in theater vs. home. *Journal of Broadcasting & Electronic Media*, 60(3), 389-409.

Watch: TBP

During class

- Explore highlights
- Top Hat participation and questions

After class

- Write in your blog
- Audiences in the time of COVID forum participation

Week 9: Monday November 16

Before class

Read:

- Sullivan Chapter 8: Media fandom and audience subcultures (189-212).
- Pouls, S. & Gilpin, D. (2019). Socially mediated Stranger Things: Audience cultures and full-season releases. *Southwestern Mass Communication Journal*, 34(2), 1-11.

Watch: TBP

During class

- Explore highlights
- Top Hat participation and questions

After class

- Write in your blog
- Audiences in the time of COVID forum participation

Week 10: Monday November 23

Before class

Read:

- Sullivan Chapter 9: Online, interactive audiences in a digital media world (213-238).
- Athique, A. (2018). The dynamics and potentials of big data for audience research. *Media, Culture and Society*, 40(1), 59-74.

Watch: TBP

During class

- Explore highlights
- Top Hat participation and questions

*Due to Sakai before class:

Audience analysis blog peer
feedback (Weeks 2-6)

After class

- Write in your blog
- Audiences in the time of COVID forum participation

Week 11: Monday November 30

Before class

Read:

- Sullivan Chapter 10: Conclusion: Audience agency in new contexts (239-249).
- Livingstone, S. (2019). Audiences in an age of datafication: Critical questions for media research. *Television & New Media*, 20(20), 170-183.

Watch: TBP

During class

- Explore highlights
- Top Hat participation and questions

After class

- Write in your blog
- Audiences in the time of COVID forum participation

Week 12: Monday December 7

Before class

Read:

- No readings for today

Watch: TBP

During class

- Review

- Top Hat participation and questions

- Go over take-home exam

After class

- Work on your take-home exam

Take-home exam DUE to Sakai *NOON*

Wednesday December 17

No late exams will be accepted

*Due to Sakai before

class:

Audience Studies Blog

Part 2

(Weeks #7-11)

*Take-home exam

handed out

*Due to Sakai before class:

Audiences in the time of

COVID (Weeks #1-10)

Grade Composition - A More Detailed Look

1. My best, worst, most interesting or otherwise noteworthy audience experience(s) EVER
10%

(Due before class Monday September 28 to Sakai)

What comes to mind when you are asked about your best, worse, most interesting or otherwise noteworthy audience

experience EVER?! This is a first-person paper (i.e. you may use "I") that allows you to dive in and think about yourself

in the context of audiences.

Length: The paper should be 4-5 double-spaced pages (excluding the cover page and references - although secondary

material is not required).

Please include a cover page with your name, email address and the course name.

Grading: We will be looking for thoughtful well-written papers. You do not need to make use of any external sources but

if you do, please provide a citation.

2. Weekly Class Top Hat participation 10%

Each week we will meet synchronously online to explore the ideas from the readings and recorded lecture. As part of our

synchronous online class, there will be Top Hat questions. Participation in answering 75%-100% of the questions will

provide you with 1% towards your final grade. There are 10 points for 12 classes so you are able to miss two classes and

have no penalty. All absences are “equal” so use your absences wisely. In other words, if you are absent for any reason,

you cannot receive 1% for that class. That said, IF at the END OF THE SEMESTER, you have missed MORE THAN

TWO lectures because of documented illness, documented family emergency and/or any other reason you would like to

discuss, please talk with Professor Good at the end of the semester. Absences from lecture will not be addressed during

the semester.

***NOTE: Answering Top Hat questions for someone else - or asking someone to answer Top Hat questions for you - is

academic misconduct. In order to receive Top Hat participation points, *you* must answer the questions. The penalties for

academic misconduct can be severe (please see below for more information).

3. Functioning blog link 3%

(Due before lecture to Sakai: Monday October 5)

Easiest 3% ever! All you have to do is submit a blog link to Sakai (on time) that WORKS! In other words, if you submit a

blog link (on time) that, when we click on it, your blog webpage opens, you get 3%! If you submit a link but it does not

work, you get 1%. Late blog links will not receive credit but you MUST submit a blog link to have your work graded!

NOTE: Do not password protect your blog.

HINT: If you want to be sure that the link will work for us, send the link to friends/family members and ask them to open

the link. If it works for others, it should work for us!

4. Audience analysis blogs 15% (blog #1); 20% (blog #2)

(Blog 1 weeks #2 through #5 Word doc due before class to Sakai: Monday October 26)

(Blog 2 weeks #6 through #11 Word doc due before class to Sakai: Monday December 7)

The idea behind the blog is for you to take what we are doing in class (textbook chapters, journal articles, lecture videos,

classes, etc.) and apply that to your “real life” audience experiences. You decide what the audiences are (and if you can

make a case for why something is an “audience experience,” then that’s good enough for us!) and how you want to

analyze those audiences. The more diverse the audience experiences that you can reflect on, the better.

Ideally you will pay attention to your audience experiences (as a member of an audience, producer of content for an

audience, viewer of others in audiences, etc.) and then reflect on how those experiences speak to what we are

exploring in class (i.e. be a participant observer and let what we are reading and discussing in class be your “research” as

you analyze your lived “data”). You are encouraged to be creative (with all of the audio/visual opportunities the Internet

and blog sites offer you) and have fun!

What blog platform should you use? This is entirely up to you (some possibilities - Blogger, Wix, Weebly, Tumblr,

Wordpress). This offers a succinct overview of some free sites:

<https://themeisle.com/blog/best-free-blogging-sites/>.

How long should the blog be? The blog should show your engagement what we are exploring. The Sullivan chapters,

journal articles, videos, classes, forum - these are your “research.” The ways in which you explore can be varied - written,

spoken, pictures, gifs, video clips (of you, from YouTube, etc.). That said, the written portion of each blog should be the

equivalent of *approximately* three double spaced pages for each week.

Blog writing hint: Write the entries weekly on Mondays after class. The readings, lecture video and class will all be

“fresh” (and when the blog due date rolls around, your blog will already be written!).

NOTE: Five of your classmates will be reading and assessing your blog. Please keep this in mind as you put your blog

together.

How will I submit my blog?

Monday October 26 (before class): Your first blog submission should contain THREE elements:

1) A Word document version of your blog post submitted to Sakai as an attachment. The Word version is the

“timestamp”; your Word document must be submitted before class Monday October 26 in order to be on time.

NOTE: The Word document is NOT what will be graded. However, the text in your Word document and the text

in your blog must be identical - but the blog will have the additional “blog elements” such as images, links, etc.

2) Your blog link/url pasted into the Sakai textbox (same as the link submitted Monday October 5).

3) Your blog entries with the title “Audience Studies (3P18) Blog #1” clearly indicated at the top.

Monday December 7 (before class): Your second blog submission should contain THREE elements:

1) A Word document version of your blog post submitted to Sakai as an attachment. The Word version is the

“timestamp”; your Word document must be submitted before class Monday December 7 in order to be on time.

NOTE: The Word document is NOT what will be graded however, the text in your Word document and the text

in your blog must be identical - but the blog will have the additional “blog elements” such as images, links, etc.

2) Your blog link/url pasted into the Sakai textbox (same as the link submitted Monday October 5).

3) Your blog entries with the title “Audience Studies (3P18) Blog #2” clearly indicated at the top.

Blog grading

80-100%

- explicit and extensive use of all course materials (for the appropriate weeks)
- well-written (excellent flow, error-free, clearly identifies where quotes and ideas are from)
- clearly very involved and engaged with all of the course materials
- thoughtful and creative in the sharing of ideas and insights about the “real world” application of course concepts

(i.e., thoughtfully making use of images, links, and online “opportunities” to highlight the course materials and

ideas)

70-80%

- explicit and extensive in its use of most course materials (for the appropriate weeks)

- mostly well-written (generally flows well, almost entirely error-free)
- clearly involved and engaged with most of the course materials
- thoughtful and somewhat creative in the sharing of ideas and insights about the “real world” application of course

concepts

60-70%

- good use of course materials but could use more detail (for the appropriate weeks)
- reasonably well-written (a few errors, quotes and ideas are indicated but not always identified)
- involved with the course materials but lacking some engagement
- creativity, thoughtfulness and the “real world” application of course concepts present but could use some work

50-60%

- very little linking to course material
- not well written (many errors and lacking indication of where quotes/ideas are from)
- lacking in engagement
- not creative or thoughtful and the “real world” application of course concepts is not present

-50%

- lacks use of course materials (i.e. could have been written before you ever spent time in 3P18)
- poorly written
- devoid of engagement
- without creativity, thoughtfulness and the “real world” application of course concepts

5. Audience analysis blog peer feedback (Weeks 2-6) 15%

(Word doc with 5 grading rubrics due to Sakai before class Monday November 9)

This is your opportunity to give 5 of your classmates feedback on what works, and what might be better, about their blog.

You will be assigned five students’ web links and given a feedback rubric.

How should I submit my blog feedback? You will submit a single Word file to Sakai of the 5 rubrics for feedback on

the five blogs you have been assigned.

How will I be graded? You will be graded on thoughtful, well written, feedback.

6. Audiences in the Time of COVID Forum Participation 12%

(Word document of all your contributions due to Sakai before class Monday November 30)

COVID-19 is a unique moment in history. Many aspects of our lives have been affected by COVID and this Sakai forum

will give you and your classmates an opportunity to reflect on audiences in the time of COVID. You can contribute

thoughts to existing topics and start new topics. In what ways has COVID changed audiences? Which audiences have

changed the most? In what ways? What do you think about these changes (good, bad, needed, permanent...)? What

aspects of audiences have remained the same? How is 3P18 affecting your thinking about COVID audiences?

How should I submit my Audiences in the time of COVID forum participation? You will submit a single Word

document of all of your forum participation (arranged by date) to Sakai.

How will I be graded? You will be graded on thoughtful, well written and regular forum participation.

7. Take-home exam 15%

(Distributed Monday December 7 in class; due to Sakai NOON Wednesday December 16)

I will give you details regarding the take-home exam in our last class Monday December 7. The take-home exam will be

due to Sakai NO LATER THAN NOON Wednesday December 16. There will be NO EXCEPTIONS for late exams

(think of handing in a “gym exam”: when the time is up, exams must be submitted). If your exam is not in by NOON, you

will receive zero. We HIGHLY recommend that you plan on handing the paper in early to give yourself a buffer.

The exam will be based on the readings, videos, classes and involvement (blogs, forum) throughout the semester. If you

are engaged throughout the semester, you should do well on the exam.

3P18 Fall 2020 p. 11

Additional Notes

Academic integrity

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one’s own work,

documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating

appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII,

“Academic Misconduct”, in the “Academic Regulations and University Policies” entry in the Undergraduate Calendar,

available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.

A Pledge of Academic Integrity appears below (please read it, check the boxes, sign it and submit it to your seminar leader).

Turnitin.com

This course will use Turnitin.com, phrase-matching software. If you object to uploading your assignments to Turnitin.com

for any reason, please notify the instructor to discuss alternative submissions.

Intellectual property notice

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the

intellectual property of the instructor. A student who publicly posts or sells an instructor’s work, without the instructor’s

express consent, may be charged with misconduct under Brock’s Academic Integrity Policy and/or Code of Conduct, and

may also face adverse legal consequences for infringement of intellectual property rights.

Special accommodation

The University is committed to fostering an inclusive and supportive environment for all students and will adhere to the

Human Rights principles that ensure respect for dignity, individualized accommodation, inclusion and full participation.

The University provides a wide range of resources to assist students, as follows:

a) If you require academic accommodation because of a disability or an ongoing health or mental health condition, please

contact Student Accessibility Services at askSAS@brocku.ca or 905 688 5550 ext. 3240.

b) If you require academic accommodation because of an incapacitating medical condition, you must, as soon as

practicable, inform your instructor(s) of your inability to complete your academic work. You must also submit a Brock

University Student Medical Certificate (found at <https://brocku.ca/registrar/toolkit/forms>). The University may, at its

discretion, request more detailed documentation in certain cases. If you are unable to write a scheduled examination due

to an incapacitating medical condition, you must follow the process set out in the Faculty

c) If you are experiencing mental health concerns, contact the Student Wellness and Accessibility Centre. *Good2Talk* is a service specifically for post-secondary students, available 24/7, 365 days a year, and provides anonymous assistance:

<http://www.good2talk.ca/> or call 1-866-925-5454. For information on wellness, coping and resiliency, visit:

<http://brockmentalhealth.ca/mental-well-being/>.

d) If you require academic accommodation on religious grounds, you should make a formal, written request to your

instructor(s) for alternative dates and/or means of satisfying requirements. Such requests should be made during the first

two weeks of any given academic term, or as soon as possible after a need for accommodation is known to exist.

e) If you have been affected by sexual violence, the Human Rights & Equity Office offers support, information,

reasonable accommodations, and resources through the Sexual Violence Support & Education Coordinator. For

information on sexual violence, visit Brock's Sexual Assault and Harassment Policy or contact the Sexual Violence

Support & Response Coordinator at humanrights@brocku.ca or 905 688 5550 ext. 4387.

f) If you feel you have experienced discrimination or harassment on any of the above grounds, including racial, gender or

other forms of discrimination, contact the Human Rights and Equity Office at humanrights@brocku.ca.

Diligence and respect

- While we are empathetic to workload concerns, workload will not be considered an excuse for late work. In our experience, everyone has workload concerns at various points in the semester and planning ahead is a vital life

skill.

- We expect that you will back up your work and we expect that you will stay on top of your grades throughout the

semester (so that there are no surprises for you as a deadline approaches or at the end of the semester). Work that

has been lost because of computer issues will not be an excuse for late work. Similarly, you should not wait until

the last minute to upload your work to Sakai. Difficulties with Sakai will not be accepted as an excuse for late

work. Once a final grade has been assigned, it will not be changed (unless there is an error in calculation).

- We expect you to be respectful when synchronously online. This includes using the camera, chat function and any “captures” (screen capture, taping, etc.) in a thoughtful manner.

Statement on Academic Misconduct

Department of Communication, Popular Culture and Film

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one’s own work,

documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating

appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, “Academic

Misconduct,” in the “Academic Regulations and University Policies” entry in the Undergraduate Calendar, available at

brocku.ca/webcal, to view a fuller description of prohibited actions, and the procedures and penalties which may be applied.

Academic misconduct includes plagiarism (presenting the words and ideas of another person as if they were your own), submitting the

same work for two different assignments, and other forms of cheating such as using crib notes during a test or fabricating data for a lab

assignment. Instructors and teaching assistants in the Department thoroughly investigate all suspected cases of academic

misconduct. The penalties for documented cases of academic misconduct can be severe. The Department may recommend that a grade

of zero be given for the assignment, and a failing grade if not a grade of zero be given for the course. In addition, a note will be attached to

the student’s academic transcript. A second offence can result in suspension from the University. The disciplinary process is

administered initially at the Department level and in cases where academic penalty is assigned will be referred to the offices of the Dean of

Social Sciences.

Make yourself aware of the issues involved. Read the section of the Undergraduate Calendar that pertains to academic

misconduct. You are reminded that the Student Development Centre (Schmon Tower, Room 400) offers workshops on writing

skills, and issues surrounding plagiarism.

For further information on all aspects of your academic program, including course planning, you may consult with the

Department’s Academic Advisor: Penni Lafleur, SBH 344, ext. 5308 , plafleur@brocku.ca.

Department of Communication, Popular Culture and Film

Pledge of Academic Integrity

I, the undersigned, understand that all the following practices constitute academic misconduct according to Brock

University's policy on academic misconduct and general academic practice:

Quoting someone else's words without using quotation marks;

Quoting someone else's words without acknowledging the source;

Using someone else's ideas in my own words without acknowledging the source;

Using someone else's argument in my own words without acknowledging the source of the argument;

Fabricating sources of information for an assignment, bibliography or list of works cited;

Having or employing someone else to write all or part of my assignment, or do all or some of the

preparatory work for me. There are two exceptions to this rule: I may have or employ someone to type

the final assignment or make editorial comments. However, I take full responsibility for any errors

introduced by a typist or editor;

Allowing another student to use material from my assignment in his/her assignment;

Writing all or part of an assignment for another student or doing all or some of the preparatory work for

him/her. Such preparatory work includes (but is not limited to) reading and note-taking from required

books and articles;

Submitting any work for credit in two or more courses;

Asking someone to use phone/computer to make it look like I attended lecture and receive credit;

Using someone else's phone/computer to make it look like that person attended lecture and receive

credit.

By signing below, I confirm that I have read the Audience Studies (3P18) fall 2019 syllabus. Furthermore, I

confirm that I understand the various forms of academic misconduct (checked above) and I will not undertake any

of the above in the work that I submit. Please read and check each of the boxes.

Name (please print):

Signature:

Seminar

ERSC 3P90

Faculty of Math and Science

Department of Earth Science

Course Number: ERSC 3P90

Term/Year/Duration: Fall/2020/D2

Course Title: Volcanology

Instructor Name: Mariek Schmidt

Email: mschmidt2@brocku.ca

Office Location: D414 (unlikely to be there much this semester)

Contact: To schedule a meeting, please email to set up an appointment on Teams

Teaching Assistants: Justin Pentesco (jpentesco@brocku.ca), Jamie Saapera (jsapera@brocku.ca)

Liaison Librarian: Ian Gordon (igordon@brocku.ca)

Times and Locations:

**This course will be entirely online. There are no scheduled in person meetings.*

Lectures: Two pre-recorded lectures (~40 minutes to 1 hour) will be posted on Mondays.

Lab: Thursday 2-5 pm, Microsoft Teams meeting

Movie: Fridays 11 am to noon.

Course Calendar Description:

Survey of volcanoes, their distribution, forms, composition, eruptive products and styles, and potential hazards

Online Delivery in Fall 2020:

This course will be very different from previous years as a result of the online delivery. As a student enrolled in an online course, it is your responsibility to have good computer, internet, and printer access and to read all course-related announcements. All Brock students have access to Microsoft Office (including Word, Teams, Excel, etcetera) included with their enrollment. This can be accessed through your account when you log in to your email.

- *Lessons.* The course will be organized by week using the Lessons tool on Sakai. Lectures will be pre-recorded and posted there. Most weeks, there will be two hours of lectures each week that you may view on your own

time. You are responsible for knowing and understanding the content from those lectures for the weekly labs as well as the movie quizzes. Links to assignments and readings will also be posted on the Lessons tool.

- **Movies.** A volcano movie will be livestreamed some weeks on Microsoft Teams on **Fridays at 11 am**. A movie quiz using the Quiz tool on Sakai must be taken within 24 hours of the showing (i.e., by noon on the following Saturday). The quiz will include 5 multiple choice questions and will relate the movie to material presented in lecture. You will have 15 minutes to complete the quiz. Because the movie will be livestreamed, the quality will be affected. If you can find an alternative version of the movie, you are welcome to view that instead (and share it with your classmates!). Copyright restricts us (MarieK and the TAs) from directly distributing the movies to you.
- **Labs.** Assignments will be presented in a Teams meeting on **Thursdays at 2 pm**, and will be due one week from when they are assigned. Please upload your completed assignments into the Drop Box tool on Sakai. We will not accept completed assignments by email.
- **Presentations.** Some lab assignments will have a presentation component, which can be pre-recorded with strict time limits. Lab presentations will be shown during the lab meeting time. A schedule of the final presentations (a component of term project) will be posted later in the course. Students are expected to view all presentations. A brief question and answer period will follow each presentation.
- **Materials.** You will need standard geology lab materials, including colored pencils, calculator, ruler, and protractor. Some labs will require a print-out. A couple labs will involve experiments using inexpensive materials, many of which you may already have in your kitchen (e.g., plastic cup, vinegar). A list of these extra lab materials will be posted on Sakai.
- **Forums.** Please post questions regarding the assignments and course content to the class forums so that they may be publicly viewable. The forums will be organized by assignment and be monitored by the TAs and by MarieK. We will try to answer the forum questions within 24 hours on weekdays, or by the following Monday, if posted on a weekend. Inappropriate use of the forums (e.g., sharing answers) is not permitted. For more sensitive issues, please contact MarieK directly by email.
- **Term Project.** This course includes a term project comprising 40% of your grade. Details for this important component of the course will come in a separate document.
- **Exams.** Take-home exams (Mid-term and Final) must be completed within the allotted time period. Students are expected to become familiar with and abide by Brock's Academic Integrity Policy.

Course Prerequisites (if any):

ERSC 2P05; ERSC 2P21 or 2P23; one of CHEM 1P91 and 1P92 (1F92), MATH 1P97, 1P98, one-half PHYS credit numbered 1P21 to 1P93.

Completion of this course will replace previous assigned grade and credit obtained in GEOG 3P90.

Required Readings or Texts:

- *Optional textbook:* Francis & Oppenheimer (2003) *Volcanoes* 2nd ed. (available on Amazon.ca)
- *All required and supplemental readings will be posted on Sakai.*

Course Communications:

All course communications will be posted as Announcements on the Sakai site.

Evaluation Components

- Labs/Assignments: 30% (6 labs, 5% each, participation will be a component of each lab grade) Labs are due 1 week after they are assigned.
- Term project: 40%
- Movie quizzes: 6% (7 quizzes, 1% each, you can miss one)
- Midterm Exam: 10%
- Final Exam: 16%

Late Submission Policy:

The penalties for late submission of assigned coursework (e.g., papers, assignments, weekly reflections) are **10%** per day for up to 5 days, unless accommodations are required. See section on accommodations.

COMPASSIONATE MEDICAL ABSENCES:

If you require academic consideration because of an incapacitating medical condition, please inform your instructor(s), as soon as possible, of your inability to complete your work. Given our challenging times related to COVID-19, requests for extensions on assignments due to illness or caring for others with illness will be given case by case consideration for extensions. If you are unable to write a scheduled examination due to an incapacitating medical condition, you must follow the process set out in the [Faculty Handbook III:9.4.1](#).

REQUIRING A MEDICAL NOTE:

If you require academic consideration because of an incapacitating medical condition, please inform your instructor(s), as soon as possible, of your inability to complete your work. This should be done before the assignment deadline or exam date. You must also submit a copy of the virtual Brock University Student Medical Certificate. At the time of the appointment the health professional will provide you with the virtual medical certificate that you will need to forward to the instructor. Please note that Student Health Services appointments are limited at this time, therefore please forward this medical certificate within 7 days of the initial contact with the instructor. The University may, at its discretion, request more detailed documentation in certain cases. If you are unable to write a scheduled examination due to an incapacitating medical condition, you must follow the process set out in the [Faculty Handbook III:9.4.1](#).

Relationship between attendance and grades:

Students are expected to attend all meetings and must submit all assignments in order to pass this course.

Important dates:

November 2, 2020 is the date for withdrawal from the course without academic penalty.

October 13-16, 2020 is the scheduled Fall Reading Week (no classes).

Academic Integrity:

Statement for undergraduate courses

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties. Information on what constitutes academic integrity is available at <https://brocku.ca/academic-integrity/>

Plagiarism software:

If plagiarism software is used (Turnitin.com), a statement to that effect must be included on the outline including an option to opt out.

Sample statement regarding Turnitin.com

This course may use Turnitin.com, phrase-matching software. If you object to uploading your assignments to Turnitin.com for any reason, please notify the instructor to discuss alternative submissions.

Intellectual Property Notice:

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

Special Accommodation:

The University is committed to fostering an inclusive and supportive environment for all students and will adhere to the Human Rights principles that ensure respect for dignity, individualized accommodation, inclusion and full participation. The University provides a wide range of resources to assist students, as follows:

- a) If you require academic accommodation because of a disability or an ongoing health or mental health condition, please contact Student Accessibility Services at askSAS@brocku.ca or 905 688 5550 ext. 3240.

b) If you require academic accommodation because of an incapacitating medical condition, you must, as soon as practicable, inform your instructor(s) of your inability to complete your academic work. You must also submit a Brock University Student Medical Certificate (found at <https://brocku.ca/registrar/toolkit/forms>). The University may, at its discretion, request more detailed documentation in certain cases. If you are unable to write a scheduled examination due to an incapacitating medical condition, you must follow the process set out in the [Faculty Handbook III:9.4.1](#).

c) If you are experiencing mental health concerns, contact the Student Wellness and Accessibility Centre. *Good2Talk* is a service specifically for post-secondary students, available 24/7, 365 days a year, and provides anonymous assistance: <http://www.good2talk.ca/> or call 1-866-925-5454. For information on wellness, coping and resiliency, visit: <https://brocku.ca/mental-health/>

d) If you require academic accommodation on religious grounds, you should make a formal, written request to your instructor(s) for alternative dates and/or means of satisfying requirements. Such requests should be made during the first two weeks of any given academic term, or as soon as possible after a need for accommodation is known to exist.

e) If you have been affected by sexual violence, the Human Rights & Equity Office offers support, information, reasonable accommodations, and resources through the Sexual Violence Support & Education Coordinator. For information on sexual violence, visit [Brock's Sexual Assault and Harassment Policy](#) or contact the Sexual Violence Support & Response Coordinator at humanrights@brocku.ca or 905 688 5550 ext. 4387.

f) If you feel you have experienced discrimination or harassment on any of the above grounds, including racial, gender or other forms of discrimination, contact the Human Rights and Equity Office at humanrights@brocku.ca.

Class Schedule

Week 1 (September 9-11/2020)

Lecture:

- Lec 1. Introduction to the course

Lab Meeting (9/10):

- 9/10 **Lab 1 - A Survey of Global Volcanism** is assigned.

Week 2 (September 14-18/2020)

Lecture:

- Lec 2. Introduction to Volcanoes
- Lec 3. Plate Tectonics and Volcanism

Lab Meeting (9/17):

- Lab 1 presentations and write up is due.
- Term Project is described and assigned.

Movie (9/18)

- NOVA *In the Path of a Killer Volcano* (1993)
- **Movie quiz** must be completed by 12 pm on Saturday 9/19

Week 3 (September 21-25/2020)

Lecture:

- Lec 4. What is magma? – Chemical Composition
- Lec 5. Volcanic volatiles

Lab Meeting (9/24):

- **Lab 2 – Lavas and Phenocrysts** is assigned.
- **Term project topic is due.**

Movie (9/25):

- National Geographic Video: Volcano! (1997)
- **Movie quiz** must be completed by 12 pm on Saturday 9/26

Week 4 (September 28 - October 2/2020)

Lecture:

- Lec 6. Physical Properties: Viscosity and Diffusion
- Lec 7. Bubbles and magma ascent

Lab Meeting (10/1):

- **Lab 2 is due.**
- Library presentation / How to find relevant journal articles / how and when to cite / how to make an annotated bibliography
- Brock Library Writing & Citing Help (<https://brocku.ca/library/help/writing-citing/>)

Movie:

- No movie this week

Week 5 (October 5-9/2020)

Lecture:

- Lec 8. Types of volcanic eruption
- Lec 9. Hawaiian Volcanism - Lavas

Lab Meeting (10/8)

- **Lab 3 – Construction of a Shield Volcano** is assigned.
- **Annotated Bibliography is due.**

Movie (10/9):

- Lava Flows and Lava Tubes (2004)
- **Movie quiz** must be completed by 12 pm on Saturday 10/10.

Thanksgiving & Reading Week (10/12-16/2020)

Week 6 (October 19-23/2020)

Lectures:

- Lec 10. Hawaiian Volcanism – Eruptive Stages and Hazards
- Lec 11. Explosive Mafic Volcanism

Lab Meeting (10/22):

- Lab 3 is due.
- **Take Home Mid-term Exam (10% of final grade) is assigned.**

Movie (10/23):

- NOVA: Kilauea: Hawai'i on Fire (2019)
- **Movie quiz** must be completed by 12 pm on Saturday 10/24.

Week 7 (October 26-30/2020)

- **Take Home Mid-term Exam is due (Monday 10/26).**

Lecture:

- Lec 12. Submarine and subglacial Volcanism
- Lec 13. Experimental Volcanology

Lab Meeting (10/29):

- **Lab 4 – Kitchen Volcanology Experiments** is assigned.

Movie:

- There is no movie this week.

Week 8 (November 2-6/2020)

Lecture:

- Lec 14. Silicic Lavas and Domes
- Lec 15. Explosive silicic volcanism 1 (Airfall and Pyroclastic Flows)

Lab Meeting (11/5/2020):

- **Rough draft of Term Project is due.**

- Lab 4 Presentations and Write-ups are due.

Movie (11/6)

- NOVA: Mystery of the Megavolcano (2007)
- **Movie quiz** must be completed by 12 pm on Saturday 11/7.

Week 9 (November 9-13/2020)

Lecture:

- Lec 16. Explosive silicic volcanism 2 (Pyroclastic Flows)
- Lec 17. Lahars

Lab Meeting (11/12)

- Watch Volcanic Hazards Movie (30 minutes)
- **Lab 5 – Volcanic Hazards Map** is assigned.

Movie (11/13):

- NOVA: Doomsday Volcanoes (2013)
- **Movie quiz** must be completed by 12 pm on Saturday 11/14.

Week 10 (November 16-20/2020)

Lecture:

- Lec 18. Stratovolcanoes
- Lec 19. Calderas

Lab Meeting (11/19):

- Lab 5 is due.
- No lab this week

Movie (11/20):

- NOVA: Mount Saint Helens Back from the Dead (2010)
- **Movie quiz** must be completed by 12 pm on Saturday 11/21.

Week 11 (November 23-27/2020)

Lecture:

- Lec 20. Volcano Monitoring
- Lec 21. Mitigation

Lab Meeting (11/26)

- **Lab 6 - Dante's Peak** is assigned.
- Watch Dante's Peak (1997) (also available on Amazon Prime)

Movie

- No other movie is schedule for this week.

Week 12 (November 30 - December/4/2020)

- Final Presentations will be scheduled this week.

Week 13 (December 7-11/2020)

- (12/7) Final Take home Exam is Posted on Sakai.
- **Completed term paper is due Friday 12/9 by 4 pm.**

****Take Home Final Exam deadline to be scheduled (Week of December 14 to 18)**

Year 4

ERSC 4P31

EARTH SCIENCES 4P31

Watershed Studies

Fall Session

2017

Instructor: Dr. Uwe Brand, P.Geo.

Watershed Studies is a professionally-driven assessment course to investigate anthropogenic and natural impacts on watercourses and its water, sediment, fauna and flora. The student is expected to work on independent and original work investigating local water sheds. In addition, the course consists of an introduction to studies and results obtained on some local watercourses and the outcomes for remedial action. Reports, to simulate professional requirements, are due at the specific time (midnight) and date.

LABORATORY/FIELD

Safety rules outlined in the lab/field will be **enforced at all times**. Students attending the lab/field agree to abide by University and Provincial Safety regulations.

Field Project (as per discussion)
Laboratory and field sampling/analytical techniques
equipment preparation, field inspection
sampling techniques and transport
laboratory pre-preparation (SOP)
Map Library resources and orientation

GRADING

Assessment Report #1	15 %
Assessment Report #2	15 %
Flow Analysis Report	15 %
Major Assessment report	40 %
Field Notes & Assignments	10%

Attendance	5%
<hr/>	
Total	100 %

All reports are to be submitted electronically using an appropriate word processor to the instructor/TA. Also, all diagrams, photos, tables must be electronically generated and incorporated into the reports.

All students are required to participate in the fieldwork during assigned dates and times

No LATE assignments will be accepted.

Due Dates

Assessment Report 1	October 20, 2017
Assessment Report 2	November 10, 2017
Flow Analysis Report	December 8, 2017
Major Assessment report plus notes	December 19, 2017

Due dates may be changed at the discretion of the lecturer.

Withdrawal Dates

Students may withdraw from courses, and last day to change from credit to audit status, without academic penalty, provided that they conduct this transaction by the following date:

Duration 2 (half credit, Sept. - Dec.)	November 7, 2017
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Students who withdraw from the course after the appropriate date will automatically be assigned a failing grade in the course.

Academic Accommodations for Students with Disabilities (Senate 595)

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Services for Students with Disabilities in the Student Development Centre (4th Floor, Schmon Tower, x 3240).

You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments. This is important for the field trips, because some climbing and rough terrain may be encountered.

Field Trip dates (2017):

1st – September 18, meet in D206 at 8:00; leave at 8:15 from Loading Dock

2nd – September 25, meet in D206; leave at 8:15

3rd – October 23, meet in D206; leave at 8:15

4th – November 13, meet in D206; leave at 9 am

5th – December 4, meet in D206; leave at 9 am

Teaching Assistant: Kristen Shaver, office hours are posted by the TA Office (D 433)

COMM 4P18

Brock University
Department of Communication, Popular Culture and Film
Media and the Natural Environment (COMM4P18) Fall 2020
Instructor information

Professor Jennifer Good

Email: jgood@brocku.ca (I can usually respond the same day. If you haven't heard from me within a day or two, **please**

write again – I receive a lot of emails and on occasion a message does not arrive, gets buried, etc.).

Grab me right after class: I am usually distracted before class, but after class is a great time to ask questions, chat...

Online office hours: Tuesdays 11:00am – 12:00pm; Thursdays 3:00pm – 4:00pm (and by appointment)

Course goals

- Introduce the concept of environmental communication
- Encourage critical thought about the relationship between various forms of communication and our understanding of, relationship with and actions related to the “natural environment”
- Provide a forum in which aspects of environmental communication can be explored in a collaborative, creative, critical, thoughtful and hands-on manner

Grade composition – A quick look (details including due dates are after the calendar)

1. Environmental autobiography 5%
2. Insta-Enviro Part I reading and class reflections (wks #1-4) 10%
3. Insta-Enviro Part II reading and class reflections (wks #5-11) 15%
4. “Insta-Enviro” peer feedback 10% (5x2%)
5. Background Environmental Communication Paper No grade and Environmental Communication Plan **proposal**
6. Background Environmental Communication Paper 15%
7. Environmental Communication Plan 10%
8. Pecha-Kucha Presentation 10%
9. Participation and “show-and-tell” 15%
10. Communication of COVID and the environment Wiki 10%

100%

- Late assignments receive a deduction of 5% per day (assignments more than two weeks late will not be accepted).

- Assignments are due before Friday's class. After class starts, the assignment is minus 5% and by midnight Friday minus

10%. The weekend counts as one day.

- This course will make use of plagiarism detection software.

- This is an online course. Each week there will be asynchronous and synchronous content.

Calendar and due dates

Before/During/After each class

Week 1: Friday September 11

What is “environmental communication”?

Before class:

Read

- Griswold, E. (2012). How ‘Silent Spring’ ignited the environmental movement. *New York Times Magazine*, September 21.

[<https://www.nytimes.com/2012/09/23/magazine/how-silent-spring-ignited-theenvironmental-movement.html>]

- Syllabus video

During class:

- Discuss what the course will look like
- Talk about who we are!

After class:

- Find an environmental communication show-and-tell for next class

Week 2: Friday September 18

Why stories matter

Before class:

Read

- Good, J. (2017). "Putting hurricanes and climate change into the same frame." *Toronto Star*, Monday September 18, p. A12.

[<https://www.thestar.com/opinion/commentary/2017/09/18/putting-hurricanesand-climate-change-into-the-same-frame.html>]

- Lakoff, G. (2010). Why it matters how we frame the environment. *Environmental Communication: A Journal of Nature and Culture*, 4(1), 70-81.

- McKibben, B. (2011). A link between climate change and Joplin tornadoes? Never! *The Washington Post*, May 23. [https://www.washingtonpost.com/opinions/a-linkbetween-climate-change-and-joplin-tornadoesnever/2011/05/23/AFrVC49G_story.html] – text of the article via YouTube

[<https://www.youtube.com/watch?v=xhCY-3XnqS0&t=33s>]

Watch

- To be posted

During class:

- Discuss why stories matter
- Share your environmental communication show-and-tell

After class:

- Write your Environmental Autobiography and submit to Sakai before next class
- Find an Environmental Autobiography show-and-tell for next class

Due in class:

Environmental communication example

show-and-tell

Week 3: Friday September 25

Environmental communication

in the COVID era

Before class:

Read

- Good, J. (2020). "Crisis? What crisis?" *The Medium*.

[<https://medium.com/@jennifer.e.good/crisis-what-crisis-7800df17cef1>]

- Pike, C. (2020). "How COVID-19 Changes Climate Communications." *Green Biz*, April 6. [<https://www.greenbiz.com/article/how-covid-19-changes-climatecommunications>]

- "Impact of COVID-19 Pandemic on the Environment" Wikipedia page

[https://en.wikipedia.org/wiki/Impact_of_the_COVID-19_pandemic_on_the_environment]

[https://en.wikipedia.org/wiki/Impact_of_the_COVID-19_pandemic_on_the_environment]

Watch

- To be posted

During class:

- Discuss the communication of the connections between COVID and the environment
- Share your show-and-tell

After class:

- Find a communication of climate change show-and-tell
- Submit to the Communication of COVID and the Environment Sakai forum

Week 4: Friday October 2

Communicating climate
change

Before class:

Read

- Culloty, E., Murphy, P., Brereton, P., Suiter, J. & Smeaton, A. (2019). Researching visual representations of climate change. *Environmental Communication*, 13(2), 179-191.
- Skurka, C., Niederdeppe, J. & Nabi, R. (2019). Kimmel on climate: Disentangling the emotional ingredients of a satirical monologue. *Science Communication*, 41(4), 394-421.

Watch

- To be posted

During class:

- Discuss the communication of climate change
- Share your communication of climate change show-and-tell

After class:

- Find a communication of consumption/materialism and the environment show-and-tell
- Get ready to hand in “Insta-Enviro” Part I

Consumption and materialism

Before class:

Read

- Good, J. (2007). Shop ‘til we drop?: Television, materialism and attitudes about the natural environment. *Mass Communication and Society*, 10(3), 365-383.

Due in class:

**Environmental
Autobiography
show-and-tell
(artifact)**

Due to Sakai:

**Environmental
Autobiography**

Due in class:

**Communication
of climate change
show-and-tell**

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- Schmuck, D., Matthes, J., & Naderer, B. (2018). Misleading consumers with green advertising? An affect–reason–involvement account of greenwashing effects in environmental advertising. *Journal of Advertising*, 47(2), 127-145.

Watch

- To be posted

During class:

- Discuss the communication of consumption/materialism and the environment
- Share your communication of consumption/materialism and the environment

After class:

- Find a communication of zoos, aquariums or ecotourism and the environment showand-tell
- Get ready to submit your Environmental Communication Background Paper and Plan proposal

University is closed

October 12

to October 16 for

Thanksgiving and Reading

EPSC-PPB Vol II

Week.

Enjoy and read!

Week 6: Friday October 23

Zoos, Aquaria and Ecotourism

Before class:

Read

- Maynard, L. (2018). Media framing of zoos and aquaria: From conservation to animal rights. *Environmental Communication*, 12(2), 177-190.

- Sowards, S. (2012). Expectations, experiences, and memories: Ecotourism and the possibilities for transformations. *Environmental Communication*, 6(2), 175-192.

Watch

- To be posted

During class:

- Discuss zoos, aquariums and ecotourism as environmental communication

- Share your zoos, aquariums and ecotourism as environmental communication show-and-tell

After class:

- Find an art/music as environmental communication show-and-tell

Week 7: Friday October 30

Art and music

Before class:

Read

- Edwards, T. (2014). Come the apocalypse: Environmental and ecological issues in popular music. *Southwestern Mass Communication Journal*, 29(1), 1-24.

Due to Sakai:

Insta-Enviro

Part I

(Weeks #1 – #4)

Due to Sakai:

Environmental

Communication

**Background Paper
and Plan proposal**

Due in class:

**Communication of
consumption/materialism**

and the

Environment

show-and-tell

Due in class:

Communication of

zoos, aquaria

and/or ecotourism

show-and-tell

- Peeples, J. (2011). Toxic sublime: Imagining contaminated landscapes.

Environmental Communication: A Journal of Nature and Culture, 5(4), 373-392.

Watch

- To be posted

During class:

- Discuss art and music as environmental communication

- Share your art and music as environmental communication show-and-tell

After class:

- Find a fashion as environmental communication show-and-tell

Monday November 2

Last day for withdrawal without academic penalty and last day to change from credit to audit status for duration 2 courses without academic penalty.

Week 8: Friday November 6

Fashion

Before class:

Read

- Pasquarelli, A. (2019). How sustainability in fashion went from the margins to the mainstream: Nearly every apparel marketer is following consumer demand by leaping onto the green wagon. *Advertising Age*, 90(5). [<https://adage.com/article/cmstrategy/sustainability-fashion-mainstream/316828>]
- Teona, G., Ko, E., & Kim, S. (2020). Environmental claims in online video advertising: Effects for fast-fashion and luxury brands. *International Journal of Advertising*, 39(6), 858-887.

Watch

- To be posted

During class:

- Discuss fashion as environmental communication
- Share your fashion as environmental communication show-and-tell

After class:

- Find an advocacy/activism as environmental communication show-and-tell

Week 9: Friday November 13

Advocacy and activism

Before class:

Read

- Cox, N. (2014). Contending with capitalism: Political economic analysis of ecoactivism on whale wars. *Communication, Culture & Critique*, 7, 283–302.
- Feldman, L, Hart, P., Leiserowitz, A., Maiback, E., & Roser-Renouf, C. (2017). Do hostile media perceptions lead to action? The role of hostile media perceptions, political efficacy, and ideology in predicting climate change activism. *Communication Research*, 44(8), 1099-1124.

Watch

- To be posted

Due to Sakai:

Insta-Enviro Peer

Feedback

COVID and the Environment Wiki: “check-in”

Due in class:

Advocacy/Activism as
Environmental
communication
show-and-tell

Due in class:

Fashion as
Environmental
communication
show-and-tell

Due in class:

Art and/or Music

Show-and-Tell

During class:

- Discuss advocacy and activism as environmental communication

- Share your advocacy/activism as environmental communication show-and-tell

After class:

- **Show and Tell:** Find an example of the future of environmental communication

Week 10: Friday November 20

The future of environmental communication

Before class:

Read

- Our Planet. Our Future. (2019) <https://www.unenvironment.org/news-andstories/speech/our-planet-our-future>

- Gladwell, M. (2010). Small change: Why the revolution will not be tweeted. *The New Yorker*, September 27. [<https://www.newyorker.com/magazine/2010/10/04/smallchange-malcolm-gladwell>]

- Breves, P. & Heber, V. (2020). Into the wild: The effects of 360° immersive nature videos on feelings of commitment to the environment. *Environmental Communication*, 14(3), 332-346.

Watch

- To be posted

During class:

- Discuss the future of environmental communication

- Share your advocacy/activism as environmental communication show-and-tell

After class:

- Prepare your Pecha Kucha

Week 11: Friday November 27

Pecha Kucha Presentations (No readings)

Week 12: Friday December 4

Pecha Kucha Presentations (No readings)

Note: The journal articles are available on the course Sakai website and via the Communication and Mass Media

Complete database.

Due to Sakai:

Environmental

Communication

Background Paper

and Environmental

Communication

Plan

Due to Sakai:

Insta-Enviro

Part II

(Weeks #5-#11)

Due in class:

Future of

Environmental

communication

show-and-tell

Due to Sakai:

COVID and the

Environment Wiki

4P18 Grade Composition – A detailed look

1. Environmental autobiography 5%

(Due: Friday September 25 before class on Sakai)

In general, I would like you to explore how the “natural environment” has been “communicated” to you throughout your life and how you understand your relationship with the “natural environment.” In the past, some students have written about the way this relationship has changed throughout their lifetime and others have focused on a particular event/time in life. The details of your relationship are entirely yours (i.e., there is no “right” or “wrong” relationship) and how you understand how you arrived at that relationship is also entirely yours. Some students have expressed a real dislike, even hatred, of nature (heat, bugs, scary weather, etc.) and some have expressed reverence, love and awe... Often the relationship falls somewhere in between and has twisted and turned over the years. I would like to know about that relationship, in whatever way you want to tell that story. (Remember that you will be sharing the highlights of your autobiography – and an artefact related to your autobiography – in class!)

Autobiography details

*Four to five double-spaced pages (not including the cover page)

*No need for outside sources

*Well-written, thoughtful autobiographies will do well

2. Insta-Enviro project Part I (for weeks #1 to #4) 10%

(Due: Friday October 9 before class on Sakai)

Insta-Enviro project Part II (for weeks #5 to #11) 15%

(Due: Friday December 4 before class on Sakai)

This is a weekly Instagram-meets-environmental-communication assignment. Each week for 11 weeks (starting in week

#1 and ending week #11) you will take a picture (using a camera or phone is fine); you will also write a two-page

explanation for each week’s image. The two-page write-up (not including the image) should reflect on the photo from the

perspective of the week’s readings and class (with explicit details from the readings and class).

Write up: Double-spaced in Word OR a public Instagram account (that you have created especially for the class). If you

use an Instagram account, only part of your write-up will fit in Instagram – the rest should be in a Word document.

How will the Insta-Enviro work be graded? Work will be graded for well-written, integrated, **course-specific detail**

(readings and class) and thoughtfulness. The photos should be appropriate given the week’s readings and discussion.

***NOTE:** Your Insta-Enviros will be shared with others in 4P18 (see below). Please only share what you are comfortable having your classmates read.

***NOTE:** Do not include the space taken up by the image in your two page “count.”

***NOTE:** The photo should be an original photo (i.e., not someone else’s photo, not a photo of a screen that has an image

on it and not a photo of some other publication or packaging that has an image on it).

***NOTE:** You will not be graded on the “quality” of the images (this is not a photography course) but the thoughtfulness

and appropriateness of the image for the week’s topic – and how you link the photo to the week’s course content (readings

and class) – will certainly be taken into consideration.

3. Insta-Enviro peer feedback (5x2% = 10%)

(DUE: Friday November 6 Word document to Sakai before class)

My guess is that you all know (and perhaps regularly use) Instagram. For this assignment you will be using that knowledge and perhaps experience – as well as your 4P18 knowledge and experiences – to provide feedback for, and evaluation of, your classmates’ Insta-Enviro work. You will receive a list of five Insta-Enviros and a rubric. The rubric will enable you to provide both quantitative and qualitative feedback. This feedback will then be shared with the Insta-Enviro author.

How will I be graded? I will provide you with a rubric. You will fill out a rubric for each of the five Insta-Enviros that you read. Thoughtful, well written, feedback will do well.

4. Background Paper and Communication Plan *proposal* No grade

(Due: Friday October 23 – the Friday after the fall reading week – before class to Sakai)

There is no grade for the proposal but in order to receive a grade on your Background Environmental Communication

Paper and Environmental Communication Plan, I must receive a proposal.

The proposal should:

- Be one to two pages double-spaced
- Provide a brief overview of the topic of your Environmental Communication Background Paper and Environmental Communication Plan (see below for details)
- Explicitly state how your Environmental Communication Background Paper and your Environmental Communication Plan are about environmental communication
- The more detail you can provide, including initial sources, the better
- Be submitted *no later than* Friday October 23 – earlier is even better!

***NOTE:** It is possible to receive verbal permission for your proposal but this **MUST** be obtained prior to the October 23 deadline.

5. The Environmental Communication Background Paper (Your idea must be approved!) **15%**

(Due: Friday November 20 before class to Sakai)

This paper is the foundations on which you are building an environmental communication plan.

Your paper should answer the following questions:

- What is the environmental issue you are addressing?
- What is the communication challenge you are addressing?
- What research helps you to answer these questions and create a foundation for your Environmental Communication Plan?

This is a formal academic research paper:

- 8-10 pages (double-spaced, 1 inch margins, Times New Roman, 11 pt. font) not including cover page and references
- Variety of sources (8-10) from both journal and non-journal sources (we will talk more about sources in class but keep in mind that there should be NO Wikipedia and NO textbooks)
- APA formatting for citations and references

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How will the Environmental Communication Background Paper be graded? We will talk more about each of these

elements in class but, in general, your paper will be graded based on the quality of writing (style), the sources you have used (content) and the way in which you have used those sources and developed the context for your Plan (logic).

6. Environmental Communication Plan 10%

(Due: Friday November 20 before class to Sakai)

The Environmental Communication Plan should provide all of the details needed to actually propose, or enact, your

Environmental Communication Plan (ECP). As such, your ECP should contain the following elements:

- The name and address of the person to whom you would address your cover letter
- Your cover letter: a one-page, double-spaced letter providing an overview of the background of your ECP and what you are proposing
- The details of your ECP
- Budget, references, images, maps, graphs, charts, etc., as needed/desired
- 5-10 pages including all information – the format is up to you

How will the Environmental Communication Plan be graded? Your Environmental Communication Plan (ECP)

should be “real world ready.” In other words, I will be looking for a document that could not only be sent to the person

indicated in your cover letter but would also convince that person that there is a need for your ECP – and that you are the

person to undertake the ECP!

In other words, I will be looking for thoughtful and thoroughly researched details – and flawless presentation. We will talk

more about the assignment in class.

7. Pecha Kucha Presentation 10%

(Due: Friday November 27 and Friday December 4)

Pecha Kucha (<https://www.pechakucha.com/>) is a presentation concept/format that shares idea with 20 slides x 20

seconds per slide! The idea is that you will almost exclusively use visuals as you share the highlights from the semester.

You will share the work you have done in the class including some combination of your autobiography, “Insta-Enviro”

entries, Environmental Communication Background paper, Environmental Communication Plan, and “show and tells”

(that you did not share in class). We will come up with the grading criteria for the presentations together.

You will all be

expected to provide feedback on each other’s presentations.

8. Participation and Show-and-Tell 15%

Fourth year seminars, such as this one, are built on engagement – and engagement is hard if people are not participating.

My expectation, therefore, is that you will not only be present for every class, but also that you will also be prepared to

participate. I keep track of and give credit for participation – *especially* participation based on the readings and “show and

tell.” Someone who is in class, prepared and provides thoughtful course-based feedback will receive 90% (or so) for that

class. Someone who is in class, says nothing and/or provides basic feedback will receive 50% (or so) for that class. If you

are not in class, you receive zero.

Keep in mind that this class meets only once a week. When you miss an entire class, it is like missing two hours of lecture

and a seminar in another class. With only twelve classes, each zero is close to losing ten percent of your participation

grade. Not being in class and/or not participating thoughtfully in class will have a significant impact on your grade.

I do know, however, that life can get in the way of attending class – especially in these COVID times. So, if you have to

leave early, or arrive late, I understand (although whenever possible, please let me know in advance). That said, a missed

class or a missed portion of a class will be excused only if there are extenuating circumstances.

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9. Communication of COVID and the Environment Wiki 10%

(Due: Friday December 4 before class to Sakai; a “check in” Friday October 30)

COVID makes this fall unique and what is interesting for us 4P18 folks is that COVID is an environmental issue. So we are going to collectively create a Communication of COVID and the Environment Wiki. The expectation is that you will contribute to the Wiki each week.

How will the Communication of COVID and the Environment be submitted? You will compile all of your contributions by date in a single Word document.

How will the Communication of COVID and the Environment be graded? I will be looking for regular thoughtful and well written contributions to the Wiki. We will talk about this more in class.

Additional Notes

Academic integrity

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.

Communication, Popular Culture and Film Statement on Academic Misconduct

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct," in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at brocku.ca/webcal, to view a fuller description of prohibited actions, and the procedures and penalties which may be applied.

Academic misconduct includes plagiarism (presenting the words and ideas of another person as if they were your own), submitting the same work for two different assignments, and other forms of cheating such as using crib notes during a test or fabricating data for a lab assignment. Instructors and teaching assistants in the Department thoroughly investigate all suspected cases of academic misconduct. The penalties for documented cases of academic misconduct can be severe. The Department may recommend that a grade of zero be given for the assignment, and a failing grade if not a grade of zero be given for the course. In addition, a note will be attached to the student's academic transcript. A second offence can result in suspension from the University. The disciplinary process is administered initially at the Department level and in cases where academic penalty is assigned will be referred to the offices of the Dean of Social Sciences.

Make yourself aware of the issues involved. Read the section of the Undergraduate Calendar that pertains to academic misconduct. You are reminded that the Student Development Centre (Schmon Tower, Room 400) offers workshops on writing skills, and issues surrounding plagiarism.

For further information on all aspects of your academic program, including course planning, you may consult with the

Department's Academic Advisor: Penni Lafleur, SBH 344, ext. 5308 , plafleur@brocku.ca.

Intellectual property notice

All videos, slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course

are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the

instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of

Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

Special accommodation

The University is committed to fostering an inclusive and supportive environment for all students and will adhere to the

Human Rights principles that ensure respect for dignity, individualized accommodation, inclusion and full participation.

The University provides a wide range of resources to assist students, as follows:

- If you require academic accommodation because of a disability or an ongoing health or mental health condition,

please contact Student Accessibility Services at askSAS@brocku.ca or 905 688 5550 ext. 3240.

- If you require academic accommodation because of an incapacitating medical condition, you must, as soon as

practicable, inform your instructor(s) of your inability to complete your academic work. You must also submit a

Brock University Student Medical Certificate (found at <https://brocku.ca/registrar/toolkit/forms>). The University

may, at its discretion, request more detailed documentation in certain cases. If you are unable to write a scheduled

examination due to an incapacitating medical condition, you must follow the process set out in the Faculty Handbook III:9.4.1.

- If you are experiencing mental health concerns, contact the Student Wellness and Accessibility Centre.

Good2Talk is a service specifically for post-secondary students, available 24/7, 365 days a year, and provides

anonymous assistance: <http://www.good2talk.ca/> or call **1-866-925-5454**. For information on wellness, coping

and resiliency, visit: <http://brockmentalhealth.ca/mental-well-being/>.

- If you require academic accommodation on religious grounds, you should make a formal, written request to your

instructor(s) for alternative dates and/or means of satisfying requirements. Such requests should be made during

the first two weeks of any given academic term, or as soon as possible after a need for accommodation is known

to exist.

- If you have been affected by sexual violence, the Human Rights & Equity Office offers support, information,

reasonable accommodations, and resources through the Sexual Violence Support & Education Coordinator. For

information on sexual violence, visit Brock's Sexual Assault and Harassment Policy or contact the Sexual Violence Support & Response Coordinator at humanrights@brocku.ca or 905 688 5550 ext. 4387.

- If you feel you have experienced discrimination or harassment on any of the above grounds, including racial,

gender or other forms of discrimination, contact the Human Rights and Equity Office at humanrights@brocku.ca.

Diligence and respect

- While I am empathetic to workload concerns, workload will **not** be considered an excuse for late work. In my

experience, everyone has workload concerns at various points in the semester and planning ahead is a vital life skill.

- I expect that you will back up your work and that you will stay on top of your grades (so that there are no surprises for you at the end of the semester). Work that has been lost because of computer issues will not be an excuse for late work and similarly, you should not wait until the last minute to upload your work to Sakai. Difficulties with Sakai will not be accepted as an excuse for late work. Once a final grade has been assigned, it will not be changed (unless there is an error in calculation).
- I expect you to be quiet, attentive and respectful in our online class and in our interactions more generally.

Pledge of Academic Integrity

I, the undersigned, understand that all the following practices constitute academic misconduct according to Brock

University's policy on academic misconduct and general academic practice:

Quoting someone else's words without using quotation marks;

Quoting someone else's words without acknowledging the source;

Using someone else's ideas in my own words without acknowledging the source;

Using someone else's argument in my own words without acknowledging the source of the argument;

Fabricating sources of information for an assignment, bibliography or list of works cited;

Having or employing someone else to write all or part of my assignment, or do all or some of the preparatory work for me. There are two exceptions to this rule: I may have or employ someone to type the final assignment or make editorial comments. However, I take full responsibility for any errors introduced by a typist or editor;

Allowing another student to use material from my assignment in his/her assignment;

Writing all or part of an assignment for another student or doing all or some of the preparatory work for

him/her. Such preparatory work includes (but is not limited to) reading and note-taking from required books and articles;

Submitting any work for credit in two or more courses;

Asking someone to use phone/computer to make it look like I attended lecture and receive credit;

Using someone else's phone/computer to make it look like that person attended lecture and receive credit.

By signing below, I confirm that I have read the Media and the Natural Environment (4P18) syllabus.

Furthermore, I confirm that I understand the various forms of academic misconduct (checked above) and I will not

undertake any of the above in the work that I submit. Please read and check each of the boxes.

Name (please print):

Signature:

Date:

ERSC 4PXX

Citizen Science

ERSC 4PXX

Citizen Science

This course aim is about the theories and praxis of citizen science and crowdsourcing. Citizen science is the participation of members of the public in projects, including the engagement of a large group of people in the creation of new knowledge (crowdsourcing). The course explores the history, theoretical foundations, and practical aspects of designing and running citizen science projects. By the end of the course, able to demonstrate knowledge of the field of citizen science and scientific crowdsourcing, including the activities that are include in it and its history

Course Outline:

Topics to be covered:

- 1) Historical citizen science, current trends that influence citizen science, and an overview
- 2) Theoretical and methodological frameworks for citizen science
- 3) User-centred design principles and methods for citizen science technology
- 4) Managing data in citizen science
- 5) Ethics, legal and policy aspects of citizen science

Assessment: Reports on assigned readings, presentations, group projects, essays

Recommended Readings:

Cavalier, Darlene et al (2020) *The Field Guide to Citizen Science: How You can Contribute to Scientific Research and Make a Difference*. Timber Press, Oregon.

Cavalier, Darlene, and Eric B. Kennedy (eds.) 2016. *The Rightful Place of Science: Citizen Science*. Arizona State University Consortium for Science, Policy, and Outcomes, Tempe.

Cooper, Caren. 2016. *Citizen Science: How Ordinary People Are Changing the Face of Discovery*. The Overlook Press, New York.

Hannibal, Mary Ellen. 2016. *Citizen Scientist: Searching for Heroes and Hope in an Age of Extinction*. The Experiment, New York.

Kimmerer, Robin W. 2013. *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teaching of Plants*. Milkweed Press, Minneapolis.

Pettibone, Lisa et al. 2016. *Citizen Science for All: A Guide for Citizen Science Practitioners*, English ed. The Citizen Science Platform, Germany.

COMM 4P35

Course Number: COMM 4P35 D2 Term/Year/Duration: Fall 2020 D2 Course
Title: Data and Society

Syllabus Updated: 19 Sept. 2020 [Weeks 6 and 7 swapped]

Instructor Name: Dr. Karen Louise Smith | karen.louise.smith@brocku.ca Office Location: Scotiabank Hall Rm. 316 Contact: 905-688-5550, Ext. 6497 Liaison Librarian: Laurie Morrison | lmorrison@brocku.ca

Times and Locations:

Seminars (the Comm 4P35) class are timetabled from 9-12 on Mondays. Class will typically begin at 10 am, with some materials regularly being posted for you to review asynchronously. Some limited weeks of the course may require the full scheduled time slot (9-12). You will be notified at least one week in advance if you need to be online for 9 am.

Office hours appointments will be held via Microsoft Teams and are typically available from 12-1 on Mondays. Please book an appointment here:

<https://outlook.office365.com/owa/calendar/KarenSmithOfficeHours@brocku.onmicrosoft.com/bookings/>

Claims such as ‘data is the new oil’ are frequently made in the media. Dominant technology companies such as Google, Amazon Facebook and Apple (GAFA) hold massive troves of our personal information and are amongst the world’s most profitable entities. Against this backdrop, the Data and Society course explores topics including open data, big data, social media and algorithms from a Critical Data Studies perspective.

The course is divided into three sections:

Social Sciences

- Critical Data Studies Overview (weeks 1-2)
- Data Download (weeks 3-6)
- Unboxing (weeks 8-11)

Students will also complete a Critical Data Studies term project. Term projects can be completed individually, or as part of a team.

Course Prerequisites (if any):

Restriction: open to BCMN, COMM, MCMN and PCUL majors with approval to year 4 (honours) or permission of the instructor. Note: students will analyse a data set and apply their findings.

Learning Objectives/Outcomes:

The learning objectives for this course are for students to:

1. Participate in critical debates concerning data in society in a variety of sectors including business, government and education
2. Explore the meaning of emerging concepts such as open data, big data and algorithms within the field of critical data studies
3. Analyze a data set and engage with the issues that emerge from data collection and use
4. Unbox the socio-technical practices associated with collecting and analyzing data
5. Demonstrate applied communication skills through written assignments as well as presentations, group work, and online class forums

Required Readings or Texts:

Required readings and other resources are listed in the week-to-week schedule. Materials are available online through Sakai.

Course Communications:

Essential course information will be shared in class (convened in Microsoft Teams), via Sakai and by Brock email. Twitter will also be used to create an (optional) class-convened conversation

(#COMM4P35). Questions or issues that are of general interest can be posted in the Forums section of Sakai. Email should be used for individual issues and the instructor will attempt to reply within 2 business days. In-depth questions need to be addressed through office hours, or an individual appointment with your instructor.

Updates:

If there are errors or omissions on this syllabus the class will be notified.

Equipment/Technology:

Students will need regular access to an internet connected computer for this course. Relying upon a mobile phone is not recommended. Some key expectations for appropriate technology use in this course: - Turning on your webcam is optional for this course - The permission of fellow students and the teaching team should be granted if any recordings or screen shots are taken of seminars or meetings

Social media and news sites (e.g., YouTube, the CBC) will frequently be referenced within this course. If a student is accessing the course from a country where YouTube, or other social media platforms and news sites are blocked, your instructor regrettably advises that you should drop the course. Access to social media platforms and news sites are integral to your learning for Comm 4P35.

Please see the Comm 4P35 Tech Info handout in the Resources folder on Sakai for more detailed information on technology and access considerations.

Evaluation Components and Due Dates

Assignments and evaluation components of the course will be discussed in class and more detailed guidelines will be posted to Sakai.

Evaluation Component	Grade Weight	Due Date
Data download presentation (Group assignment)	15.0%	Varying dates - Videos due on on Friday prior to class @ noon, e.g., Sept. 25 for Sept. 28 class
Unboxing presentation assignment (Group assignment)	15.0%	Varying dates - Videos due on on Friday prior to class @ noon, e.g., Nov. 6 for Nov. 9 class
Critical data studies term project proposal	15.0%	Presentations beginning on October 26th with written proposal due Nov. 2nd
Critical data studies final term project	15.0%	Presentations beginning December 7th with final reports due on December 14th
Participation report (Individual assignment)	15.0%	December 9th (with 2 critical reflections submitted earlier in the term)
TOTAL	100.0%	

Assignment Overview

- Data download presentation Working in a team of 2-3 students, you will download one or more data sets related to the week's theme. In lieu of downloading data, you can also interact with a portal or visualization tool that enables you to access relevant data for your presentation. The presentation team is responsible for critically analyzing or engaging with the data and developing an argument that relates to the week's overarching theme. Additional scholarly and/or policy research is expected to leverage references that are not assigned on the syllabus. Topics must be approved by the instructor at least one week before your presentation. o Sample topics: § Week 4: Consultation Data on Open Government in Canada § Week 7: Uber Trip Data and Innisfil, Ontario

Presentations should last 20 minutes and include 10-15 minutes (30-35 minutes total length). The presentation component will typically be a pre-recorded video, with live discussion with your peers.

- Unboxing presentation assignment

Working in a team of 2-3 students you will select a product, company, organization, policy, or controversy that relates to the week's overarching theme. Your challenge with this assignment is to 'unbox' opaque technologies, algorithms or practices involved in the smart technology ecosystem. o Sample topics: § Week 8: 'Miracle' Marketing and the Eversense Continuous Glucose Monitoring Device § Week 10: YouTube Profiting from Children's Information?

Presentations should last 20 minutes and include 10-15 minutes (30-35 minutes total length). The presentation component will typically be a pre-recorded video, with live discussion with your peers.

- Critical data studies term project o Proposal phase: Working individually or in a team, you will propose a term project and demonstrate knowledge of the foundational scholarly literature necessary to pursue the term project. Proposals are generally expected to be 5 pages (single student), 6 pages (2 students) or 7 pages for (3 student teams). o Term project phase: Your project topic that will culminate in a 15 page (single student), 20 page (pair of students) or 25 page (3 student team) report or essay as a term project.

Possible starting points for the project include: o A critical exploration of an open data portal, or an application related to open data sets o Content analysis of advertising, or news stories related to a smart technology product o A theoretically informed examination of a controversy associated with data in society (e.g., a data breach, a controversial practice, etc.)

To demonstrate a breadth of knowledge over the term your term project should NOT directly replicate the topic you explore for the Data Download or Unboxing Presentation assignments. Please speak to your instructor if you wish to build upon one of your presentation topics for the critical data studies term project.

Both the proposal and term project phase of the assignment require you to present your ideas in class for feedback and discussion as noted in the week-to-week schedule.

- Participation report Your participation report will include a record of your attendance over the term and 2 critical reflections of approximately 3 pages each, which you prepare over the term and submit in advance of the appropriate class, where you will share your ideas. Your participation report grade will be awarded holistically on the basis of your ongoing attendance, engaged participation and written reflections.

The two written reflections are due on the Friday at 12:00 noon (3 days before you will share your insights in class verbally):

- Critical Reflection #1: Written submission due by Oct. 23rd at 12 noon • Critical Reflection #2: Due before Nov. 27 at 12 noon

No grades will be assigned for the critical reflections until the end of the term when the participation report is graded, which includes these responses.

Assignment Submission Instructions

Please refer to each assignment's handout for instructions on electronic and/or hard copy submission.

Students are expected to follow both assignment instructions and the CPCF departmental guidelines for essays when handing in written work • <http://www.brocku.ca/social-sciences/departments-and-centres/cpcf/student-success/essay-styleguidelines>

Late Submission Policy:

Assignments are due by the specified deadlines. A late penalty of 3% per day will be applied to late work (to a maximum of 15%). Late work is accepted one week from the original deadline, unless extenuating circumstances apply.

- 1) Medical situation: Late work is accepted penalty free when submitted with a Brock Medical Certificate, within a reasonable time frame after the illness o Brock Medical Certificate <https://brocku.ca/registrar/wp-content/uploads/sites/45/MedicalCertificate.pdf>
- 2) Accommodation need: Late work is accepted penalty free when there is an accommodation need, which is documented through Brock's Student Accessibility Services office
- 3) Other extenuating or emergency-level circumstances at the instructor's sole discretion: in all other situations please contact your instructor before a deadline or as soon as possible, to request an extension. The instructor will assess each situation on a case-by-case basis and accept late work when there is a compelling reason to justify late submission. Please note that students may be asked to provide evidence or documentation to support the instructor's discretionary decision about whether to accept late work. Under extenuating or emergency-level circumstances, work could be accepted penalty free. A late penalty of up to 15% may also be applied in cases where the instructor feels a penalty is warranted.

Relationship between attendance and grades:

Students are expected to attend the Comm 4P35 seminar/class. Attendance is tracked in seminar will factor into the grade for the Seminar Participation Report. Being late, leaving early, or missing seminar twice over the semester will negatively impact your participation grade. Students who need to miss lecture or seminar for reasons consistent with accessibility, medical or religious exemption purposes can consult with their instructor for accommodations.

Important dates: (check the section on sessional or important dates in the relevant online University calendar at <http://brocku.ca/webcal/>)

November 2 is the date for withdrawal from the course without academic penalty

Oct 28 is the date you will be notified of 15% of your course grade.

October 12-16 is Thanksgiving and the scheduled reading week

No Dates are set aside as makeup days due to holidays. Please consult with the instructor at the beginning of the term if you require accommodation to arrange makeup dates.

Dec 9 are set aside for designated reading days (these may be used to cover classes missed because of adverse weather)

Dec 10-22 are set aside for formal examination periods

Group work expectations:

Group work is a component of this course. Team members are generally expected to resolve any challenges within the team. In extenuating circumstances, such in the case of a non-contributing

team member, please notify your TA or the instructor well in advance of the assignment deadline. A group meeting may be called with the instructor. Individual grades and/or a team 'divorce' may be implemented in extenuating circumstances. All group members should retain rough notes, drafts, and evidence of their contribution to the group project in case a group meeting is called, and individual work is required.

Academic Policies

Academic Integrity:

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Polices" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.

Please see the CPCF in-depth statement on Academic Integrity at the end of this syllabus. Each student in COMM 4P35 will be expected to sign an academic integrity pledge on Sakai for relevant assignments.

This course will NOT use Turnitin.com, phrase-matching software.

Special Accommodation:

The University is committed to fostering an inclusive and supportive environment for all students and will adhere to the Human Rights principles that ensure respect for dignity, individualized accommodation, inclusion and full participation. The University provides a wide range of resources to assist students, as follows:

a) If you require academic accommodation because of a disability or an ongoing health or mental health condition, please contact Student Accessibility Services at askSAS@brocku.ca or 905 688 5550 ext. 3240.

b) If you require academic accommodation because of an incapacitating medical condition, you must, as soon as practicable, inform your instructor(s) of your inability to complete your academic work. You must also submit a Brock University Student Medical Certificate (found at <https://brocku.ca/registrar/toolkit/forms>). The University may, at its discretion, request more detailed documentation in certain cases. If you are unable to write a scheduled examination due to an incapacitating medical condition, you must follow the process set out in the Faculty Handbook III:9.4.1.

c) If you are experiencing mental health concerns, contact the Student Wellness and Accessibility Centre. Good2Talk is a service specifically for post-secondary students, available 24/7, 365 days a year, and provides anonymous assistance: <http://www.good2talk.ca/> or call 1-866-925-5454. For information on wellness, coping and resiliency, visit: <https://brocku.ca/mental-health/>

d) If you require academic accommodation on religious grounds, you should make a formal, written request to your instructor(s) for alternative dates and/or means of satisfying requirements. Such requests should be made during the first two weeks of any given academic term, or as soon as possible after a need for accommodation is known to exist.

e) If you have been affected by sexual violence, the Human Rights & Equity Office offers support, information, reasonable accommodations, and resources through the Sexual Violence Support & Education Coordinator. For information on sexual violence, visit Brock's Sexual Assault and Harassment Policy or contact the Sexual Violence Support & Response Coordinator at humanrights@brocku.ca or 905 688 5550 ext. 4387. f) If you feel you have experienced discrimination or harassment on any of the above grounds, including racial, gender or other forms of discrimination, contact the Human Rights and Equity Office at humanrights@brocku.ca.

Intellectual Property Policy:

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

Week-to-Week Lecture Schedule

Week

Focus and activities/assessments

Weekly schedule

1 - Sept. 14

Introduction to the course and Critical Data Studies

- Iliadis, A., & Russo, F. (2016). Critical data studies: An introduction. *Big Data & Society*. <https://doi.org/10.1177/2053951716674238>

2 - Sept. 21

Data assemblages and a theoretical overview

- Kitchin, R. (2014). *The Data Revolution: Big Data, Open Data, Data Infrastructures and Their Consequences*. • Chapter 1: Conceptualising Data (p. 1-26)
- Williamson, B. (2017). Learning in the 'platform society': Disassembling an educational data assemblage. *Research in Education*, 98(1), 59-82.

DATA DOWNLOAD

3 - Sept. 28

Big Data and Social Media

First week to submit Critical Response #1 (due on Friday prior to class @ noon)

Data Download Presentations begin (due

• Andrejevic, M. (2014). Big data, big questions| the big data divide. *International Journal of Communication*, 8, 17. • boyd, danah, & Crawford, Kate. (2012). *Critical Questions for Big Data: Provocations for a Cultural, Technological, and Scholarly Phenomenon*. *Information, Communication & Society*, 15(5), 662- 679. • Lupton, D. (2015). *The 13 Ps of Big Data*. Retrieved from:

on Friday prior to class @ noon)

<https://simplysociology.wordpress.com/2015/05/11/the-thirteen-ps-of-big-data/>

4 - Oct. 5

Open Data

• Open Knowledge Foundation. (2010-2012). *Open Data Handbook*. • Why Open Data from opendatahandbook.org/guide/en/why-opendata/ • What is Open Data from <http://opendatahandbook.org/guide/en/what-is-open-data/> • Rosling, H., Ronnlund, R.R., & Rosling, O. (2004). *New software brings statistics beyond the eye*. In *Proceedings from Statistics, Knowledge and Policy: OECD World Forum on Key Indicators: Palermo*. Available online at: <http://www.oecd.org/dataoecd/39/48/33843977.doc> • Colpaert, P., Joye, S., Mechant, P., Mannens, E., & Van de Walle, R. (2013). *The 5 stars of open data portals*. In *Proceedings of the 7th International Conference on Methodologies, Technologies and Tools Enabling E-Government (MeTTeG13)*, University of Vigo, Spain (pp. 61-67).

READING WEEK

5 - Oct. 19

Search, Personalization and Algorithmic bias

• Goldman, E. (2006). *Search engine bias and the demise of search engine utopianism*. *Yale Journal of Law & Technology*. 8(1): 188-199 • Smith, B., & Linden, G. (2017). *Two decades of recommender systems at Amazon.com*. *IEEE internet computing*, 21(3), 12-18. • Noble, S. U. (2018) *A Society, Searching*. In *Algorithms of Oppression: How Search Engines Reinforce Racism*. pp. 15-63

6 - Oct. 26

Data from the gig economy

Last week to submit Critical Response #1 (due on Friday prior to class @ noon)

[Moved up from week 7]

• Gregg, M. (2015, September 11). *The doublespeak of the gig economy*. *The Atlantic*. Retrieved from <http://www.theatlantic.com/business/archive/2015/09/gig-economy-doublespeak-new-labor/404779/> • Irani, L. C., & Silberman, M. S. (2013, April). *Turkopticon: Interrupting*

worker invisibility in amazon mechanical turk. In Proceedings of the SIGCHI conference on human factors in computing systems (pp. 611-620). • Rosenblat, A., & Stark, L. (2016). Algorithmic labor and information asymmetries: A case study of Uber's drivers. *International Journal of Communication*, 10, 27.

7 - Nov. 2 Proposal Presentations - Critical Data Studies Projects

[Moved down from week 6]

UNBOXING

8 - Nov. 9 Smart Wearables

Unboxing presentations begin (due on Friday prior to class @ noon)

First week to submit Critical Response #2 (due on Friday prior to class @ noon)

• Hilts, A., Parsons, C. and Knockel, J. (2016). Every Step You Fake: A Comparative Analysis of Fitness Tracker Privacy and Security. Open Effect Report. Available at: [https://openeffect.ca/reports/Every_Step_You_Fake .pdf](https://openeffect.ca/reports/Every_Step_You_Fake.pdf) • Sections 1, and 5-7 • Neff, G., and Nafus, D. (2016). *Self-Tracking*. Cambridge, MA: The MIT Press. o Chapter 2: What is at Stake? The personal gets political (p. 37-68)

9 - Nov. 16

Smart Homes and Their Infrastructures

• Maalsen, S., & Sadowski, J. (2019). The Smart Home on FIRE: Amplifying and Accelerating Domestic Surveillance. *Surveillance & Society*, 17(1/2), 118-124. • Shirani, F., Groves, C., Henwood, K., Pidgeon, N., & Roberts, E. (2020). 'I'm the smart meter': Perceptions of smart technology amongst vulnerable consumers. *Energy Policy*, 144, 111637. • EFF. (2010). New "Smart Meters" for Energy Use Put Privacy at Risk. Retrieved from: <https://www.eff.org/deeplinks/2010/03/new-smartmeters-energy-use-put-privacy-risk>

10 - Nov. 23

Smart Speakers and Personal Assistants Technologies

• Pridmore, J., Zimmer, M., Vitak, J., Mols, A., Trottier, D., Kumar, P. C., & Liao, Y. (2019). Intelligent Personal Assistants and the Intercultural Negotiations of Dataveillance in Platformed Households. *Surveillance & Society*, 17(1/2), 125-131. • EQUALS/UNESCO I'd Blush if I Could. Retrieved from: https://unesdoc.unesco.org/ark:/48223/pf000036741_6.page=1 o Read About on pg. 4 and Think Piece 2 pg. 85134

11 - Nov. 30

Smart Toys and The Datafication of Childhood

Last week to submit Critical Response #2 (due on Friday prior to class @ noon)

• Lupton, D., & Williamson, B. (2017). The datafied child: The dataveillance of children and implications for their rights. *New Media & Society*, 19(5), 780-794. • Smith, K. L. and Shade, L. R. (2018). Children's Digital Playgrounds as Data Assemblages: Problematics of Privacy, Personalization and Promotional Culture. *Big Data & Society*. Available

online: <https://journals.sagepub.com/doi/10.1177/2053951718805214> • McReynolds, E., Hubbard, S., Lau, T., Saraf, A., Cakmak, M., & Roesner, F. (2017, May). Toys that listen: A study of parents, children, and internetconnected toys. In Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems (pp. 5197-5207). ACM.

12 - Dec. 7

Final presentations: Critical Data Studies Term Projects
No readings

Participation Report Due: Dec. 9th after classes end

Department of Communication, Popular Culture and Film
Statement
on: Academic Misconduct

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at brocku.ca/webcal, to view a fuller description of prohibited actions, and the procedures and penalties which may be applied.

Academic misconduct includes plagiarism (presenting the words and ideas of another person as if they were your own), submitting the same work for two different assignments, and other forms of cheating such as using crib notes during a test or fabricating data for a lab assignment.

Instructors and teaching assistants in the Department thoroughly investigate all suspected cases of academic misconduct.

The penalties for documented cases of academic misconduct can be severe. The Department may recommend that a grade of zero be given for the assignment, and a failing grade if not a grade of zero be given for the course. In addition, a note will be attached to the student's academic transcript. A second offense can result in suspension from the University. The disciplinary process is administered initially at the Department level and in cases where academic penalty is assigned will be referred to the offices of the Dean of Social Sciences.

Make yourself aware of the issues involved. Read the section of the Undergraduate Calendar that pertains to academic misconduct. You are reminded that the Student Development Centre (Schmon Tower, Room 400) offers workshops on writing skills, and issues surrounding plagiarism.

For further information on all aspects of your academic program, including course planning, you may consult with the Department's Academic Advisor:

Penni Lafleur, SBH 344, ext. 5308 , plafleur@brocku.ca>

ERSC/GEOG/BIOL 4P85

BIOL/ERSC/GEOG 4P85

Ecosystems and Changing Disturbance Regimes

Course Outline for Winter 2018 (D3, S1 Jan.-April 2019)

INSTRUCTOR: Dr. Dan McCarthy dmccarthy2@brocku.ca

OFFICE HOURS: Mondays @ 1PM (or by appointment)

Office # MC D 315 phone: 688-5550 ext. 3864

Time & Place: Tuesdays 10:00-13:00 TH 254 (3 hours per week of lecture and seminar)

Teaching Assistant: Susan Jonsson-Ninniss sjonssoninniss@brocku.ca

CALENDAR DESCRIPTION:

Terrestrial ecosystem response to large-scale environmental change. Topics may include disturbance regimes, adaptation, alteration of biogeochemical cycles, invasive species and range shifts, carbon cycle feedbacks, predicting future climate and vegetation impacts, change detection, scaling-up and nonlinearity.

Prerequisite(s): BIOL/ERSC/GEOG 3P85 or permission of the instructor.

COURSE STRUCTURE AND APPROACH:

This course is designed in a way that will encourage students to think, write, take and study their lecture notes, do independent research and communicate ideas in a classroom setting. Students will be encouraged and rewarded for being active learners. Electronic versions of the lectures and readings will NOT be posted to Sakai and there will be time limited assignments that will be distributed to each student. These assignments must be completed in class. *Students who have special needs should meet with the professor to arrange for suitable academic accommodation.* All students will be expected to attend lectures and seminars, take notes, ask questions and locate their own copies of the assigned readings.

In the first few weeks, the lectures and assigned readings will review and critically evaluate some of the fundamental concepts related to ecological disturbance. Each lecture will be about 60-90 minutes long. This will be followed by a 10 minute recess. Class will then return for a seminar discussion of assigned readings. Some of the questions that will be addressed in the seminar discussions will appear on examinations.

There are two progress exams. These will include definitions, short and longer answer questions related to the lectures, seminars, mini-lectures and assigned readings.

GRADE EVALUATION:

In-class Progress Exam #1: 30% In-class

Progress Exam #2: 30%

In-class Assignments: 2 @ 10% = 20%

Mini-Lecture: 20%

JAN. 8 - INTRODUCTION TO THE COURSE - READINGS ARE ASSIGNED FOR TOPIC 1, brief review of note taking, study strategies, exam preparation, seminars and assignments, review some basic ecological concepts (e.g., disturbance controlled ecosystems)

JAN. 15 - LECTURE TOPIC 1: DEVELOPING A WORKING DEFINITION OF “DISTURBANCE”

A review and clarification of the terminology and basic concepts related to disturbance, stasis and disturbance regimes along with a review of the intermediate disturbance hypothesis and alternatives.

Topic 1 material & some of Topic 2 reading:

Donohue, I., Hillebrand, H., Montoya, J.M., Petchey, O.L., Pimm, S.L., Fowler, M.S. *et al.* 2016 Navigating the complexity of ecological stability. *Ecology Letters*, **19** (9), 1172-1185. *A small part of this paper is related to Topic 1 (ie. multifaceted disturbances, see Fig.1) the rest of it is ... Theoretical Biology.*

Rykiel EJ. 1985: Towards a definition of disturbance. *Australian Journal of Ecology* 10(3):361-365. *Intro to basic defns., considers chicken & egg question...“is disturbance a cause or an effect”*

Turner MG. 2010. Disturbance and landscape dynamics in a changing world. *Ecology* 91(10):2833-2849. *Long-winded review of disturbance concept - useful for forest examples and Table 1 is a source of defns.*

Svensson JR. 2010. Ecological disturbances: the good, the bad and the ugly. Thesis for the degree of Doctor of Philosophy, Department of Marine Ecology - Tjarno University of Gothenburg, Sweden. p.1-36

https://gupea.ub.gu.se/bitstream/2077/23772/1/gupea_2077_23772_1.pdf *Offers a pretty good review of more modern defns. of disturbance.*

Disturbance effects

Dornelas, M. 2010. Disturbance and change in biodiversity. *Phil. Trans. R. Soc. B.* 365:37193727.

Huston MA. 1994. *Biological diversity: the coexistence of species on changing landscapes.* New York, Cambridge University Press, 681p. *Dense reading with some useful figures.. this is a “thick” book.*

Roxburgh SH, Shea K, Wilson JB. 2004. The intermediate disturbance hypothesis: patch dynamics and mechanisms of species coexistence. *Ecology* 85(2):359-371. *Reviews terminology and intermediate disturbance.*

Disturbance regimes

Johnstone, J.F., Allen, C.D., Franklin, J.F., Frelich, L.E., Harvey, B.J., Higuera, P.E. *et al.* 2016 Changing disturbance regimes, ecological memory, and forest resilience. *Frontiers in Ecology*

and the Environment, 14 (7), 369-378. *Good review of ecological memory ... a useful source of regime info and examples.*

Lytle DA. 2001. Disturbance regimes and life-history evolution. *The American Naturalist* 157(5):525-536. *This is okay but a bit dated and "light"... I'm looking for a more recent article.*
Tivy J. 1993. *Biogeography: A study of plants in the ecosphere*. Third Edition. Longman Scientific and Technical, Essex, England. 452pp. *Very basic low level intro to disturbance regimes and biodiversity ... dated ... some weak/erroneous generalizations.*

JAN. 22 - LECTURE TOPIC 2: CHANGE DETECTION AND DEFINING BASELINE "NORMAL"

- a) Abiotic conditions: An introduction to the concept of critical load, sequestration and flux. How does alteration of biogeochemical cycles alter biotic communities? What biotic evidence would we find in a landscape to show that critical loads have been reached or exceeded? Are there indicator plants/organisms that can be used and if so, how might we assign cause/effect?
- b) Biotic response: How are growth, competitive interactions and composition of plant communities altered by changes in biotic or abiotic driving forces?
- c) Human alteration of biogeochemical cycles.

Topic2 (sources used to develop lecture material - essential readings TBA):

Beisner BE, Haydon DT, Cuddington K. 2003. Alternative stable states in ecology. *Frontiers in Ecology and the Environment* 1(1):376-382. *Primary source of information and diagrams used in lectures to explain shifting states and equilibrium.*

Chow-Fraser, P. (2005). Ecosystem response to changes in water level of Lake Ontario marshes: lessons from the restoration of Cootes Paradise Marsh. *Hydrobiologia* 539, 189-204.

Koerner C, Morgan J and Norby R. 2007. CO₂ fertilization: When, where, how much? In: Canadell J, Pitelka L, Pataki D, editors. *Terrestrial ecosystems in a changing world*. IGBP Book Series. Heidelberg (Germany): Springer. p 9-21. *(Please don't panic if this cannot be found - this topic is well covered by many recent articles/publications/websites that are easily found by Google Scholar).*

Naeem S. 2002. Ecosystem consequences of biodiversity loss: the evolution of a paradigm. *Ecology* 83(6):1537-1552. *An important source of lecture material. Must study this for definitions and concepts - see below.*

Odum EP. 1985. Trends expected in stressed ecosystems. *BioScience* 35:419-422.

Potvin C, Stuart Chapin III F, Gonzalez A, Leadley P, Reich P, Roy J. 2007. Plant biodiversity and responses to elevated carbon dioxide. In: Canadell J, Pitelka L, Pataki D, editors. *Terrestrial ecosystems in a changing world*. IGBP Book Series. Heidelberg (Germany): Springer. p 103-112.

Additional/supplemental reading used in lecture

Hanson, M. A., Herwig, B. R., Zimmer, K. D. & Hansel-Welch, N. (2017). Rehabilitation of shallow lakes: time to adjust expectations? *Hydrobiologia* 787, 45-59.

Hilborn R, Walters CJ. 1981. Pitfalls of environmental baseline and process studies. *Environmental Impact Assessment Review* 2(3):265-278. *This is an excellent commentary by*

some of Canada's pioneers in environmental assessment. It gives practical advice and insight into the challenges faced in Enviro Impact Assessment. Especially useful for Canadian examples showing where monitoring failed to identify cause... caribou, fisheries, pipelines, etc.

Hobbs, W. O., Hobbs, J. M. R., Ois, T. L., Zimmer, K. D., Theissen, K. M., Edlund, M. B., Michelutti, N., Butler, M. G., Hanson, M. A. & Carlson, T. J. (2012). A 200-year perspective on alternative stable state theory and lake management from a biomanipulated shallow lake. *Ecological Applications* 22, 1483-1496.

Sheppard C. 1995. The shifting baseline syndrome. *Marine Pollution Bulletin* 30(12):766-767.

Pauly D. 1995. Anecdotes and the shifting baseline syndrome of fisheries. *Trends in Ecology & Evolution* 10(10):430-430. *First mention of the "shifting baseline syndrome"*

University of Zurich. "Ecosystems cope with stress more effectively the greater the biodiversity." *ScienceDaily*. ScienceDaily, 5 September 2012.
www.sciencedaily.com/releases/2012/09/120905083751.htm

Umea University. (2016, May 25). Ecosystems with many and similar species can handle tougher environmental disturbances. *ScienceDaily*. Retrieved January 12, 2017 from
www.sciencedaily.com/releases/2016/05/160525161551.htm

White PS, and Jentsch A. 2001. The search for generality in studies of disturbance and ecosystem dynamics. *Progress in Botany* 62:399-449.

Jan. 29 - Assignment 1: This in-class work will require a good understanding of the readings associated with **Topic 1**. Please bring a pen, your lecture notes and a hard copy of the readings. All work must be done in class and submitted by the end of class. Your in-class answers will be handwritten in an exam booklet. Each student must work quietly and independently. This is an "open book" assignment. Computer use is not permitted.

FEB. 5 - LECTURE TOPIC 3: DISTURBANCE AND REGULATION OF BIODIVERSITY

When is disturbance bad? Is Ed Wilson right? Are we in a "biodiversity crisis" ... a bottleneck ... a mega extinction? Can we link biodiversity and ecosystem function? What is a functional group? Development and testing of disturbance hypotheses. Solving and conceptualizing chicken and egg questions. Isolating cause and effect in open and closed systems, dose and response, etc. "Lies, damn lies and statistics." What evidence is there to suggest that biodiversity regulates the severity and nature of disturbance? What can we learn from attempts to regulate biodiversity using changes to lake/water level etc.? Alternate equilibrium states.

Topic 3 (sources used to develop lecture material - essential readings TBA):

Balmford A, Bond W. 2005. Trends in the state of nature and their implications for human wellbeing. *Ecology Letters* 8:1218-1234.

Brose, U. & Hillebrand, H. (2016). Biodiversity and ecosystem functioning in dynamic landscapes. *Philosophical Transactions of the Royal Society B: Biological Sciences* 371.

Bruno JF, Stachowicz JJ, Bertness MD. 2003. Inclusion of facilitation into ecological theory. *Trends in Ecology & Evolution* 18(3):119-125.

Calabrese EJ, Bachmann KA, Bailer AJ, Bolger PM, Borak J, Cai L, Cedergreen N, Cherian MG, Chiueh CC, Clarkson TW and others. 2007. Biological stress response terminology: Integrating the concepts of adaptive response and preconditioning stress within a hormetic dose-response framework. *Journal Name: Toxicology and Applied Pharmacology* 222(1):122-128.

Carpenter, S., Walker, B., Anderies, J. M. & Abel, N. (2001). From metaphor to measurement: Resilience of what to what? *Ecosystems* 4, 765-781.

Chiarucci, A., Bacaro, G. & Scheiner, S. M. (2011). Old and new challenges in using species diversity for assessing biodiversity. *Philosophical Transactions of the Royal Society B: Biological Sciences* 366, 2426-2437.

Faculty of Science - University of Copenhagen. "Biodiversity belowground is just as important as aboveground." ScienceDaily. ScienceDaily, 2 September 2015. www.sciencedaily.com/releases/2015/09/150902082928.htm

Huston MA. 1994. *Biological diversity: the coexistence of species on changing landscapes*. Cambridge, UK: Cambridge University Press.

Huston MA. 1997. Hidden treatments in ecological experiments: re-evaluating the ecosystem function of biodiversity. *Oecologia* 110(4):449-460.

Jentsch A, Kreyling J, Beierkuhnlein C. 2007. A new generation of climate-change experiments: events, not trends. *Frontiers in Ecology and the Environment* 5(7):365-374.

Newton, A. C. (2016). Biodiversity Risks of Adopting Resilience as a Policy Goal. *Conservation Letters* 9, 369-376.

Pascual M., Guichard F. 2005: Criticality and disturbance in spatial ecological systems. *Trends in Ecology and Evolution* 20(2):88-95.

Petchey OL, Gaston KL. 2006. Functional diversity: back to basics and looking forward. *Ecology Letters* 9(6):741-758.

Scheffer, M., Carpenter, S., Foley, J. A., Folke, C. & Walker, B. (2001). Catastrophic shifts in ecosystems. *Nature* 413, 591-596.

University of Gothenburg. (2010, November 28). Managing nature reserves using ecological disturbances can easily go wrong. *ScienceDaily*. Retrieved January 12, 2017 from www.sciencedaily.com/releases/2010/11/101128111118.htm

White PS, Jentsch A. 2001. The search for generality in studies of disturbance and ecosystem dynamics. *Progress in Botany* 62:399-450.

Svensson JR, Lindegarth M, Siccha M, Lenz M, Molis M, Wahl M, Pavia H. 2007. Maximum species richness at intermediate frequencies of disturbance: consistency among levels of productivity. *Ecology* 88(4):830-838.

Naeem S, Colwell R, Diaz S, Hughes J, Jouseau C, Lavorel S, Morin P, Petchey O, Wriqht J.

2007. Predicting the ecosystem consequences of biodiversity loss: the biomerger framework. In: Canadell J, Pitelka L, Pataki D, editors. *Terrestrial ecosystems in a changing world*. IGBP Book Series. Heidelberg (Germany): Springer. p.112-126.

FEB. 12 - Progress Exam #1: No examination aids will be permitted. This in-class exam will take place from 15:00-16:00. It will cover Topics 1, 2 & 3 both lecture and assigned reading material. You will be asked to explain views and concepts expressed in the readings and lectures, define and clarify terminology.

FEB. 19-23 READING WEEK - NO CLASS

Feb. 26 - LECTURE TOPIC 4: INVASIVE SPECIES AND RANGE SHIFTS

Putting invasions in perspective (e.g., historical, local and global impacts, control measures, what has worked and what has not worked and why). How do we predict the ecosystem consequences of biodiversity loss? What's new about/with novel ecosystems? How "native" is a native species? A consideration of some simple models and their assumptions. Consensus building in science.

Topic 4 (sources used to develop lecture material - essential readings TBA):

Coreau A, Treyer S, Cheptou P-O, Thompson JD, Mermet L. 2010. Exploring the difficulties of studying futures in ecology: what do ecological scientists think? *Oikos* 119(8):1364-1376.

Coreau A, Pinay G, Thompson JD, Cheptou P-O, Mermet L. 2009. The rise of research on futures in ecology: rebalancing scenarios and predictions. *Ecology Letters* 12(12):1277-1286.

Hulme PE. 2006. Beyond control: wider implications for the management of biological invasions. *Journal of Applied Ecology* 43(5):835-847.

Melbourne BA, Cornell HV, Davies KF, Dugaw CJ, Elmendorf S, Freestone AL, Hall RJ, Harrison S, Hastings A, Holland M, Holyoak M, Lambrinos J, Moore K, Yokomizo H. 2007. Invasion in a heterogeneous world: resistance, coexistence or hostile takeover? *Ecology Letters* 10(1):77-94.

Sutherland WJ. 2006. Predicting the ecological consequences of environmental change: a review of the methods. *Journal of Applied Ecology* 43(4):599-616.

Theoharides KA, Duker JS. 2007. Plant invasion across space and time: factors affecting nonindigenous species success during four stages of invasion. *New Phytologist* 176(22):256-273.

Walther G-R, Hughes L, Vitousek P, Stenseth NC. 2005. Consensus on climate change. *TRENDS in Ecology and Evolution* 20(12):648-649.

Feb. 26 - Assignment 2: This in-class work will require a good understanding of the readings associated with Topics 3, 4 & 5. Please bring a pen, your lecture notes and a hard copy of the readings. All work must be done in class and submitted by noon. Your in-class answers will be handwritten. Each student must work quietly and independently. This is an “open book” assignment, but computer use will not be permitted.

Student Mini-lectures:

This section of the course will involve student presentations. Each week, there will be several fifteen minute long mini-lectures followed by a 5-15 minute question period. The lectures are delivered by a single student or by a pair of students. Each mini-lecture will have: a) an annotated bibliography, b) an oral presentation with data and illustrative material, c) an extended summary (written, 500 words max.), and d) a question and answer session. A printed copy of a, b, c will be given to the teaching assistant at the start of the mini-lecture. *Late work will receive a mark of zero unless an acceptable medical or compassionate excuse is received by the professor.*

Each lecture will concisely review the fundamental concepts and provide clear examples of “classic” case studies that illustrate/substantiate/quantify these concepts or processes. The presentations will be original, well organized, well paced and offer evidence of critical thought. Each annotated bibliography will follow the CSE name/year system of referencing explained at https://writing.wisc.edu/Handbook/DocCSE_NameYear.html#oneauthor

The bibliography will have between 10 and 15 reference sources that are pertinent to the topic. Each entry will have a descriptive and evaluative paragraph of approximately 150 words. Please consult “How to Prepare an Annotated Bibliography” <http://olinuris.library.cornell.edu/ref/research/skill28.htm>

Topics and presentation teams will be formally assigned and co-ordinated by the teaching assistant. Questions about the written portion of the mini-lectures should be directed to the teaching assistant. The topics given here (see below) are only *examples* (topics used in previous years). Some of the topics covered this year will resemble these but new topics will also be added. The final list will be posted to Sakai in late January. Please speak with the professor if you would like to begin working on a mini-lecture before a list of approved topics is posted or if you would like to work on a topic that is not on the list.

March 5, 12, 19 Student Mini-lectures:

Some topics from previous years: Thresholds in biological systems. Spatial non-linearities, Cascading effects in the “Earth System. Plant functional types. Plant dispersal under rapid (decadal) climate change. Assembly and disassembly of plant communities - modern, prehistoric and future. Responses of high latitude ecosystems to global change. A critical examination of evidence to support the claim that Canada’s boreal forests are carbon sink or a carbon source?

Predicting timberline response to climate change. Certainty in Science. Scaling up. Equifinality and causality. Scientific alternatives to the ecosystem concept

March 26 - *Progress Exam #2*: This is an open book (but no computer use) exam. It will take place from 9:00-11:00. This will cover all material covered in the lectures, mini-lectures, assignments and readings taken to date. In it you will be asked to explain views and concepts expressed in the readings and lectures, define and clarify terminology and answer at least one long answer question. Sometimes this exam has a main “essay” question and several short answer questions. If so, you might be given the “main” question” a few days earlier and have the option of preparing a written answer and submitting it at the start of the exam. The short answer questions would then be received and written in class on March 26.

April 2nd The start of this class period is reserved as a contingency... e.g., it may be used for mini-lectures if students were unable to present at an earlier date, etc. Course evaluations and any unfinished student Mini-lectures.

April 9 - No Class: Makeup day for March 30 (Good Friday) classes (Friday schedule)

April 10-11: Snow/reading days - day of week missed will determine the replacement schedule of classes

Important Dates, Cautions and Academic Discipline

January 19: Last day for duration 3 late registration and course changes without permission of the instructor. Brock Registration System closes for duration 3 adds; last day to drop courses without financial penalty. After this date, manual course change requests are required. Last date for withdrawal without academic penalty and last day to change from credit to audit status for duration 1 courses.

February 1: Last day to submit Intent to Graduate for Spring Convocation.

Feb. 20-24: Reading Week.

March 9: Last date for withdrawal without academic penalty and last day to change from credit to audit status for duration 3 courses.

In cases where plagiarism is suspected, Turn-it-In http://www.turnitin.com/en_us/home *will be used* as an investigative tool. Students who are concerned about the use of Turn-it-in should discuss their concerns with the instructor before they submit their assignments.

Note: All students are expected to know and comply with Brock’s Student Code of Conduct <http://www.brocku.ca/student-discipline/code-of-conduct>

Mini lectures - some topics and background material

Forests and carbon flux:

“Large areas of forestland in temperate North America, as well as in other parts of the world, are growing older and will soon transition into middle and then late successional stages exceeding 100 yr in age. These ecosystems have been important regional carbon sinks as they recovered from prior anthropogenic and natural disturbance, but their future sink strength, or annual rate of carbon storage, is in question. Ecosystem development theory predicts a steady decline in annual carbon storage as forests age, but newly available, direct measurements of forest net CO₂ exchange challenge that prediction.”

Curtis, P. S. and Gough, C. M. 2018. Forest aging, disturbance and the carbon cycle. *New Phytol*, 219: 1188-1193. doi:[10.1111/nph.15227](https://doi.org/10.1111/nph.15227)

Demographic models:

Teach us how ecologists use a variety of models and approaches to investigate the link between populations and disturbances over time.

stage-structured, spatially explicit individual-based models (IBM)

e.g. Wang Y, Wen S, Ellwood MDF, Miller AD, Chu C. 2018. Temporal effects of disturbance on community composition in simulated stage-structured plant communities. *Ecol Evol*. 8:120-127. <https://doi.org/10.1002/ece3.3660>

Recent changes in disturbances

“The word “unprecedented” is appearing more often in news reporting on droughts, fires, hurricanes, tsunamis, ice storms, and insect outbreaks. The causes and effects of these events are often exacerbated by human modifications of natural environments and influenced by technological developments.” Teach us about risks and resilience and how disturbance are changing.

Front Ecol Environ 2018; 16(1):3-3, doi:[10.1002/fee.1759](https://doi.org/10.1002/fee.1759)

FILM/COMM/PCUL 4V58

(AKA COMM 4P58)

BROCK UNIVERSITY
Department of Communication, Popular Culture and Film
FILM/COMM/PCUL 4V58: Ecocinema: History, Theory, Practices
Fall 2019, D2

Professor: Dr. Christie Milliken
Email: cmilliken@brocku.ca
Liaison Librarian – Linda Lowry
llowry@brocku.ca

This course will explore the florescence of ecocinema and ecocinema studies over the last two decades. Concerns about climate change, species degradation/ extinction, resource extraction and other industrial practices (including hydrocarbonized film industrial practices), forced migration, slow violence and eco-trauma, as well as questions of scale, magnitude and the sublime in nature will be explored in relation to visual media.

We consider how avant-garde, mainstream feature films, and nonfiction/ documentary media deploy rhetorical strategies that invite viewers to rethink our relationship to the planet. Beyond considering simple stories of tragedy and triumph (or apocalyptic vs progressive narratives), we consider the politics and aesthetics of environmentalism including how scientific knowledge gets interpreted/visualized through spectacle; themes that have dominated environmental media over time; and the relationships among art, objectivity, advocacy and appeals to emotion.

Note:

- All course information (including the readings) appears on the SAKAI site. Check it regularly.
- Please direct course-related emails directed to me with 4V58 in the subject line.

Grading:

Seminar participation, attendance 25%

Short Reading/Screening Response Paper
(5 pages, 1500 words, Oct 8th by noon) 15%

Seminar Presentation and write-up
(write-up due one week after presentation) 20%

Annotated Bibliography, Essay Plan (see below; Nov 9th by noon) 10%

Essay (12-14 pages, no more than 4000 words, Dec 15th by noon) 30%

• **Intellectual Property Notice:** All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

Course Outcomes:

After successfully completing this course, students will be able to:

- Identify, discuss and evaluate key issues and concepts relevant to understanding ecocriticism and ecocinema across a range of films in their cultural and historical contexts.
- Develop understanding of the relationships between and differences among different kinds of ecocinema practice; including different approaches to education,

entertainment and advocacy.

- Apply the knowledge and skills they have gained to the critical analysis of fiction and nonfiction film texts.
- Conduct and synthesize scholarly research about film and the environment.
- Demonstrate their understanding of and ability to apply course concepts in writing, in presentations, and in class discussion/forum.

Weekly Overview:

Week 1 (Sept 8-10) - Introduction to the Class

Begin reading and viewing....

Week 2 (Sept 14-18) Fake News, Balanced Journalism, Denialism and Lies

Screen: *Merchants of Doubt* (Robert Kenner, 2014) 96 min (Criterion-on-Demand) ✓ <https://media3-criterionpiccom.proxy.library.brocku.ca/htbin/wwform/006?T=MON2020>

[proxy.library.brocku.ca/htbin/wwform/006?T=MON2020](https://media3-criterionpiccom.proxy.library.brocku.ca/htbin/wwform/006?T=MON2020)

Read:

Juliet Roper et al, "Doubt, Delay and Discourse: Skeptics' Strategies to Politicize Climate Change," *Science Communication*, 38:6 (2016), 776-799.

Steven Schwarze, "Environmental Melodrama," *Quarterly Journal of Speech*, 92:3 (August 2006), 239-261.

Charles Musser, "Review – *Merchants of Doubt*", *Cineaste*, 40:4 (Fall 2015), 50-52.

Week 3 (Sept 21-25) Overpopulation/Melodrama/Apocalypse

Screen: *Soylent Green* (Richard Fleisher, 1973) 97 min (Criterion-on-Demand) ✓ <https://media3-criterionpiccom.proxy.library.brocku.ca/htbin/wwform/006?T=M73120>

[proxy.library.brocku.ca/htbin/wwform/006?T=M73120](https://media3-criterionpiccom.proxy.library.brocku.ca/htbin/wwform/006?T=M73120)

Read:

Jess Olszynko-Gryn and Patrick Ellis, "Malthus at the Movies: Science, Cinema, and Activism around *Z.P.G.* and *Soylent Green*," *Journal of Cinema and Media Studies*, 58:1 (Fall 2018), 47-69.

Robin Murray and Joseph Heumann, "Environmental Nostalgia and the Tragic Ecological Hero: The Case of *Soylent Green* and the 1970s Eco-Disaster Film," *Ecology and Popular Film*, SUNY, 2009. 91-108.

Recommended screening: *Silent Running* (Douglas Trumbull, 1971), *Omega Man* (Boris Sagal, 1971).

Recommended reading: Lizzie Widdicombe, "The End of Food," *The New Yorker*, May 5, 2014. (18 pages)

Week 4 (Sept 28-Oct2) The Game Changer: Al Gore, Oscars, Nobel Prizes and the Resurgence of Environmentalism

Screen: *An Inconvenient Truth* (Davis Guggenheim, 2006) 96 min (Criterion-on-Demand) ✓ <https://media3-criterionpiccom.proxy.library.brocku.ca/htbin/wwform/006?T=P26227>

[proxy.library.brocku.ca/htbin/wwform/006?T=P26227](https://media3-criterionpiccom.proxy.library.brocku.ca/htbin/wwform/006?T=P26227)

Read: Finis Dunaway, "The Strange Career of *An Inconvenient Truth*," *Seeing Green: The Use and Abuse of American Environmental Images* (U of Chicago Press, 2015), 258-280.

Ursula Heise, "From the Blue Earth to Google Earth," *Sense of Place and Sense of Planet*, Oxford UP, 2008. 17-67.

Recommended screening: *An Inconvenient Sequel* (Bonni Cohen and Jon Shenk, 2017)

Week 5 (Oct 5-9) Slow Film - Landscapes, Environments, Contemplation

Screen and Discuss: *Sogobi* (James Benning, 2002) 90 min (find this on Youtube)

Read:

Scott MacDonald, "The Ecocinema Experience," *Ecocinema Theory and Practice*, Eds.

Stephen Rust, Salma Monani and Sean Cubitt. Routledge: 2012. 17-42.

John Duvall, "Documenting the Environment," *The Environmental Documentary: Activism in the 21st Century*. Bloomsbury Academic, 7-23.

Week 6 (Oct 12-16) **Thanksgiving and FALL READING BREAK**

Week 7 (Oct 19-23) Wildlife (Underwater)

Blackfish (Gabriela Cowperthwaite 2013) 83 min and Kanopy

<https://brocku.kanopy.com/video/blackfish-0>

The Cove (Louis Psihoyos, 2009) 92 min (Criterion-on-Demand) ✓

[https://media3-criterionpiccom.](https://media3-criterionpiccom.proxy.library.brocku.ca/htbin/wwform/006?T=CF0824)

[proxy.library.brocku.ca/htbin/wwform/006?T=CF0824](https://media3-criterionpiccom.proxy.library.brocku.ca/htbin/wwform/006?T=CF0824)

Read:

Jason Sperb, "From Nihilism to Nostalgia: *Blackfish* and the Contradictions of the Nature Documentary," *Journal of Popular Film and Television*. 44:4 (October 2016), 206-219.

Janet Walker, "Eavesdropping in *The Cove*: Interspecies ethics, public and private space, and trauma under water," *Studies in Documentary Film*; Volume 7:3 (2013), 209-232.

Recommended viewing: *Sharkwater* (Rob Stewart, 2006), *Revolution* (Rob Stewart 2012)

Recommended reading: Steven Schoen, "Blackfishing for Buzz: The Rhetoric of the Real in Theme Parks and Documentary," *Journal of Florida Studies*. 1: 5 (2016) ,1-15.

Week 8 (Oct 26-30) Garbage and Waste

Screen: *Trashed* (Candida Brady 2012) 98 min. Kanopy

<https://brocku-kanopy-com.proxy.library.brocku.ca/video/trashed-0>

Read: Richard Maxwell and Toby Miller, "Introduction," *Greening the Media*. Oxford University Press, 2012. 1-21.

Rob Nixon, "Introduction," *Slow Violence and Environmentalism of the Poor*. Harvard UP, 2011. 1-44.

Recommended:

Screen online: *Frontline: Ghana: Digital Dumping Ground* (2010) 20 min (YouTube)

Week 9 (Nov 2-6) Disney, Animation and the Environment

Screen: *WALL·E* (Andrew Stanton 2008) 98 min (Note: we are in the process of acquiring streaming rights to this film and I will notify you when this is available).

Read: David Whitely, "*WALL·E*: Nostalgia and the Apocalypse of Trash" *The Idea of Nature in Disney Animation: From Snow White to WALL·E*. Ashgate, 2012. 141-159.

Maria Bose, "Immaterial Thoughts: Brand Value, Environmental Sustainability, and WALL·E," *Criticism*. 59:2 (Spring 2017), 247-277.

Recommended viewing: *Bambi* (David Hand 1942), *Up* (Peter Doctor and Bob Peterson, 2009), *The Lorax*, (Chris Renaud, 2012)

Recommended reading:

Gerry Canavan, "Unless Someone Like You Cares a Whole Awful Lot: Apocalypse as Children's Entertainment." *Science Fiction Film and Television*. Volume 10:1 (2017), 81-105.

Week 10 (Nov 9-13) Water

Screen: *Blue Gold* (Sam Bozzo 2010) 89 min (Criterion-on-Demand)

[https://media3-criterionpiccom.](https://media3-criterionpiccom.proxy.library.brocku.ca/htbin/wwform/006?T=MON1559)

[proxy.library.brocku.ca/htbin/wwform/006?T=MON1559](https://media3-criterionpiccom.proxy.library.brocku.ca/htbin/wwform/006?T=MON1559)

Read:

Karen Bakker, "The Business of Water," *The Oxford Handbook of Water Politics and*

Policy. Ed. Ken Conca and Erika Weinthal. Oxford University Press: 2015. (28 pages)
Erik Loomis, "The Global Water Crisis: Privatization and Neocolonialism in Film,"
Radical History Review, 116 (Spring 2013), 189-195

Recommended screening: *Watermark* (Baichwal/Burkynsky, 2013),
FLOW - For Love of Water (Irena Salina 2008)

* NOTE: **November 2nd is the last day to withdraw from this class without academic penalty.**

Week 11 (Nov 16-20) Industrialization/Art/Extraction

Screen: *Manufactured Landscapes* (Jennifer Baichwal, 2006) 86 min (NFB)

https://www-nfb-ca.proxy.library.brocku.ca/film/manufactured_landscapes_edu/

Read: Gerda Cammaer, "Edward Burkynsky's *Manufactured Landscapes*: The Ethics and Aesthetics of Creating Moving Still Images and Stilling Moving Images of Ecological Disasters," *Environmental Communication: A Journal of Nature and Culture* 3: 1 (2009), 121-130

Jennifer Peeples, Toxic Sublime: Imaging Contaminated Landscapes, *Environmental Communication*. Volume 5: 2 (Dec 2011), 373-392

Nadia Bozak, Review of *Manufactured Landscapes*, *Film Quarterly*, Volume 62:2 (Winter 2008), 68-71

Recommended viewing: *Workingman's Death* (Michael Glawogger 2005),
Anthropocene (Baichwal, de Pencier, Burkynsky, 2018)

Week 12 (Nov 23-27) Polar Cinemas – Indigenous Media

Screen: *Qapirangajug!: Inuit Knowledge and Climate Change* (Zacharias Kunuk, 2010) 60 min (Izuma TV)

<http://www.isuma.tv/inuit-knowledge-and-climate-change/movie>

Read: Scott MacKenzie and Ann Westerstahl Stenport, "All That's Frozen Melts into Air: Arctic Cinemas at the End of the World," *Public*. Volume 24: 48 (Dec 2013), 71-82.

Taylor, Timothy. "Man Standing," *Canadian Art*. 28:3 Fall 2011. 30-35.

Nadia Bozak, "Conclusion", *The Cinematic Footprint: Lights, Camera, Natural Resources*. University of Minnesota Press, 2012. 189-203.

Recommended viewing: *Chasing Ice* (Orlowski 2012)

Week 13 (Nov 30-Dec 3) Wildlife – Land

Selected episodes of *Planet Earth II* Episodes 1 ("Islands") and 6 ("Cities")

<https://video-alexanderstreet-com.proxy.library.brocku.ca/watch/islands-2>

<https://video-alexanderstreet-com.proxy.library.brocku.ca/watch/cities-3>

Read: Cynthia Chris, "Introduction" *Watching Wildlife*, University of Minnesota Press, 2006. xi-xxii

Karen Collins, "Calls of the wild" 'Fake' sound effects and cinematic realism in BBC David Attenborough nature documentaries," *The Soundtrack*. 10:1 (2017), 59-77.

Brett Mills, "Towards a Theory of Documentary Representation of Animals," *Screen*, 56:1 (Spring 2015), 102-107.

Recommended reading:

Mary Beth Woodson, "Review of *Earth and Planet Earth*," *Society and Animals* 18 (2010) 421-432.

Last day of classes – December 8

Classes End Dec 3, Exam Time Period – December 10-22

* There is no final exam in this class.

***The final paper is due on Tuesday December 15th by noon.**

FORUM PARTICIPATION & ATTENDANCE:

One of the most important and valuable aspects of student life and the seminar experience is conversation and debate, through which we acquire new insights into our beliefs, attitudes, and practices that can facilitate and enhance our understanding of our own research & learning, and significantly affect the classroom experience. It is the goal of facilitators to raise important issues and pose questions, but it is the responsibility of *everyone in the class* to contribute to a shared understanding of these issues and questions. If you have any questions or concerns (or opposing views) about the readings and screenings that are not raised by the seminar presenter, speak up.

Bear in mind that your attendance/participation mark constitutes a significant percentage of your final grade and will be based on your **preparation for class**; evidence that you have completed and understood the readings **and** screenings (and show reflective, critical thinking about them); as well as demonstration of your ability to express and share your ideas. These elements must be demonstrated through conversation with classmates in the seminar setting for *the duration* of the semester. It goes without saying that attendance is crucial (and will be taken).

Reading/Screening Response Paper:

For the **Response Paper**, you are required to write a report that applies ideas from the readings to the screening of the week. (Note: you may select any week **except** the one for which you are doing a seminar presentation). This assignment is designed to make you read carefully, pay close attention during the lab, and apply the knowledge you are synthesizing into a short, coherent and engaging analysis. (5 double-spaced typed pages, 1500 words; **due Thursday, October 8th**)

SEMINAR PRESENTATIONS:

Because this is a fourth year seminar, I am determined to keep the spirit of seminar presentations and conversation alive. **Students are required to lead one seminar during the semester.** During asynchronous learning, what this means is that you will post a Powerpoint presentation by noon on the Monday of the week during which you present. Students will then be required to respond to your presentation until the end of day on Friday when that portion of the site will close. You should follow their entries carefully that week and respond where appropriate.

The best presentations include a comprehensive overview of the week's material, discussion of method, content (as well as form and aesthetics in the case of the film texts), and suggest connections to other important readings and visual media from the course (and beyond). It is crucial that you balance presentation of ideas with opportunities for class discussion/debate, so finding ways to stimulate response is an important part of a successful presentation. Be both selective and creative in your attempt to engage the class. Do not simply regurgitate the material from the readings. For your presentation, **you are required to do your own outside research.**

Make sure you organize a clear plan for a well thought out and focused presentation. You are strongly encouraged to use clips to supplement your ideas. Your presentation grade includes a presentation write-up (due one week after the day you post your material). This is a 750-word written report explaining your goals; assessing the strengths and weaknesses of the presentation; and addressing any follow-up thoughts on the topic that come to mind, provoked by the previous week's discussion. **The write-up should include a bibliography and filmography.**

Co-presenters are graded separately.

MEETING, PAPER PROPOSAL, ANNOTATED BIB & ESSAY ASSIGNMENT:

Note that you are required to meet with me via skype, zoon, or lifesize

(to be arranged individually) to discuss and clear your paper topic before you begin research for your Annotated Bibliography. Your essay proposal is due in class on **Monday November 9th**. The proposal should include a thesis argument; the driving questions you intend to explore in the essay; the text(s) you will analyze to develop your argument, etc. In addition to several paragraphs articulating the goal of the project and its contribution to the field, this proposal should include at least 6 scholarly bibliographic annotations (8-10 sentences per citation; **excluding** any readings from this course).

You are encouraged to develop and explore your own interest in ecomedia. This could be on areas outside of what we cover explicitly in the class (forced migration, oil, industrialization of food, etc). The media could be any format: a television program/series, public service announcements, industrial/promotional videos or ads, documentaries, fiction films or other popular cultural texts that engage issues relating to the environment, sustainability and/or climate change. You may want to pick a particular environmental topic (for example media about plastics, e-waste, electric cars, solar energy), a geographical region (rain forests, The Amazon, the Arctic), filmmaker, animal, artistic or cultural trend/trope in ecomedia, or you may want to explore issues related to mise-en-scene, excess, nostalgia, slow violence, trauma, the sublime, melodrama, humour, etc. Essays should be maximum 14 pages (no more than 4000 words) in length and are due one week after the final class (**Tuesday December 15th at noon**).

COURSE POLICIES AND EXPECTATIONS

- **Accessibility:** If you have a documented disability (or think you may have one) and, as a result, need a reasonable accommodation to participate in this class or complete course requirements, contact the Student Development Centre (SDC) about Brock's Services for Students with Disabilities (SSWD) as soon as possible. As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Student Accessibility Services in the Student Development Centre (4th floor Schmon Tower, ex. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

- Grades may be deducted for failure to adhere to **assignment guidelines** and/or for **insufficient length**. In addition to following assignment-specific instructions, all written submissions should follow CPCF departmental guidelines for the preparation and formatting of essays (<http://www.brocku.ca/socialsciences/undergraduate-programs/cpcf/cpcf-guide/student-success/essay-styleguidelines>). These include guidelines for documenting all primary and secondary research according to approved academic style (APA, MLA or Chicago). If you are unsure, ask.

- **Students are responsible for ensuring that assignments have been submitted properly.**

- The penalty for a **late assignment** is a grade deduction of 5% per day, beginning the day following the assignment's due date. The weekend counts as one day. No assignments will be accepted more than two weeks after the due date, at which point the grade awarded is zero (0).

- Requests for **extensions** must be addressed to me in advance, and no extensions will be granted on the due date or the day before. No extensions will be granted after the original due date has passed, and the fourteen (14) day submission window will not be waived. Please note that simply requesting an extension does not guarantee that

one will be granted. Make-up assignments are not available. Missed presentations can only be made up in the case of formally documented medical issues, family emergencies, or religious obligations on the presentation date.

- **Students will be expected to adhere to the university's policies regarding academic integrity.** Academic misconduct is a serious offence. The Undergraduate Calendar provides a detailed outline of the most common forms of misconduct, together with clearly worded definitions, procedural descriptions, and a statement of penalties (see Undergraduate Calendar, Academic Regulations and University Policies, VII. Academic Misconduct; see also Brock's Academic Integrity website: <http://www.brocku.ca/academicintegrity/>).

- **Academic Accommodation due to Religious Obligations:** Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements.

- **Medical Exemption Policy:** The University will accommodate students whose studies become interrupted, or who may be unable to complete academic work, due to an incapacitating medical condition. In these situations, the student must complete the Brock University Student Medical Certificate or Brock University Student Health Services Medical Certificate (or in case of a concussion, the Brock University Student Health Services Medical Concussion Certificate) and include any relevant medical documentation to support his/her request for academic accommodation based on medical grounds. The University may, at its discretion, request more detailed documentation in certain cases.

ERSC 4F95

ERSC 4F95
Honours Project I

Individual research project carried out under the direction of a faculty adviser. Note that the nature of projects undertaken in ERSC 4F95 and ERSC 4F96 by an individual student must differ significantly to provide a broad range of experiences.

Restriction: open to Earth and Planetary Science majors with a minimum 75 percent average, approval to year 4 (honours) and permission of the Department.

Assessment: Proposal, Presentation, completed project, report

Note: Course still in development, no detailed course outlines are available at this stage. Projects may include written works, web sites, videos or other approved projects targeting social media.

APPENDIX C - Program Governance & Unit Rules and Regulations

Program Governance

As mentioned in Section 3.1.5, the program will be governed by the Department of Earth Sciences, with extensive consultations with the Departments of Geography and Tourism and the Department of Communication, Popular Culture and Film. Due to the extensive cross-listing of courses between ERSC and GEOG, a joint committee will be established that will discuss all issues relevant to the program. It should be noted that Drs. Turner and Pisaric are also cross listed and can already attend departmental meetings within ERSC.

In the initial running of the program, a yearly meeting will be scheduled with the explicit purpose of evaluating progress of the initial cohort. These meetings will also include input from CPCF, who may want to designate a specific liaison as a contact person.

Below are the rules of the Department of Earth Sciences:

RULES OF THE DEPARTMENTAL COMMITTEE 2019-20

Department of Earth Sciences

Approved Oct. 2, 2019

The following rules govern the Departmental Committee of the Department of Earth Sciences.

1. The Department of Earth Sciences complies with the relevant articles in the Collective Agreement between Brock University and the Brock University Faculty Association.
2. The Departmental Committee consists of:
 - a. All full-time tenured, probationary, and limited-term faculty members of the Department of Earth Sciences are Regular Members (Article 16.02 (b) of the Collective Agreement). A quorum at Departmental Meetings shall comprise at least 50% plus 1 Regular Members.
 - b. One full-time staff member, one undergraduate and one graduate student representative elected by respective peers will be Special Members. Special members are here defined as members with voting privileges on all motions except where limited by the Collective Agreement and except a motion to “suspend special membership”. The motion to “suspend special membership” (not debatable) will be carried by a majority of the Regular Members. When such a motion is carried the Special Members of the Departmental Committee will leave the meeting. Special Members may not be present in Departmental meetings until a motion “to reinstate special membership” (not debatable) has been carried by a majority vote of the Regular Members.

outside Brock University. They do not have voting privileges, but they are eligible to co-supervise graduate students together with a Regular Member of the Department of Earth Sciences. They are expected to contribute to the Department on a regular basis in a variety of ways, including (but not limited to) annual lectures and mentoring students. Appointment follows a majority ballot vote by Regular Members of the Department.

3. Committee Meetings will be guided by Robert's Rules of Order. The Committee shall meet at least once in each of the Fall and Winter terms. The Chair, or a designate, shall be responsible for the Agenda of each meeting of the Committee, and minutes will be taken by the Administrative Assistant and edited by the Chair or designate prior to distribution. Minutes will be distributed to Regular and Special Members of the Departmental Committee.
4. Under extenuating circumstances the Chair may wish to initiate a process of email voting on a motion by the Departmental Committee. FHB Section 2, 9.6H states that e-mail votes may only be considered if the motion to be considered is time sensitive and the committee is unable to meet to consider the matter in a timely fashion and/or establish quorum. Votes requiring the use of secret ballots may not be carried out using email voting. On the advice of BUFA (April 17, 2017) the department will follow the process for email voting as outlined in FHB 2, 9.1.6I and reproduced below:
 - a) The Chair shall write to members of the committee with the text of the motion and any supporting materials to determine whether or not there is sufficient support for conducting an e-mail vote.
 - b) If at least 75 percent of the members of the committee indicate, in writing within 48 hours, that an e-mail vote is acceptable, the chair shall notify members of the committee that e-mail voting shall proceed. The first two members of the committee who respond in the affirmative shall be deemed to be the mover and seconder of the motion.
 - c) If the criteria outlined in 9.1.6H) are not met, an e-mail vote shall not be permitted.
 - d) Committee members shall then have 48 hours to vote on the motion.
 - e) Once every member of the committee has voted by e-mail, or after 48 hours have passed, the chair shall disclose the vote totals to the entire committee via e-mail and declare the motion carried or defeated."
5. In consultation with Regular Members, the Chair will propose Departmental Committee assignments (UPC Representative, Geology Club Liaison, Guest Speaker Coordinator, Library Liaison). These will be brought forward for approval at a Departmental meeting prior to the UPC Calendar Submission in the Fall Term.
6. Ad-hoc sub-committees may also be appointed by the Chair in consultation with the Committee.
7. The procedure for conducting student evaluations (Article 16.03 (f) of the Collective Agreement) is:

- a. A third-party, selected by the instructor, distributes evaluation/questionnaires in class. The students record their responses to the questions on SCANTRON sheets.
- b. A same third-party delivers the completed SCANTRON sheets to the Administrative Assistant of the Department of Earth Sciences.
- c. The sheets are scanned at the Computing Centre and the results are compiled into a summary table. The Administrative Assistant types the written comments exactly as they appear on the SCANTRON sheets.
- d. For BUFA faculty members the original questionnaires, the summary table and typed comments are given to the faculty member for whom the course evaluation was made.
- e. For CUPE sessional instructors copies of the summary table and typed comments are given to the Chair and to the instructor for whom the course evaluations were made and the original questionnaires will be kept in a locked cabinet within the department. If the Chair has concerns regarding the result of the evaluations she/he will arrange a meeting with the instructor to address those concerns. The instructor may be accompanied by a CUPE colleague at any meeting(s) to address issues arising from course evaluations. A summary of the discussion and its outcomes will be placed in the instructor's file where it will serve as a performance evaluation
- f. For the evaluation of online courses, the Department uses the University's online evaluation process that is available through the Centre of Pedagogical Innovation (CPI; see details at <https://brocku.ca/pedagogical-innovation/teaching-tools/course-evaluation/> . This evaluation process makes questionnaires available to students who are registered in the course for completion online through the SAKAI learning management system. The results of the evaluation are provided to the instructor(s) after final grades are submitted to the Registrar's Office by way of a link, provided by CPI, to a secure web site. It is up to the online course instructor(s) to provide CPI with the approved questionnaire for the course evaluation. The process (see link above) respects the conditions of the Agreement, including that course evaluations are the "property" of the instructor. Instructors should discuss the distribution of results with CPI to learn about the options that are available to them. (Sept. 20, 2016)

8. Procedures for Performance Reviews.

Members are to submit an Annual Report to the Dean detailing their activities and accomplishments with respect to teaching, research and scholarly activity, and service during the preceding year (July 1 to June 30) by August 31 (Articles 12.07 and 35 of the Collective Agreement). Performance review shall follow the criteria outline in the Collective Agreement, specifically Articles 12 (Rights and Responsibilities of Members), 21 (Tenure and Promotion for Full-Time Faculty), and 24 (Workload for Faculty Members), with normal expectations for workload specified annually in the Normal Workload Standards document (Article 24.04

9. Criteria and Procedures for Tenure and Promotion. The criteria and procedures are given in Articles 16.02 (e), 16.03 (c) and (d), and 21 of the Collective Agreement, without additions or amendments.

10. Chair of the Department.

In accordance with Article 27.02b of the Collective Agreement, the Chair receives 1.0 FCE teaching release. The Chair is responsible for representing the Department's interests to the Dean of the Faculty of Mathematics and Sciences (FMS), including regular 1-on-1 meetings with the Dean and attendance at scheduled meetings of the Chairs and Directors of FMS; ensuring that the undergraduate program is delivered, entailing optimal deployment of Regular Members and hiring of sessional instructors as required; ensuring academic integrity; overseeing (in consultation with the FMS Finance Officer and various staff members) the annual budget of the department; overseeing the operation of Departmental Committees; supervising and writing performance evaluations for staff; participating in recruitment and outreach activities aimed at enhancing the profile of the Department and of Earth Sciences. If the Chair is to be away from the Department for more than three (3) working days, an Acting Chair will be appointed and the Departmental Committee will be notified by email.

During the fall term of the final year of the Chair's term, the Departmental Committee shall record a vote indicating its choice for the next Chair. Voting to establish a Departmental recommendation respecting appointment of Chair shall be by the tenured and probationary faculty members of the Department of Earth Sciences only (Article 16.03c of the Collective Agreement). In keeping with Article 27.03 of the Collective Agreement, only full-time tenured faculty members are eligible for appointment as chairs; any outside appointment shall be in accordance with Article 19 (Appointments). A nomination form (see Appendix I) shall be used to identify willing candidates for the election of the Chair and elections shall be carried out by secret ballot. The result of this vote shall be forwarded to the Dean who may consult further. The Dean shall forward the results of the vote and his/her recommendation to the President, who will appoint the Chair. The term of office for Chair shall be for no more than three (3) years and may be renewed.

11. Graduate Program Director

The Graduate Program Director (GPD) for Earth Sciences has the responsibility to administer the ERSC graduate program and represent the interests of the program to appropriate administrative units. The GPD chairs the Earth Sciences Graduate Program Committee (GPC), which is made up of all full-time faculty members who are members of the Department of Earth Sciences Committee and any other faculty members chosen by that committee.

In December of the final year of the term of a GPD the Chair of the Department will send an email to all tenured full-time faculty members with rank of Associate Professor or above and are members of the GPC, asking if they are willing to stand for the position of GPD for a 3-year term, beginning on the following July 1. That email will allow 5 full working days from the time sent for response. If no faculty member from the program comes forward a second email will be sent calling for a

willing GPD and 5 days will be allowed for response.

If there is no positive response following the second email the Dean will be informed of the situation and the Dean may consult directly with potential GPDs and make the selection with the blessing of the department.

If only one eligible member of the program indicates willingness to become the next GPD then that person will be recommended to the Dean (CA 16A.04g.v).

If two or more members of the program indicate willingness to become the next GPD there will be an *in-camera* meeting of the Departmental Committee without the candidates for discussion and secret ballot vote will be taken by full-time faculty members of the GPC. In the case of a tie vote for the selection of GPD the department may seek the advice of BUFA if it cannot find a reasonable way to overcome a tie vote for the selection of the GPD.

12. Full-time appointments will follow the procedures as outlined in Article 19 of the BUFA Collective Agreement.

All part-time instructor, teaching-assistant and marker-grader appointments will be made in accordance with the CUPE Local 4207 Collective Agreement.

13. If a student requests that prerequisite(s) be waived for a course that is homed in the Department of Earth Sciences the Chair, acting on behalf of the department, will only waive prerequisites with the written agreement of the course instructor. For such requests pertaining to Earth Science courses that are not homed in the Department of Earth Sciences the student will be referred to the home department of the course in question. (Sept. 20, 2016)
14. Faculty Handbook 3A section 9.2.4 assigns responsibility to the Department/Program for the safekeeping of examination scripts and “the breakdown of each student’s grade used in the determination of the final grade” for a course for a period of “not less than 12 months”. To ensure such safekeeping faculty are required to provide to the Department’s Administrative Assistant all completed examination scripts and the grade breakdown for all students in a course at the time that final grades for that course are submitted. Note that “grade breakdown” includes the grade and weight for each piece of work that contributes to the final course grade. After 12 months from the end of the term for a given course the scripts and the grade breakdowns that are kept by the Department’s Administrative Assistant for that course will be destroyed.
15. A copy of the Course Outline for every offering of an undergraduate ERSC course that is homed in the Department of Earth Sciences will be provided to the Administrative Assistant to the Department of Earth Sciences at the beginning of each term. The Course Outlines will be stored within the department. Each Course Outline will be available, upon request, to students who have completed that course. Note that FHB 3B section 7.8 requires Course Outlines for all graduate courses (excluding theses and MRPs) and states that “copies of those course outlines will be filed with the Graduate Program Director” for the program(s) in which the course is offered.

Appendix I

Nomination form for consideration for appointment as
Chair, Department of Earth Sciences

I, _____, nominate _____ to
stand for
(print nominator's name) (print nominee's name)

election for the position of Chair of the Department of Earth Sciences, from July 1, 2018 until
June 30, 2021.

Signed: _____ Date: _____
(nominator) (dd/mm/yy)

I, _____, agree to stand for election to the position of Chair
(print nominee's name)

of the Department of Earth Sciences, from July 1, 20xx until June 30, 20xx.

Signed: _____ Date: _____
(nominee) (dd/mm/yy)

APPENDIX D - Draft Calendar Entry

Earth and Planetary Science Communications

The Department of Earth Sciences offers a four-year program of study leading to a BAsC in Earth and Planetary Science.

Year 1

- ERSC 1P01 and ERSC 1P02
- GEOG 1F90
- COMM 1F90 and 1P96
- INDG 1F90
- CHEM 1P00 or WRDS 1P06

Note: Students without credit in SCH4U are required to take CHEM1P00

Year 2

- ERSC 1P94, ERSC 2P08, ERSC2P18
- COMM 2P15, COMM 2P50, WRDS 2P14
- 1.5 credits from ERSC 2P03, ERSC 2P05, ERSC 2P07, ERSC 2P15, ERSC 2P61
- one-half elective credit

Year 3

- ERSC 2P9X, ERSC 3P94, ERSC 3P04
- COMM 3P18, COMM 3P62
- One credit from ERSC 3P01, ERSC 3P03, ERSC 3P05, ERSC 3P07, ERSC 3P12, ERSC 3P24, 3P25
- 1.5 elective credit
-

Note: Students who want to pursue careers in social media or related fields are recommended to take COMM 2P91 or IASC 3P01.

Year 4

- ERSC 4F95, ERSC 4PXX
- One credit from COMM 4P58, COMM 4P18, COMM 4P35
- One credit from ERSC 3(alpha) or above.
- 1.5 elective credit.

Note: recommended electives are ERSC 3P90, ERSC4P31, ERSC 4P85

Pass program

Satisfactory completion of the first three years of the Honours program entitles a student to apply for a Pass degree.

APPENDIX E - CVs

CVs of all faculty members delivering/contributing to the program should be included. The format for the CVs should follow one of the Tri-Council formats, however all CVs must be in the same format. The information reported should refer to the past 8 years

Brand, Uwe
Cheel, Rick
Fueten, Frank
Head Martin
McCarthy, Dan
McCarthy, Francine
Menzies, John
Pisaric, Michael
Schmidt, Mariek
Turner, Kevin

Brand, Uwe

CURRICULUM VITAE

Dr. Uwe Brand, DFGAC, P.Geo.

Professor of Earth Sciences

Chancellor's Research Chair

Professional Geoscientist (P.Geo., APGO)

Former Editor –in – Chief, Chemical Geology

Distinguished Fellow of the Geological Association of Canada

Department of Earth Sciences, Brock University, St. Catharines, Ontario, Canada L2S 3A1 Telephone:
905 688-5550 Ext. 3529 Fax: 905 641-8186 E-mail: uwe.brand@brocku.ca

Environmental Hydrogeochemist & Director

CERTI Environmental Consultants

200 Highway 20 East, Fonthill, Ontario L0S 1E6

Education

<u>Institutions Attended</u>	<u>Dates</u>	<u>Degrees Awarded</u>
University of Waterloo	1974	B.Sc. (Hon.) Earth Sciences
University of Missouri-Columbia	1976	M.A. Geology
University of Ottawa	1979	Ph.D. Geology

Academic & Professional Distinctions and Awards

- 2010-13 Editor-in-Chief, Chemical Geology
- 2013- Editorial Board Member, Chemical Geology
- 2016 Faculty of Mathematics & Science: Distinguished Research Award, Brock University (with Nigel Blamey)
- 2017 Our paper “Paradigm shift in determining Neoproterozoic atmospheric oxygen. *Geology* 2016, v 44, p 651-654” (#1111) was named one of the top ten read geochemical papers for 2016 (Geochemical Society); it was also named the number #1 paper for Geology for 2016 by the Geological Society of America
- 2017 Nominee for M. Plyley Graduate Mentorship Award, Brock University
- 2017 Faculty of Mathematics & Science: Experiential Education Leadership Award, Brock University

Academic Appointments

<u>Position</u>	<u>Institution</u>	<u>Dates</u>
Assistant Supervisor (B.Sc.)	University of Ottawa	1977-79
N.S.E.R.C. Postdoctoral Fellow	University of Waterloo	1979-80
Assistant Professor	Brock University	1980-83
Research Associate (Basin Analysis Group)	University of Toronto	1981-84
Associate Professor (Tenured)	Brock University	1983-88
Professor (part-time)	McMaster University	1989-01

Adjunct Professor	University of Toronto	1993-99
Professor	Brock University	1988-
Adjunct Professor	University of Pittsburgh	1989-

Academic Experience and Appointments

Journal Reviewer

American Journal of Science
Biogeosciences
Bolletino della Societa Paleontologica Italiana
Canadian Journal of Earth Sciences
Carbonates and Evaporites
Chemical Geology
Earth-Science Reviews
Environmental Management
Geology
Geological Society of America, Bulletin
Geochimica et Cosmochimica Acta
Geological Magazine
Geologica Carpathica, SK
GeoBios
Gondwana Research
International Journal of Earth Sciences (Geologische Rundschau)
Lethaia
Limnology & Oceanography
Journal of Sedimentary Petrology
Journal of the Geological Society
Palaeogeography, Palaeoclimatology, Palaeoecology
Regional Studies in Marine Science
Transaction of the Royal Society of Edinburgh

Research Grant Reviewer

Geoscience Grant Reviewer, Ontario Geological Survey

National Science Foundation (NSF), Washington D.C.

American Chemical Society, Petroleum Research Fund, Washington D.C.

Natural Sciences and Engineering Research Council of Canada (NSERC-Strategic Grants)

Natural Sciences and Engineering Research Council of Canada (NSERC - Discovery Grants)

Iowa Academy of Science

Natural Environment Research Council (NERC) Swindon, United Kingdom

National Science Foundation – Georgia NSF

Agence Nationale de la Recherche (ANR – France)

Editorship

Chemical Geology, Editorial Board (2013-)

Carbonates and Evaporites, Associate Editor (1986-)

Chemical Geology, Editor-in-Chief (2010-2013)

Journal of Geological Research, Editorial Board

Community Service: Scholarship Reviewer

2007	Reviewer, Ontario Graduate Scholarship Program
2008	TREB Environmental Scholarship Reviewer & Judge
2009	TREB Environmental Scholarship Reviewer & Judge
2010	TREB Environmental Scholarship Reviewer & Judge
2011	TREB President's Scholarship Reviewer & Judge
2012	TREB President's Scholarship Reviewer & Judge
2013	ORF-Large Infrastructure Review, Panel Member, Ontario Ministry of Research, Innovation and Science

Symposium/Session Organizer & Chair

2012	Secular variation of the elemental and isotopic composition of seawater. Theme 13a. Co-convenors: U. Brand & B. Peucker-Ehrenbrinck. 2012 Goldschmidt Conference, Montreal, Canada, June 24-29 (by invitation of the Organizing Committee).
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- 2014 Geochemistry of Biogenic Carbonates: proxies of Geologic Events. Brock CCR award lecture, January 29, 2014.
- 2015 Biostratigraphy, chemostratigraphy, and past environmental and climate changes, Session S3. Co-chairs/convenors: L. Angiolini and U. Brand. 7th International Brachiopod Congress, Nanjing, China, May 22-29 (by invitation of organizing committee).
- 2015 Plenary Talk: Trace and isotope chemistry of brachiopods: proxies of geologic events. May 23, 2015. 7th International Brachiopod Congress, Nanjing, China, May 22-29 (by invitation of organizing committee).
- 2016 Invited Talk: Inclusion gas analysis: a game changer for the geosciences. September 22, 2016. Polish Academy of Sciences, Warsaw, Poland.
- Invited Talk: Inclusion gas analysis: a game changer for the geosciences. October 4, 2016. Department of Earth Sciences, University of Milan, Milan, Italy.
- 2017-18 Scientific Committee Member, 8th International Brachiopod Congress, Milan, Italy, Sept. 11-14, 2018 (by invitation of the organizing chairs).
- 2018 Session co-ordinator and co-chair, 06I: Diagenetic constraints in biogenic and geologic materials: macro- to nano-scale processes. 2018 Goldschmidt Conference, Boston, MA.
- 2014 Invited Colloquium: The Doushantuo cap dolomite: Rapid biogenic-methane driven Marinoan Icehouse to Greenhouse transition. University of Western Ontario, March 16, 2018.
- 2018 Plenary Talk: Modern and Fossil Brachiopods: Superheroes of archives. 8th International Brachiopod Congress, September 10-14, 2018, Milan, Italy.

Memberships in Professional Societies

<u>Dates</u>	<u>Status</u>	<u>Society</u>
2010- EPSC-PPB Vol II	Member	Geochemical Society

Publications

Refereed Journal Articles (underlined names are students, post-docs)

- BRAND, U.**, BITNER, A.M., LOGAN, A., AZMY, K., CRIPPA, G., ANGIOLINI, L., COLIN, P., GRIESSHABER, E., HARPER, E.M., E.T. RUGGIERO, HAUSSERMANN, V. Brachiopod-based oxygen-isotope thermometer: update and review. *Rivista Italiana di Paleontologia e Stratigrafia* (submitted April 11, 2019)
128. GARBELLI, C. SHEN, S.Z., IMMENHAUSER, A., **BRAND, U.**, BUHL, D., WANG, W.Q., ZHANG, H., SHI, G.R. 2019. Early and Middle Permian deglaciation of the southern hemisphere: brachiopod-based $^{87}\text{Sr}/^{86}\text{Sr}$ calibration. *Earth and Planetary Science Letters*, 516, 122-135.
127. FOUREL, F., LECUYER, C., SERIS, M., BLAMEY, N., **BRAND, U.**, FRALICK, P., VOLDERS, F. 2019. Improved online hydrogen isotope analysis of halite aqueous inclusions. *Journal of Mass Spectrometry*, 54, 342-350
126. BLAMEY, N.J.F., **BRAND, U.** 2019. Atmospheric gases in modern and ancient halite fluid inclusions: a screening protocol. *Gondwana Research*, 69, 163-176. doi.org/10.1016/j.gr.2018.12.004
125. RODA, M.S., GRIESSHABER, E., ZIEGLER, A., HENKEL, D., HAUSSERMANN, V., EISENHAUER, A., LAUDIN, J., **BRAND, U.**, SCHMAHL, W.W. 2019. Calcite fiber formation in modern brachiopod shells. *Scientific Reports*, 9, 598-613.
124. YE, F., JURIKOVA, H., ANGIOLINI, L., **BRAND, U.**, CRIPPA, G., HENKEL, D., LAUDIEN, J., HIEBENTHAL, SMAJGL, D. 2019. Variation in brachiopod microstructure and isotope geochemistry under low pH – ocean acidification – conditions. *Biogeosciences*, 16, 617-642.
123. CASELLA, L.A., HE, X., GRIESSHABER, E., FERNANDEZ-DIAZ, L., HARPER, E.M., JACKSON, D., ZIEGLER, A., MAVROMATIS, V., DIETZEL, M., EISENHAUER, A., **BRAND, U.**, SCHMAHL, W.W. 2019. Microstructures and alteration of biogenic carbonate archives: degree of diagenetic overprinting deduced from statistical grain area analysis (SAGA). *Biogeosciences*,
122. ZAKY, A., **BRAND, U.**, BUHL, D., BLAMEY, N., BITNER, A.M., LOGAN, A., GASPARD, D., POPOV, A. 2019. Strontium isotope geochemistry of modern and ancient archives: tracer of

secular change in ocean chemistry. *Canadian J. Earth Sciences*, 56, 245-264. DOI: 10.1139/CJES-2018-0085.

121. CASELLA, L.A., HE, S., GRIESSHABER, E., FERNANDEZ-DIAS, L., GREINER, M., HARPER, E.M., JACKSON, D.J., ZIEGLER, A., MAVROMATIS, V., DIETZEL, M., EISENHAUER, A., VEINTMILLAS-VERDAGUER, S., **BRAND, U.**, SCHMAHL, W.W. 2018. Hydrothermal alteration of aragonitic bicarbonates: assessment of micro- and nanostructural dissolution-reprecipitation and constraints of diagenetic overprint from quantitative statistical grain-area analysis. *Biogeosciences*, 15, 7451-7484.
120. BELLEFROID, E.J., PLANAVSKY, N.J., MILLER, N.R., **BRAND, U.**, WANG, C. 2018. Case studies on the utility of sequential carbonate leaching for radiogenic strontium isotope analysis. *Chemical Geology*, 497, 88-99.
119. ROMANIN, M., CRIPPA, G., YE, F., **BRAND, U.**, ANGIOLINI, L., BITNER, A.M., GASPARD, D., HAUSSERMANN, V., LAUDIEN, J. 2018. A sampling strategy for modern and fossil brachiopods: selecting the optimal shell segment for geochemical analyses. *Revista Italiana di Paleontologia e Stratigrafia (Research in Paleontology and Stratigraphy)*, 124, 343-359.
118. CASELLA, L.A., SIMONET RODA, M., ANGIOLINI, L., ZIEGLER, A., SCHMAHL, W.W., **BRAND, U.**, GRIESSHABER, E. 2018b. Archival biogenic micro- and nanostructure data analysis: signatures of diagenetic systems. *Data-in-Brief. Palaeogeog., Palaeoclimatol., Palaeoecol.*, 19, 299-311.
117. CASELLA, L.A., GRIESSHABER, E., SIMONET RODA, M., ZIEGLER, A., MAVROMATIS, V., HENKEL, D., LAUDIEN, J., HAUSSERMANN, V., NEUSER, R.D., ANGIOLINI, L., DIETZEL, M., EISENHAUER, A., IMMENHAUSER, A., **BRAND, U.**, SCHMAHL, W.W. 2018a. Micro- and nanostructures reflect the degree of diagenetic alteration in brachiopod shell calcite: a multi-analytical screening approach (CL, FE-SEM, AFM, EBSD). *Palaeogeog., Palaeoclimatol., Palaeoecol.*, 502, 13-30.
116. BAJNAL, D., FIEBIG, J., TOMASOVYCH, T., MILNER, S.G., ROLLION-BARD, C., RADDATZ, J., LOFFLER, N., PRIMO-RAMOS, C., **BRAND, U.** 2018. Assessing kinetic fractionation in brachiopod calcite using clumped isotopes. *Scientific Reports*, v. 8, 533-542.
115. YE, F., CRIPPA, G., ANGIOLINI, L., **BRAND, U.**, CAPITANI, G.C., CUSACK, M., GARBELLI, C., GRIESSHABER, E., SCHMAHL, W.W. 2018. Mapping of recent brachiopod microstructure: a tool for environmental and climate studies. *Journal of Structural Biology*, v. 201, 221-236.
114. JURIKOVA, H., GUTJAHR, M., LIEBETRAU, V., FLOGEL, S., WALLMANN, K., EISENHAUER, A., POSENATO, R., ANGIOLINI, L., GARBELLI, C., **BRAND, U.** 2017. Assessing ocean

acidification and carbon cycle perturbations during the end-Permian extinction using boron isotopes. *Permophiles*, v. 65, 15-16.

113. ULLMANN, C.V., KORTE, C., BITNER, A.M., AZMY, K., **BRAND, U.** 2017. Geochemistry of the brachiopod *Hemithiris psittacea* from the Canadian Arctic: implications for high latitude paleoclimate studies. *Chemical Geology*, v. 466, 187-198.
112. ZAKY, A., **BRAND, U.**, AZMY, K., LOGAN, A., SVAVARSSON, J. Rare Earth Elements of shallow-water articulated brachiopods: a bathymetric indicator. 2016. *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 461, 178-194.
111. BLAMEY, N.J.F., **BRAND, U.**, PARNELL, J., SPEAR, N., LÉCUYER, C., BENISON, K. MENG, F., NI, P. 2016. Paradigm shift in determining Neoproterozoic atmospheric oxygen. *Geology*, v. 44, 651-654. (Top ten-read paper for 2016 – Geochemical Society; 2016 number #1 paper for Geology – Geological Society of America)
110. **BRAND, U.**, BLAMEY, N., GARBELLI, C., POSENATO, R., ANGIOLINI, L., AZMY, K., FARABEGOLI, E., CAME, R. 2016. Methane Hydrate: Killer Cause of Earth's greatest mass extinction. *Palaeoworld*, v. 25, 496-507. (Article on the topic by Adrian Reid, UTS, Sydney, Australia: <http://adrianreid.businesscatalyst.com/>). Top ten most-read article for *Palaeoworld* (2017, 2018, 2019).
109. ZAKY, A., AZMY, K., **BRAND, U.**, SVAVARSSON, J. 2016. Rare Earth Elements in deep-water articulated brachiopods: evaluation of seawater mass. *Chemical Geology*, 435, 22-34.
108. HOU, Y., AZMY, K., BERRA, F., JADOUL, F., BLAMEY, N.J.F., GLEESON, S.A., **BRAND, U.** 2016. Origin of the Breno and Ensino dolomites in the western Southern Alps (Italy): implications for a volcanic influence. *Marine and Petroleum Geology*, v. 69, 38-52.
107. GARBELLI, C., ANGIOLINI, L., **BRAND, U.**, SHEN, S., JADOUL, F., POSENATO, R., AZMY, K., CAO, C.Q. 2016. Neotethys seawater chemistry and temperature at the dawn of the end Permian mass extinction. *Gondwana Research*, v. 35, 272-285.
106. AZMY, K., KENDALL, B., **BRAND, U.**, STOUGE, S., GORDON, G.W. 2015. Redox conditions across the Cambrian-Ordovician boundary: elemental and isotopic signatures retained in the GSSP carbonates. *Palaeogeog., Palaeoclimatol., Palaeoecol.*, v. 440, 440-454.
105. ZAKY, A., **BRAND, U.**, AZMY, K. 2015. A new sample processing protocol for procuring seawater REE signatures in biogenic and abiogenic carbonates. *Chemical Geology*, v. 416, 36-50.

104. **BRAND, U.**, AZMY, K., BITNER, A.M., LOGAN, A., ZUSCHIN, M., RUGGIERO, E., COLIN, P.L. 2015. Carbon isotope compositions in modern brachiopod calcite: a case of equilibrium with seawater? *Chemical Geology*, v. 411, 81-96.
103. **BRAND, U.**, CAME, R., AFFEK, H., AZMY, K., MOOI, R., LAYTON, K. 2014. Climate-forced change in Hudson Bay seawater composition and temperature, Arctic Canada. *Chemical Geology*, v. 388, 78-86.
102. AZMY, K., STOUGE, S., **BRAND, U.**, BAGNOLI, G., RIPPERDAN, R. 2014. High-resolution chemostratigraphy of the Cambrian-Ordovician GSSP: enhanced international correlation tool. *Palaeogeog., Palaeoclimatol., Palaeoecol.*, v. 409, 135-144.
101. CAME, R.E., **BRAND, U.**, AFFEK, H.P. 2014. Calibration of the carbonate clumped isotope paleothermometer using modern brachiopods. *Chemical Geology*, v. 377, 20-30.
100. GARBELLI, C., ANGIOLINI, L., **BRAND, U.**, JADOUL, F. 2014. Brachiopod fabric, classes and biogeochemistry: implications for the reconstruction and interpretation of seawater carbon-isotope curves and records. *Chemical Geology*, v. 371, 60-67.
99. BLAMEY, N.J.F., AZMY, K., **BRAND, U.** 2014. Provenance and burial history of cement in sandstones: a geochemical investigation. *Sedimentary Geology*, 299, 30-41.
98. BABATUNDE, J.O., AZMY, K., **BRAND, U.** 2014. Dolomites of the Boat Harbour Formation in the Northern Peninsula, western Newfoundland, Canada: implications for dolomitization history and porosity control. *American Association of Petroleum Geology Bulletin*, v. 98, 765-791.
97. **BRAND, U.**, AZMY, K., BITNER, A.M., LOGAN, A., ZUSCHIN, M., CAME, R. RUGGIERO, E. 2013. Oxygen isotopes and $MgCO_3$ in brachiopod calcite and a new paleotemperature equation. *Chemical Geology*, v. 359, 23-31.
96. AZMY, K., LAVOIE, D., WANG, Z., **BRAND, U.**, AL-AASM, I., JACKSON, S., GIRARD, I. 2013. Magnesium-isotope and REE compositions of Lower Ordovician carbonates from eastern Laurentia: implications for the origin of dolomites and limestones. *Chemical Geology*, v. 356, 64-75.
95. AZOMANI, E., AZMY, K., BLAMEY, N., **BRAND, U.**, AL-AASM, I. 2013. Origin of Lower Ordovician dolomites in eastern Laurentia: controls on porosity and implications from geochemistry. *Marine and Petroleum Geology*, v. 40, 99-114.

94. SCHMAHL, W.W., GRIESSHABER, E., KELM, K., GOETZ, A., JORDAN, G., BALL, A., XU, D., MERKEL, C., **BRAND, U.** 2012. Hierarchical structure of marine shell biomaterials: biomechanical functionalization of calcite by brachiopods. *Zeitschrift für Kristallographie*, 227, 793-804.
93. **BRAND, U.** POSENATO, R., CAME, R., AFFEK, H., ANGIOLINI, L., AZMY, K., FARABEGOLI, E. 2012. The end-Permian mass extinction: a rapid volcanic CO₂ & CH₄ – climatic catastrophe. *Chemical Geology*, 322-323, 121-144.
92. **BRAND, U.**, JIANG, G., AZMY, K., BISHOP, J., MONTANEZ, I.P. 2012. Diagenetic evaluation of a Pennsylvanian carbonate succession (Bird Spring Formation, Arrow Canyon, Nevada, U.S.A.) – 1: brachiopod and whole rock comparison. *Chemical Geology*, 308-309, 26-39.
91. GARBELLI, C., ANGIOLINI, L., JADOUL, F., **BRAND, U.** 2012. Micromorphology and differential preservation of Upper Permian brachiopod low-Mg calcite. *Chemical Geology*, 298-299, 1-10.
90. **BRAND, U.**, LOGAN, A., BITNER, M.A., GRIESSHABER, E., AZMY, K., BUHL, D. 2011. What is the Ideal Proxy of Palaeozoic Seawater chemistry? *Memoirs of the Association of Australasian Palaeontologists*, 41, 9-24.
89. AZMY, K., **BRAND, U.**, SYLVESTER, P., GLEESON, S.A., LOGAN, A., BITNER, M.A. 2011. Biogenic and abiogenic low-Mg-calcite (bLMC and aLMC): evaluation of seawater-REE composition, water masses and carbonate diagenesis. *Chemical Geology*, 280, 180-190.

Papers in non-refereed Journals, Guidebooks, Magazines & Conferences

14. SHAVER, K., DAVIS, A., BRAND, U. 2017. Trees and Climate Change: A Municipal Initiative. *Municipal World*, August issue, 9-11.
13. SHAVER, K., DAVIS, A., PILKINGTON, P.M., BRAND, U. 2017. Actions speak louder than Words (Watershed study and assessment). *Spotlight on Experiential Education*, Brock University, April 27, 2017.
12. PILKINGTON, P.M., SHAVER, K., DAVIS, A., BRAND, U. 2017. From our home to Earth: Take responsibility for your planet (Advanced Environmental Assessment). *Spotlight on Experiential Education*, Brock University, April 27, 2017.

Conference Presentations, Publications & Workshops (underlined are students and post-doctoral fellows)

153. FOUREL, F., LECUYER, C., SERIS, M., BLAMEY, N., **BRAND, U.**, FRALICK, P., VOLDERS, F. 2019. Improved online hydrogen isotope analysis of halite aqueous inclusions: insights into the Proterozoic water cycle. EGU General Assembly 2019, Vienna Austria, v. 21.
152. BAJNAI, D., FIEBIG, J., TOMASOVYCH, A., MILNER GARCIA, S., ROLLION-BARD, C., RADDATZ, J., LOFFLER, N., PRIMO-RAMOS, C., ANGIOLINI, L., HENKEL, D., **BRAND, U.** 2018. Assessing kinetic fractionation in brachiopod calcite using clumped isotopes. 8th International Brachiopod Congress, Milan, Italy, September 11-14, 2018.
151. YE, F., JURIKOVA, H., ANGIOLINI, L., **BRAND, U.**, CRIPPA, G., HENKEL, D., LAUDIEN, J., HIEBENTHAL, C., SMAJGL, D., 2018. Variation in brachiopod microstructure and isotope geochemistry under low pH – ocean acidification – conditions. 8th International Brachiopod Congress, Milan, Italy, September 11-14, 2018.
150. ROMANIN, M., BITNER, M.A., ANGIOLINI, L., GATTA, D., **BRAND, U.** 2018. Cement-filled fossil brachiopod punctae and potential analytical bias in paleoenvironmental reconstructions. 8th International Brachiopod Congress, Milan, Italy, September 11-14, 2018.
149. ROMANIN, M., CRIPPA, G., YE, F., BITNER, M.A., ANGIOLINI, L., GASPARD, D., HAUSSERMANN, V., LAUDIEN, J., **BRAND, U.** 2018. Trace elements, stable isotope compositions, and shell microstructures define the optimal sampling shell segment for geochemical analyses in five modern brachiopod species. 8th International Brachiopod Congress, Milan, Italy, September 11-14, 2018.
148. JURIKOVA, H., GUTJAHR, M., WALLMANN, K., FLOGEL, S., LIEBETRAU, V., POSENATO, R., ANGIOLINI, L., GARBELLI, C., **BRAND, U.**, EISENHAUER, A. 2018. Major marine carbon cycle perturbations during the Permian-Triassic mass extinction. 8th International Brachiopod Congress, Milan, Italy, September 11-14, 2018.
147. **BRAND, U.** 2018. Modern and fossil brachiopods: superheroes of archives (Plenary Talk). 8th International Brachiopod Congress, Milan, Italy, September 11-14, 2018.
146. BLAMEY, N., **BRAND, U.**, PARNELL, J., LECUYER, C., HEIZLER, M., DAVIS, A., SHAVER, K., FRALICK, P. 2018. Development of a halite screening protocol for ancient atmosphere. 27th Goldschmidt Conference, Boston, MA. August 12-17, 2018.

145. **BRAND, U.**, **BLAMEY, N.**, **SHAVER, K.**, **GUO, W.**, **JIANG, G.**, **PARNELL, J.**, **BUHL, D.** 2018. Rapid microbial-methane deglaciation of the Marinoan Snowball Earth. 27th Goldschmidt Conference, Boston, MA. August 12-17, 2018.
144. **WOSTBROCK, J.**, **SHARP, Z.**, **BRAND, U.**, **ATUDOREI, V.**, **COPLEN, T.** 2018. Triple oxygen isotope fractionation of synthetic calcite. 27th Goldschmidt Conference, Boston, MA. August 12-17, 2018.
143. **WU, N.**, **CAME, R.E.**, **BRAND, U.**, **AFFEK, H.P.** 2018. Clumped isotope compositions of Paleozoic rocks. 27th Goldschmidt Conference, Boston, MA. August 12-17, 2018.
142. **ROMANIN, M.**, **CRIPPA, G.**, **YE, F.**, **BRAND, U.**, **BITNER, M.A.**, **GASPARD, D.**, **HAUSSERMANN, V.**, **LAUDIEN, J.**, 2018. Which is the optimal shell-part to sample for geochemical analyses? Trace element and stable isotope compositions of five recent brachiopod species. 5th International Paleontological Congress, July 2018, Paris, France
141. **YE, F.**, **ANGIOLINI, L.**, **CRIPPA, G.**, **HENKEL, D.**, **JURIKOVA, H.**, **BRAND, U.** 2018. The effect of ocean acidification on the shell microstructure in the recent brachiopod *Magellania venosa* (Dixon, 1789): a lesson for the past and future. 5th International Paleontological Congress, July 2018, Paris, France
140. **JURIKOVA, H.**, **GUTJAHR, M.**, **WALLMANN, K.**, **FLOGEL, S.**, **LIEBETRAU, V.**, **POSENATO, R.**, **ANGIOLINI, L.**, **GARBELLI, C.**, **BRAND, U.**, **EISENHAUSER, A.**, 2018. Carbon cycle perturbations and ocean acidification at the onset of the end-Permian mass extinction. 5th International Paleontological Congress, July 2018, Paris, France.
139. **YE, F.**, **ANGIOLINI, L.**, **CRIPPA, G.**, **JURIKOVA, H.**, **HENKEL, D.**, **BRAND, U.**, 2018. Variation in brachiopod microstructure under low pH – ocean acidification – conditions. XVIII Edizione delle Giornate di Paleontologia, Trento June 6-8, Volume dei Riassunti.
138. **DAVIS, A.M.**, **BRAND, U.** 2018. Confirming temperatures 420 million years ago: the warm upper Silurian. MNK Graduate Studies Conference, Brock University, April 12, 2018.
137. **SHAVER, K.**, **BRAND, U.** 2018. Equatorial temperatures of the Visean (Carboniferous) and onset of the LPIA. MNK Graduate Studies Conference, Brock University, April 12, 2018.
136. **HAM, E.R.**, **DAVIS, A.**, **SHAVER, K.**, **BRAND, U.** 2018. Climate change in the Niagara Region? A study of the upper Twelve Mile Creek. 2018. MNK Graduate Studies Conference, Brock University, April 12, 2018.

135. BAJNAI, D., FIEBIG, J., TOMASOVYCH, MILNER-GARCIA, S., ROLLION-BARD, C., A., RADDATZ, J., LOEFFLER, N., PRIMO-RAMOS, C., **BRAND, U.** 2018. Assessing kinetic fractionation in brachiopod calcite using clumped isotopes. EGU General Assembly April 2018, Vienna, Austria, v. 20.
134. ROMANIN, M., BITNER, A.M., ANGIOLINI, L., **BRAND, U.** 2018. Are fossil brachiopod geochemical analyses biased by cement-filled punctae? EGU General Assembly April 2018, Vienna, Austria, v. 20.
133. LECUYER, C., FOUREL, F., BLAMEY, N., **BRAND, U.**, FRALICK, P. 2017. Insights into the Proterozoic water cycle: D/H ratios of water from fluid inclusions trapped in halite. Goldschmidt 2017 Conference, Paris, France, August 13-18, 2017.
132. TORBER, P., FARKAS, J., ROLLION-BARD, C., WALLMANN, K., **BRAND, U.**, AZMY, K., TOMASOVYCH, A., LECUYER, C., VIGIER, N., SAULNIER, S., KOMAREK, A.A., SIMECEK, M., FRANCOVA, M., BOHM, F., EISENHAEUER, A. 2017. D26Mg record of Phanerozoic oceans. Goldschmidt 2017 Conference, Paris, France, August 13-18, 2017.
131. FOUREL, F., LECUYER, C., BLAMEY, N., **BRAND, U.**, FRALICK, P. 2017. New method for D/H measurements from halite fluid inclusions: clues to ancient hydrosphere. Goldschmidt 2017 Conference, Paris, France, August 13-18, 2017.
130. GIBBONS, J., SHARP, Z., ATUDOREI, V., **BRAND, U.** 2017. Triple oxygen isotopes of carbonates: calibration of the δ -T relationship. Goldschmidt 2017 Conference, Paris, France, August 13-18, 2017.
129. BAJNAI, D., FIEBIG, J., RADDATZ, J., TOMASOVICH, A., **BRAND, U.** 2017. Assessing kinetic fractionation in brachiopod calcite using clumped isotopes. Goldschmidt 2017 Conference, Paris, France, August 13-18, 2017.
128. JURIKOVA, H., GUTJAHR, M., WALLMANN, K., LIEBETRAU, V., FLOGEL, S., **BRAND, U.**, POSENATO, R., GARBELLI, C., ANGIOLINI, L., EISENHAEUER, A. 2017. Decoupled $\delta^{11}\text{B}$ and $\delta^{13}\text{C}$ during the Late Permian: implications for carbon cycle perturbation during the mass extinction event. Goldschmidt 2017 Conference, Paris, France, August 13-18, 2017.
127. BLAMEY, N., **BRAND, U.**, FRALICK, P., LECUYER, C., BENISON, K., PARNELL, J. 2017. Atmospheric and oceanic oxygen at 1.4 Ga measured in halite. 2017. Goldschmidt 2017 Conference, Paris, France, August 13-18, 2017.

126. **BRAND, U.**, BLAMEY, N., MENG, F., NI., P., PARNELL, J., LECUYER, C., BENISON, K., SPEAR, N., FRALICK, P. 2017. Oxygenation of the Neoproterozoic to early Paleozoic atmosphere and ocean: impact on life. Goldschmidt 2017 Conference, Paris, France, August 13-18, 2017.
125. BAJNAI, D., FIEBIG, J., RADDATZ, J., TOMASOVYCH, A., **BRAND, U.** 2017. Assessing kinetic fractionation in brachiopod calcite using clumped isotopes. 6th International Clumped Isotope Workshop, Institute de Physique du Globe de Paris, Paris, France, August 10-12, 2017.
124. YE, F., ANGIOLINI, L., CRIPPA, G., GARBELLI, C., **BRAND, U.**, CUSACK, M., GRISSHABER, E., HARPER, E., SCHMAHL, W. 2017. The jigsaw of fibers in the brachiopod shell: a matter of growth or environmental control? XVII Edizione delle Giornate di Paleontologia, 24-26 May, Volume dei Riassunti.
123. SHAVER, K., BAJNAI, D., DAVIS, A., ZAKY, A., **BRAND, U.** 2017. Cyclic record of sea surface temperature and water depth change during the Visean (Carboniferous) of Great Britain. MNK Graduate Studies Conference, Brock University April 11.
125. DAVIS, A., ZAKY, A., SHAVER, K., ROMANIN, M., WANG, L., **BRAND, U.** 2017. Climate change record in modern polar and tropical carbonate archives (molluscs, brachiopods). MNK Graduate Studies Conference, Brock University April 11.
124. WANG, L., SHAVER, K., DAVIS, A., AZMY, K., **BRAND, U.** 2017. Carbon isotope chemostratigraphy subjacent to the Ordovician GSSP at Green Point, Newfoundland, Canada. MNK Graduate Studies Conference, Brock University April 11.
123. SHAVER, K., BAJNAI, D., DAVIS, A., ZAKY, A., **BRAND, U.** 2017. Cyclic record of sea surface temperature and sea level change during the Visean (Carboniferous) of Great Britain. Geol. Soc. America North-Central Meeting, March 20, Pittsburgh, PA.
122. DAVIS, A., ZAKY, A., SHAVER, K., ROMANIN, M., WANG, L., **BRAND, U.** 2017. Climate change record in modern polar and tropical carbonate archives (molluscs, brachiopods). Geol. Soc. America North-Central Meeting, March 20, Pittsburgh, PA.
121. WANG, L., SHAVER, K., DAVIS, A., **BRAND, U.** 2017. High-resolution chemostratigraphy of the Furongian Series Stage 10 below the Ordovician GSSP. Geol. Soc. America North-Central Meeting, March 20, Pittsburgh, PA.

120. ROMANIN, M., ZAKY, A., DAVIS, A., SHAVER, K., WANG, L., BITNER, A., BRAND, U., 2017. Decadal climate variation recorded in modern global carbonate archives (brachiopods, molluscs). EGU General Assembly 2017, Vienna, Austria, v. 19.
119. ROMANIN, M., BITNER, A.M., BRAND, U. 2017. Microstructural growth increments in the brachiopods *Liothyrella uva* and *L. neozelanica*: preliminary study of growth analysis and proxy calibration. EGU General Assembly 2017, Vienna, Austria, v. 19.
118. YE, F., ANGIOLINI, L., CRIPPA, G., GARBELLI, C., BRAND, U., CUSACK, M., HARPER, E., 2017. Mapping of recent brachiopod microstructure: a tool for environmental and climate studies. EGU General Assembly 2017, Vienna, Austria, v. 19.
117. JURIKOVA, H., GUTJAHR, M., LIEBETRAU, V., BRAND, U., POSENATO, R., ANGIOLINI, L., EISENHAUER, A. 2017. Boron isotopes in brachiopods during the end-Permian mass extinction: constraints on pH evolution and seawater chemistry. EGU General Assembly 2017, Vienna, Austria, v. 19.
116. CASELLA, L.A., GRIESSHABER, E., NEUSER, R., STEVENS, K., RITTER, A.-C., MUTTERLOSE, J., BRAND, U., IMMENHAUSER, A., SCHMAHL, W.W. 2016. Microstructural changes reflect the degree of diagenetic alteration in biogenic carbonates. EGU General Assembly 2016, Vienna, Austria, v. 18, EGU 2016-14983.
115. ZAKY, A., BRAND, U., AZMY, K. 2015. A new sample processing protocol for procuring seawater REE signatures in biogenic and abiogenic carbonates. Geol. Society America Annual Meeting, Baltimore, MD; Session 323.
114. **BRAND, U., BLAMEY, N., GRIESSHABER, E., POSENATO, R., ANGIOLINI, L., AZMY, K., FARABEGOLI, E., CAME, R.** 2015. Methane Clathrate: killer cause of Earth's greatest mass extinction. Geol. Soc. America Annual Meeting, Baltimore, MD; Session 68-T153.
113. **BRAND, U., BLAMEY, N., SPEAR, N., PARNELL, J., MACMAHON, S.** 2015. Neoproterozoic atmospheric oxygen and the diversification of M-A life. 25th Goldschmidt Conference, Prague, Czech Republic, August 16-21.
112. **BLAMEY, N., BRAND, U., SPEAR, N., PARNELL, J., MACMAHON, S.** 2015. Measuring paleoatmospheric terrestrial and martian gases. 25th Goldschmidt Conference, Prague, Czech Republic, August 16-21.
111. ZAKY, A., AZMY, K., BRAND, U. 2015. Efficient sample processing protocol of shells: implications for reliable REE signatures. 25th Goldschmidt Conference, Prague, Czech Republic, August 16-21.

110. CASELLA, L., GRIESSHABER, E., NEUSER, R., STEVENS, K., RITTER, A.-CH., MUTTERLOSE, J., **BRAND, U.**, IMMENHAUSER, A., SCHMAHL, W.W. 2015. Microstructural changes reflect the degree of diagenetic alteration in biogenic carbonates. 25th Goldschmidt Conference, Prague, Czech Republic, August 16-21.
109. **BRAND, U.** 2015. Trace and isotope chemistry in brachiopods: proxies of geologic events. Plenary Presentation. 7th International Brachiopod Congress, Nanjing, China, May 22-25.
108. ZAKY, A., **BRAND, U.**, AZMY, K., LOGAN, A., SVAVARSSON, J. 2015. Rare Earth Elements of modern shelf and deep-water articulated brachiopods: evaluation of seawater masses. Session S3, 7th International Brachiopod Congress, Nanjing, China, May 22-25.
107. ZAKY, A., **BRAND, U.**, AZMY, K. 2015. A new sample processing protocol: an important update for procuring reliable REE signatures. Session S3, 7th International Brachiopod Congress, Nanjing, China, May 22-25.
106. GARBELLI, C., ANGIOLINI, L., **BRAND, U.**, SHEN, S., JADOUL, F., POSENATO, R., AZMY, K., CAO, C. 2015. Neotethys seawater chemistry and temperature at the dawn of the latest Permian events. Session S3, 7th International Brachiopod Congress, Nanjing, China, May 22-25.
105. GARBELLI, C., ANGIOLINI, L., JADOUL, **BRAND, U.**, SHEN, S. 2014. The $\delta^{13}\text{C}$ of Paleozoic brachiopod shell: insights on shell fabric and implications on paleoceanographic isotopic curve reconstruction. Italian Congress of Geosciences, Milan, Italy, September 2014.
104. FARKAS, J., **BRAND, U.**, AZMY, K., TOMASOVYCH, A., FIETZKE, J., EISENHAUER, A., FRANCOVA, M., SIMECEK, M., VEIZER, J. 2014. Magnesium isotopes in calcite brachiopods: implications for biomineralization and chemical evolution of Phanerozoic oceans. International Paleontological Congress 2014, Mendoza, Argentina.
103. FARKAS, J., **BRAND, U.**, TOMASOVYCH, A., AZMY, K., FIETZKE, J. EISENHAUER, A. 2013. Magnesium isotope composition of globally distributed modern brachiopods: implications for paleoseawater $\delta^{26}\text{Mg}$ reconstructions. V.M. Goldschmidt Conference, Florence, Italy, August 2013 (Theme 9 – Seawater geochemical evolution: applications of elemental and isotopic proxies)
102. AZMY, K., BAGNOLI, G., STOUGE, S., **BRAND, U.** 2013. High-resolution carbon-isotope stratigraphy of the Ordovician GSSP: an enhanced international correlation tool. International Congress on Stratigraphy, Lisbon, July 2013.

101. **BRAND, U.**, POSENATO, R., CAME, R., AFFEK, H., ANGIOLINI, L., AZMY, K. 2012. The end-Permian mass extinction: a rapid volcanic CO₂ and CH₄-climatic catastrophe. Geol. Soc. America Annual Meeting, Charlotte, NC, November 2012.
100. CAME, R., BEACH, A., **BRAND, U.**, AFFEK, H. 2012. Clumped isotope calibration using modern brachiopods: implications for reconstructions of temperature and the oxygen isotopic composition of seawater. V.M. Goldschmidt Conference, Montreal, June 2012. Session 13a, p. 344.
99. **BRAND, U.**, AZMY, K., LOGAN, A., BITNER, M.A., DURZI, B., DURZI, T., ZUSCHIN, M. 2012. Oxygen isotopes & Mg content in brachiopod calcite: equilibrium fractionation and a new paleotemperature equation. V.M. Goldschmidt Conference, Montreal, June 2012. Session 13a, p. 344.
98. MONTANEZ, I.P., **BRAND, U.**, POULSEN, C.J., HORTON, D.E. 2011. Climate-forcing and feedbacks of the Late Paleozoic Ice Age (invited). AGU Fall Meeting, San Francisco, CA., Session PP34B.

Grants

- External Grants:
- NSERC Discovery Operating Grants (2015-2020)
 - BaseLine Earth EU Grant (2015-2018)
 - NSERC Operating Grants (1981-2014)
 - MOE 2008-2011 Operating Grant (co-applicant w. D. McCarthy)
 - NSERC 2009-2014 Discovery Operating Grant
- Internal Grant
- Brock University Match-of-Minds grant (2016)
 - Brock University Match-of-Minds grant (2015)
 - Research Services, Brock Univ. 2014-2015 Bridge Grant
 - Brock University CCRA 2008 - 2011 Operating grant

Invited Lectures

17. BRAND, U. 2018. Invited Talk: The Doushantuo Cap Dolomite: Rapid biogenic-methane driven Marinoan icehouse to greenhouse transition. March 16, 2018. Department of Earth Sciences, University of Western Ontario, London, Ontario Canada.
16. BRAND, U. 2016. Invited Talk: Inclusion gas analysis: a game changer for the geosciences. October 4, 2016. Department of Earth Sciences, University of Milan, Milan, Italy.
15. BRAND, U. 2016. Invited Talk: Inclusion gas analysis: a game changer for the geosciences. September 22, 2016. Polish Academy of Sciences, Warsaw, Poland.
14. BRAND, U. 2015. Invited Plenary Talk: Trace and isotope chemistry in brachiopods: proxies of geologic events. 7th International Brachiopod Congress, Nanjing, China, May 22-25.

Student Supervision (recent):

1. R. Brigham & L. Bourke, (summer 2019) – supervisor; NSERC Undergraduate research student interns
2. Y. BenHalim & M. Damon (winter 2019) – supervisor, trainer – TMC water quality project
3. Amir Zaky, Brock University - Postdoctoral Fellow (2016-2017)
4. J. Viscek (Lead), C. Beck, B. Rosentreter, J. Singh, K. Motala (interns; Niagara College-Brock University) – (Supervisor/trainer- water quality project-Twelve Mile Creek; summer 2018)
5. M. Ouellette & K. Shaver, Water Quality Meter Training (Technicians-Brock U.; Nov. 2017)
6. David Bajnai, Goethe Universität, Frankfurt, Germany (advisor, Ph.D. candidate; BaseLine Earth, 2015-2019)
7. Marco Romanin, Institute of Paleontology, Polish Academy of Sciences, Warszawa, Poland - Ph.D. candidate (co-supervisor; BaseLine Earth, 2015-)
8. Facheng Ye, Università degli Studi di Milano - Ph.D. candidate (co-supervisor; BaseLine Earth, 2015-2019)
9. Hanah Yurikova, GEOMAR-Kiel – Ph.D. candidate (advisor); BaseLine Earth, 2015-2018)
10. Alyssa Davis, Brock University - MSc student (supervisor, 2016-2018)
11. Justin Kaczmarczyk, Brock University – B.Sc. “Soil chemistry and the effect on grape quality and yield for winemaking (supervisor, 2016-2017)
12. Alyssa Davis, Brock University - undergraduate (supervisor - Match of Minds, 2016)
13. Kristen Shaver, Brock University - MSc student (supervisor, 2016-2018)
14. Namir Al-Aasm, Brock University - MSc student (supervisor, 2016, withdrawn)
15. Kristen Shaver, Brock University - BSc thesis student (supervisor, 2015-2016)
16. Lisha Wang, Brock University - MSc student (supervisor, 2015-2017)
17. Kristen Shaver, Brock University – UG-lab assistant (supervisor - Match of Minds; 2015)
18. Yong Hou, Memorial University – M.Sc. candidate (advisor; Spring 2013 -2015)
19. Alicia Rubinson, Brock University - Co-op student (supervisor, two terms; Fall 2014, Winter 2015)
20. Amir Zaky, Memorial University – Ph.D. candidate (co-supervisor; Fall 2011 - 2016)
21. John Babatunde, Memorial University – Ph.D. candidate (advisor; Fall 2011 - 2014)

Cheel, Richard

Curriculum Vitae

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August, 2019

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Education

Institution	Degree Awarded	Year of Degree
McMaster University	Ph.D. (Geology)	1984
University of Ottawa	M.Sc. (Geology)	1980
McMaster University	Hons. B.A. (Geography)	1977

Academic positions

July 1, 1995 - June 30, 1998	Professor (part-time), McMaster University, School of Geography and Geology
July 1, 1994 to present	Professor, Brock University, Department of Earth Sciences
July 1, 1990-June 30, 1994	Associate Professor (with tenure), Brock University, Department of Earth Sciences
July 1, 1986-June 30, 1990	Assistant Professor, Brock University, Department of Geological Sciences
August 1, 1984-July 31, 1986	Assistant Professor, Brandon University, Department of Geology

Jan. 3, 1984-July 31, 1984

Lecturer, Brandon University, Department of Geology

Administrative positions at Brock University

July 1, 2015 to June 31, 2018	Chair, Department of Earth Sciences
July 1, 2012 - May 1, 2014	Associate Dean, Undergraduate Affairs, Faculty of Math and Science
April 1, 2012 - June 30, 2012	Associate Dean, Grad. Studies and Research, Faculty of Math and Science
Feb. 9, 2010 - Dec. 31, 2011	Interim Dean, Faculty of Mathematics and Science
Sept. 1, 2007 - Feb. 9, 2010	Associate Dean, Faculty of Mathematics and Science
June, 2001-June, 2003	Vice-Chair of Senate
July 1, 1996-June 30, 1997	Acting Dean, Faculty of Mathematics and Science
Oct. 23, 1995-June 30, 1997	Director of the Environmental Science Program
June, 1995-June, 1996	Vice-Chair of Senate
Jan. 1, 1995-June 30, 1996	Chair, Department of Earth Sciences
July 1, 1994-Dec. 31, 1994	Acting Dean, Faculty of Mathematics and Science
July 1, 1991-June 30, 1994	Chair, Department of Earth Sciences

Scholarly contributions

Publications

Refereed Articles (Journals and books)

Cheel, R.J., 2003, Hummocky Cross-Stratification. Invited contribution to *The Encyclopedia of Sediment and Sedimentary Rocks*, G.V. Middleton, Editor. Kluwer Academic Publishers, 362-364.

Cheel, R.J., 2003, Heavy Mineral Shadows. Invited contribution to *The Encyclopedia of Sediment and Sedimentary Rocks*, G.V. Middleton, Editor. Kluwer Academic Publishers, p. 355-356.

Cheel, R.J., 2003, Parting lineation and current crescents. Invited contribution to *The Encyclopedia of Sediment and Sedimentary Rocks*, G.V. Middleton, Editor. Kluwer Academic Publishers, 512-514.

Alexander J., J.S. Bridge, R.J. Cheel, and S.F. LeClair, 2001, Bedforms and associated sedimentary structures formed under supercritical water flows over aggrading sand beds. *Sedimentology*, 48: 133-152..

McFarland S., Westrop S.R. and R.J. Cheel. 1999. Allogenic versus autogenic processes in the genesis of Middle Ordovician Brachiopod-rich shell beds, Verulam Formation, Ontario. *Palaios*, 14: 282-287.

Paterson, J. and Cheel, R.J., 1997, The depositional history of the Bloomington complex, an ice-contact deposit in the Oak Ridges Moraine, southern Ontario, Canada: *Quaternary Science Reviews*, 16: p. 705-719.

Leckie, D.A., and Cheel, R.J., 1997, Sedimentology and depositional history of the Lower Cretaceous Coarse-grained clastics, southwest Alberta and southeast British Columbia: *Canadian Society of Petroleum Geologists, Bulletin*, v. 45, p. 1-24.

Cheel, R.J. and Middleton, G.V., 1993, Directional scours on a transgressive surface: examples from the Silurian Whirlpool Formation of Southern Ontario, Canada: *Journal of Sedimentary Petrology*, v. 63, p. 392-397.

Cheel, R.J., and D.A. Leckie, 1993, Hummocky cross-stratification: *Sedimentology Reviews*, v. 1. p. 103-121.

Cheel, R.J., and D.A. Leckie, 1992, Coarse-grained storm beds of the Upper Cretaceous Chungo Member (Wapiabi Formation), southern Alberta, Canada: *Journal of Sedimentary Petrology*, v. 62, p. 933-945.

Cheel, R.J., 1991, Grain fabric in hummocky cross-stratified storm beds: genetic implications: *Journal of Sedimentary Petrology*, v. 61, p. 102-110.

Duke, W.A., Arnott, W., and Cheel, R.J., 1991, Shelf sandstones and hummocky cross-stratification: New insights on a stormy debate: *Geology*, v. 19, p. 625-628.

Cheel, R.J., 1990, Horizontal lamination and the sequence of bed phases and stratification under upper flow regime conditions: *Sedimentology*, v. 37, p. 517-530.

Cheel, R.J., 1990, Flow, sediment transport and bedform dynamics over the transition from dunes to upper-stage plane beds: implications for the formation of planar laminae: Discussion of paper by J.R. Bridge and J. Best. *Sedimentology*, v. 37, p. 549-551.

Cheel, R.J. and Leckie, D.A., 1990, A tidal-inlet complex in the Cretaceous epeiric sea of North America: Virgelle Member, Milk River Formation, southern Alberta, Canada. *Sedimentology*, v. 37, p. 67-81.

Leckie, D.A. and R.J. Cheel, 1990, Nodular silcretes of the Cypress Hills Formation (U. Eocene to M. Miocene) of southern Saskatchewan, Canada: *Sedimentology*, v. 37, p. 445-454.

Leckie, D.A. and R.J. Cheel, 1989, Sedimentology of the Cypress Hills Formation (U. Eocene to Miocene): a semi-arid braidplain deposit: *Canadian Journal of Earth Sciences*, v. 26, p. 1918-1931.

Cheel, R.J. and G.V. Middleton, 1987, Horizontal lamination formed under upper flow regime plane bed conditions: Reply to discussion by J.R. Bridge: *Journal of Geology*, v.95, p. 282.

Cheel, R.J. and G.V. Middleton, 1986, Horizontal lamination formed under upper flow regime plane bed conditions: *Journal of Geology*, v. 94, p. 489-504.

Cheel, R.J. and G.V. Middleton, 1986, Measurement of small-scale textural laminae in sand-sized sediments: *Journal of Sedimentary Petrology*, v. 56, p. 547-548.

Cheel, R.J. and B.R. Rust, 1986, A sequence of soft-sediment deformation (dewatering) structures in Late Quaternary subaqueous outwash near Ottawa, Canada: *Sedimentary Geology*, v. 47, p. 77-93.

Cheel, R.J., 1984, Heavy mineral shadows, a new sedimentary structure formed under upper flow regime conditions: its directional and hydraulic significance: *Journal of Sedimentary Petrology*, v. 54, p. 1173-1180.

Cheel, R.J., 1982, The depositional history of an esker near Ottawa, Canada: *Canadian Journal of Earth Sciences*, v. 19, p. 1417-1427.

Cheel, R.J. and B.R. Rust, 1982, Coarse-grained facies of glaciomarine deposits near Ottawa, Canada: In R. Davidson-Arnott, W. Nickling and B.D. Fahey, editors, *Research in Glacial, Glaciofluvial and Glaciolacustrine Systems*, Proceedings of the 6th Guelph Symposium on Geomorphology, 1980, p. 279-292.

Refereed Articles (Guidebooks, etc.)

Cheel, R.J. (Editor), 1991, *Sedimentology and Depositional Environments of Ordovician and Silurian Strata of the Niagara Escarpment, Ontario and New York*. Geological Association of Canada, Annual Meeting, Toronto, 1991. Guidebook to Field Trip B4, 99 pp.

Brett, C.E., R.J. Cheel, W.L. Duke, W.M. Goodman, S.T. LoDuca G.V. Middleton, B.R. Pratt, M.A. Rutka and C.J. Salas, 1991, Field Stop Descriptions. In: *Sedimentology and Depositional Environments of Ordovician and Silurian Strata of the Niagara Escarpment, Ontario and New York*. Edited by R.J. Cheel. Geological Association of Canada, Annual Meeting, Toronto, 1991. Guidebook to Field Trip B4, p. 64-99.

Rutka, M.A., Cheel, R.J., Middleton G.V., and Salas, C.J., 1991, The Silurian Whirlpool Sandstone. In: *Sedimentology and Depositional Environments of Ordovician and Silurian Strata of the Niagara Escarpment, Ontario and New York*. Edited by R.J. Cheel. Geological Association of Canada, Annual Meeting, Toronto, 1991. Guidebook to Field Trip B4, p. 27-34.

Leckie, D.A. and R.J. Cheel, 1986, Tidal channel facies of the Virgelle Member (Cretaceous Milk River Formation), southern Alberta, Canada: Current Research, Part B, Geological Survey of Canada, Paper 86-1B, p. 637-645.

Non-refereed Publications

Cheel, R.J. and Smaine, C., 2018. **مدخل إلى علم الرسوبيات الفتاتية** (Introduction to Clastic Sedimentology - Arabic edition). Available online at <https://platform.almanhal.com/Reader/Book/88610?search=cheel>

Ahmed, S.E. and R.J. Cheel, 2015. Environment, Energy and Commercial Civilization: Statistical Challenges and Opportunities. International Conference for Energy, Environment and Commercial Civilization, Sichuan University, Chengdu, China Oct. 22-25, 2015.

Cheel, Richard J., 2007. *Global Warming Alert*. Crabtree Publishing Company, 32 pages (a book for grades 4 to 6; a part of Crabtree's *Disaster Alert* series).

Benincasa, A.J. and R.J. Cheel, 1998, Sedimentology and stratigraphy of the Lower Silurian Grimsby Formation, in subsurface, Lake Erie and southwestern Ontario. *Ontario Petroleum Institute Journal*, v. 36.

McFarland, S., Cheel, R.J., and Westrop, S.R., 1998, Sedimentology of storm-generated shell beds from the Verulam Formation (Middle Ordovician) at Lakefield and Gamesbridge quarries, southern Ontario, Canada. *Ontario Petroleum Institute Journal*, v. 36.

Cheel, R.J., Rutka, M.A., and Middleton, G.V., 1995, The sedimentology of the Lower Silurian Whirlpool Sandstone: in outcrop and subsurface, southern, Ontario. *Ontario Petroleum Institute Journal*, v. 33, 19 p..

Leckie, D.A., Cheel, R.J. and Rosenthal, L., 1989, Sedimentology of the upper Virgelle Member (Upper Cretaceous Milk River Formation), Writing-on-Stone Provincial Park, Alberta, and the southern Alberta transect: Canadian Society of Petroleum Geologists, Second International Research Symposium on Clastic Tidal Deposits, Calgary, Alberta, 49 p.

Published Refereed Conference Proceedings

Birnie X., F. Fueten, R. Stesky, R. Cheel, A. P. Rossi 2012, Lithified Aeolian Bedforms as Evidence for Ancient Water Circulation in West Candor Chasma, Mars. 43rd Lunar and Planetary Science Conference (2012), 1292.pdf, 2p.

Cheel, R.J. and Udri, A., 1996 The behavior, internal stratification and fabric of in-phase waves. Geological Society of America, Northeastern Section Annual Meeting, Buffalo, New York, Abstracts with program.

- Cheel, R.J. and Leckie, D.A., 1991, Conglomeratic storm beds: their characteristics and paleoprocess interpretation: Geological Association of Canada, Abstracts with program, v. 16, p. A22.
- Cheel, R.J. and D.A. Leckie, 1989, Cypress Hills Formation (Oligocene) of southern Alberta and Saskatchewan, Canada: Geological Association of Canada, Abstracts with program, v. 14, p. 113.
- Cheel, R.J. and D.A. Leckie, 1988, Cypress Hills Formation (Oligocene) of southern Alberta and Saskatchewan, Canada: deposits of a semi-arid alluvial fan: Society of Economic Paleontologists and Mineralogists Fifth Midyear Meeting, Abstracts with program, p. 10.
- Cheel, R.J. and D.A. Leckie, 1987, Evidence for tides in the western interior basin: a case study from the Milk River Formation (U. Cretaceous) of southern Alberta: Geological Association of Canada, Abstracts with program, v. 12, p. 31.
- Cheel, R.J., 1984, Horizontal laminae formed by deposition under upper flow regime plane bed conditions: Geological Association of Canada, Abstracts with program, v. 9, p. 52.
- Cheel, R.J., 1982, Heavy mineral accumulations under upper flow regime conditions: directional and hydraulic significance: International Association of Sedimentologists Eleventh International Congress, Abstracts, p. 158.
- Cheel, R.J. and B.R. Rust, 1980, A sequence of soft-sediment deformation structures in Late Quaternary subaqueous outwash near Ottawa, Ontario: Geological Association of Canada, Abstracts with program, v. 5, p. 45.
- Leckie, D.A., and R.J. Cheel, 1990, A tidal inlet complex in the Cretaceous Epeiric sea of North America: Virgelle Member, Milk River Formation, southern Alberta: *in* Tidal inlet and related sand bodies, Modern and Ancient, SEPM Research Conference, San Juan Basin, New Mexico, Technical Program., p. 28-29.
- Leckie, D.A., and Cheel, R.J., 1990, A new interpretation for the Oligocene Cypress Hills Formation, southern Alberta and Saskatchewan: Canadian Society of Petroleum Geologists Annual Meeting, "Best of the CSPG Sedimentary Subdivision Session", May, 1990.
- Leckie, D.A. and R.J. Cheel, 1986, Tidal channel facies of the Virgelle Member (Cretaceous Milk River Formation), southern Alberta, Canada: International Association of Sedimentologists Twelfth International Congress, Abstracts, p. 177.
- Meiher Drees, N.C., Leckie, D.A., and R.J. Cheel, 1987, Sedimentology of tidally influenced shoreline sandstones and offshore, sandy shales; Upper Cretaceous Milk River and Lea Park formations, southern Alberta, Canada: Symposium on Coastal Lowlands: Geology and Geotechnology, The Hague, Netherlands, p. 151.
- Meiher Drees, N.C., Leckie, D.A., and R.J. Cheel, 1989, Sedimentology of the Upper Cretaceous Milk River and Lea Park Formations in southern Alberta: Forum '89, Geological Survey of Canada, Oil and Gas Activities in Canada, Program and Abstracts, p. 58
- Meiher Drees, N.C., Leckie, D.A., and R.J. Cheel, 1989, Sedimentology of the Upper Cretaceous Milk River and Lea Park Formations in southern Alberta: Second International Research Symposium on Clastic Tidal Deposits, Program and abstracts, p. 61.
- Peralta, J., F. Fueten, R. Cheel, R. Stesky J. Flahaut, E. Hauber, 2015. Layer Attitude and Thickness Measurements in Western Portion of the Ophir Chasma Interior Layered Deposit, Valles Marineris, Mars. *46th Lunar and Planetary Science Conference (2015)*, 1153.pdf, 2 p.

Book Review

Cheel, R.J., 1991, Review of "Physical principles of Sedimentology" by K.J. Hsü, *Canadian Society of Petroleum Geologists, Bulletin*, p. 493.

Theses

Cheel, R.J., 1984, Sediment transport and deposition under upper flow regime plane bed conditions: Ph.D. Thesis, McMaster University. Supervised by G.V. Middleton.

Cheel, R.J., 1980, Late Quaternary glaciomarine deposits of the Stittsville area, near Ottawa, Canada: M.Sc. Thesis, University of Ottawa. Supervised by B.R. Rust.

University publications

Cheel, R.J., 1993, *Introduction to Clastic Sedimentology: ERSC 2P31 Course Notes*. Brock University, 141 pp. [available on-line since 2005 at www.brocku.ca/sedimentology]

Cheel, R.J., 1990, *Grain fabric in hummocky cross-stratified storm beds: genetic implications*: Studies in Sedimentary Processes No. 5, Brock University Department of Geological Sciences Research Report Series No. 29, 11 pp.

Cheel, R.J., 1989, *Horizontal lamination and the sequence of bed phases under upper flow regime conditions*: Studies in Sedimentary Processes No. 4, Brock University Department of Geological Sciences Research Report Series No. 28, 17 pp.

Papers presented at conferences

Ahmed, S.E. and R.J. Cheel, 2016, Science Education: Preparing a new generation for an exciting (and challenging) future). The 10th International Conference on Management Science and Engineering Management, Baku, Azerbaijan, Aug. 30-Sept. 4, 2016.

Cheel, R.J. and Udri, A., 1996, The behavior, internal stratification and fabric of in-phase waves. Geological Society of America, Northeastern Section Annual Meeting, Buffalo, New York, March 22, 1996.

Cheel, R.J., Rutka, M.A., and Middleton, G.V., 1994, The sedimentology of the Lower Silurian Whirlpool Sandstone: in outcrop and subsurface, southern, Ontario. Ontario Petroleum Institute Annual Meeting. Niagara Falls, Ontario, October, 1994.

Cheel, R.J. and Middleton, G.V., 1990, Scours on a transgressive surface of the Silurian Whirlpool Formation in southern Ontario, Canadian Sedimentology Research Group Annual Regional Meeting, St. Catharines, May, 1990.

Cheel, R.J., 1989, Fabric and Grading in hummocky cross-stratified sandstones: genetic implications. Canadian Sedimentology Research Group Regional Meeting, Ottawa, May, 1989.

Cheel, R.J., 1989, Horizontal lamination and the sequence of bedforms and stratification under upper flow regime conditions. Canadian Sedimentology Research Group Regional Meeting, Ottawa, May, 1989.

Cheel, R.J., 1988, The depositional history of the Oligocene Cypress Hills Formation, southern Alberta and Saskatchewan: Canadian Sedimentological Research Group, Second Annual Regional Meeting (Central Canada), Queen's University, Kingston, Ontario, May 15.

Cheel, R.J., 1984, Horizontal laminae formed by deposition under upper flow regime plane bed conditions: Geological Association of Canada, May, 1984.

Cheel, R.J., 1982, Heavy mineral accumulations under upper flow regime conditions: directional and hydraulic significance: International Association of Sedimentologists Eleventh International Congress, August, 1982.

Cheel, R.J. and Leckie, D.A., 1991, Conglomeratic storm beds: their characteristics and paleoprocess interpretation: Geological Association of Canada, Abstracts with program, v. 16, p. A22.

Cheel, R.J. and B.R. Rust, 1980, Coarse-grained facies of glaciomarine deposits near Ottawa, Canada: Research in Glacial, Glaciofluvial and Glaciolacustrine Systems, The 6th Guelph Symposium on Geomorphology, May, 1980.

Cheel, R.J. and B.R. Rust, 1980, A sequence of soft-sediment deformation structures in Late Quaternary subaqueous outwash near Ottawa, Ontario: Geological Association of Canada, Halifax, May, 1980.

Cheel, R.J. and D.A. Leckie, 1989, Cypress Hills Formation (Oligocene) of southern Alberta and Saskatchewan, Canada: Geological Association of Canada, Montreal, May, 1989.

Cheel, R.J. and D.A. Leckie, 1988, Cypress Hills Formation (Oligocene) of southern Alberta and Saskatchewan, Canada: deposits of a semi-arid alluvial fan: Society of Economic Paleontologists and Mineralogists Fifth Midyear Meeting, Columbus, Ohio, 1988.

Cheel, R.J. and D.A. Leckie, 1987, Evidence for tides in the western interior basin: a case study from the Milk River Formation (U. Cretaceous) of southern Alberta: Geological Association of Canada, Saskatoon, 1987.

Leckie, D.A., and R.J. Cheel, 1990, A tidal inlet complex in the Cretaceous Epeiric sea of North America: Virgelle Member, Milk River Formation, southern Alberta: *in* Tidal inlet and related sand bodies, Modern and Ancient, SEPM Research Conference, San Juan Basin, New Mexico.

Leckie, D.A. and R.J. Cheel, 1986, Tidal channel facies of the Virgelle Member (Cretaceous Milk River Formation), southern Alberta, Canada: International Association of Sedimentologists Twelfth International Congress, Australia, August, 1986.

Meiher Drees, N.C., Leckie, D.A., and R.J. Cheel, 1987, Sedimentology of tidally influenced shoreline sandstones and offshore, sandy shales; Upper Cretaceous Milk River and Lea Park formations, southern Alberta, Canada: Symposium on Coastal Lowlands: Geology and Geotechnology, The Hague, Netherlands.

Graduate Students Supervised

Michael Meyers, BSc. SUNY Geneseo, 1975. Thesis: Flow regime prediction via Froude number calculation in a rock-bedded stream. Completed 2010. Note: I took over supervision from Keith Tinkler after completion of the first draft of the thesis.

Melissa Barnard, BSc/BEEd Brock University 2006. Thesis: Impact of considering the effects of latent heat on caldera-hosted hydrothermal systems. Completed 2010. Note: I was internal supervisor but Steven Cook was external supervisor providing the bulk of supervision.

Michael Johnson, BSc Brock University, 1995. Thesis: The sedimentology of the Silurian Whirlpool Formation, in subsurface, southern Ontario, Canada. Completed 1998.

Sean McFarland, BSc University of Toronto, 1984. Thesis: The sedimentology and taphonomy of the Ordovician Verulam Formation, southern Ontario, Canada. Completed 1997. Winner of the Ontario Petroleum Institute's "Best MSc Thesis" Award for 1997.

Anthony Benincasa, BSc Waterloo University, 1978. Thesis: The sedimentology of the Grimsby Formation in subsurface, southern Ontario, Canada. Completed 1996. Winner of the Ontario Petroleum Institute's "Best MSc Thesis" Award for 1996.

Jens Paterson. BSc Queens University, 1993. Thesis: The sedimentology of an element of the Oak Ridges Moraine, southern Ontario, Canada. Completed 1995.

Research Grants

Internal Grants Awarded

Year	Institution	Amount
1994	Brock University NSERC General Research Grant	\$4,200
1991	Brock University NSERC General Research Grant	\$2,400
1990	Brock University NSERC General Research Grant	\$5,645

1986	Brock University President's Grant	\$3,000
1986	Brandon University President's Grant	\$1,461
1985	Brandon University President's Grant	\$1,360
1984	Brandon University President's Grant	\$5,922

Refereed External Grants Awarded

Year(s)	Granting Agency	Amount
1995-1999	NSERC Research Grant (\$23,100/yr)	\$92,400
1993-1995	NSERC Research Partnerships Grant for Industrially-Oriented Research	\$14,000
1992-1995	NSERC Research Grant (\$21,000/yr)	\$63,000
1991	Energy Mines and Resources Research Agreement	\$4,000
1990-1992	NSERC Operating Grant (\$12,000/yr)	\$24,000
1990	Energy Mines and Resources Research Agreement	\$4,500
1989	Energy Mines and Resources Research Agreement	\$4,500
1987-1990	NSERC Operating Grant (\$12,000/yr)	\$36,000
1987	Energy Mines and Resources Research Agreement	\$4,000
1985-1987	NSERC Operating Grant (\$9,200/yr)	\$18,400
1985	NSERC Equipment Grant	\$10,159

Industry funding

Year(s)	Source of funding	Amount
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1993-95	Telesis Oil and Gas	\$9,000
1993-95	Pembina Exploration Ltd.	\$5,000

Fueten, Frank

11. CURRICULUM VITAE - Frank Fueten

A. FORMAL EDUCATION

Institution	Degree Awards	Year of Degree
University of Toronto	Ph.D.	1990
McMaster University	M.Sc.	1985
McMaster University	B.Sc. (Hons)	1982

(d) ACADEMIC DISTINCTIONS AND AWARDS

1988/1989	Ontario Graduate Scholarship
1987/1988	Ontario Graduate Scholarship
1987/1988	David Strangway Award in Earth Science
1986/1987	University of Toronto Open Doctoral Fellowship

(e) ACADEMIC POSITIONS HELD

Institution	Rank	Dates
Brock University	Chair, Dept. Earth Sci.	2018-present
Brock University	Chair, Dept. Earth Sci.	2002-2004
Brock University	Professor	July 2002-present
University of Toronto	Adjunct Associate Professor	July 2001-2005
Universite de Nantes (France)	Invited Scientist	July 2000
Universite de Nantes (France)	Invited Scientist	July, August 1998
McMaster University	Associate Professor (part-time)	1995 to 1998
Brock University	Chair, Technical Services	1995 to 2002
Brock University	Associate Professor	1993 to 2002
Brock University	Assistant Professor	1989 to 1993

(f) SCHOLARLY ACTIVITIES

– Publications

– Articles in Refereed Journals

Schmidt, G., Fueten, F., Stesky, R., Flahaut, J., & Hauber, E. (2018). Geology of Hebes Chasma, Mars: 1. Structure, stratigraphy, and mineralogy of the interior layered deposits. *Journal of Geophysical Research: Planets*, 123. <https://doi.org/10.1029/2018JE005658>

Fueten, F., Novakovic, N., Stesky, R., Flahaut, J., Hauber, E., & Rossi, A. P. (2017). The evolution of Juventae Chasma, Valles Marineris, Mars: Progressive collapse and sedimentation. *Journal of Geophysical Research: Planets*, 122. <https://doi.org/10.1002/2017JE005334>

Brustel, C., J. Flahaut, E. Hauber, F. Fueten, C. Quantin, R. Stesky, and G. R. Davies. 2017, Valles Marineris tectonic and volcanic history inferred from dikes in eastern Coprates Chasma, *J. Geophys. Res. Planets*, 122, doi:10.1002/2016JE005231.

– Gwinner, R. Jaumann, E. Hauber, H. Hoffmann, C. Heipke, J. Oberst, G. Neukum, V. Ansan, J. Bostelmann, A. Dumke, S. Elgner, G. Erkeling, F. Fueten, H. Hiesinger, N.M. Hoekzema, E. Kersten, D. Loizeau, K.-D. Matz, P.C. McGuire, V. Mertens, G. Michael,

A. Pasewaldt, P. Pinet, F. Preusker, D. Reiss, T. Roatsch, R. Schmidt, F. Scholten, M. Spiegel, R. Stesky, D. Tirsch, S. van Gasselt, S. Walter, M. Wählisch, K. Willner. 2016, The High Resolution Stereo Camera (HRSC) of Mars Express and its approach to science analysis and mapping for Mars and its satellites. *Planetary and Space Science*, Volume 126, July 2016, p. 93-138. doi:10.1016/j.pss.2016.02.014

Pondrelli, M., A. Pio Rossi, L. Le Deit, F. Fueten, S. van Gasselt, M. Glamoclija, B. Cavalazzi, E. Hauber, F. Franchi and R. Pozzobon, 2015, Equatorial layered deposits in Arabia Terra, Mars: Facies and process variability. *Geological Society of America Bulletin*, doi: 10.1130/B31225.1

Jaumann, R., et al., 2015, Quantifying geological processes on Mars - Results of the high resolution stereo camera (HRSC) on Mars express. *Planetary and Space Science* (2015), [http://dx.doi.org/10.1016/j.pss.2014.11.029i_\(I am author #7 out of 38\)](http://dx.doi.org/10.1016/j.pss.2014.11.029i_(I am author #7 out of 38))

Fueten, F., J. Flahaut, R. Stesky, E. Hauber, and A. P. Rossi, 2014, Stratigraphy and mineralogy of Candor Mensa, West Candor Chasma, Mars: Insights into the geologic history of Valles Marineris, *J. Geophys. Res. Planets*, 119, doi:10.1002/2013JE004557.

Le Deit, L., E. Hauber, F. Fueten, M. Pondrelli, A. P. Rossi, and R. Jaumann, 2013, Sequence of infilling events in Gale Crater, Mars: Results from morphology, stratigraphy, and mineralogy, *J. Geophys. Res. Planets*, 118, 2439-2473, doi:10.1002/2012JE004322.

Birnie C., Fueten, F., Stesky, R. Hauber, E., 2012, Underlying structural control of small-scale faults and fractures in West Candor Chasma, Mars. *J. Geophys. Res.*, 117, E11001, doi:10.1029/2012JE004144.

Lagoeiro, L., Barbosa P.F., Fueten F. 2011, Complex fringes around magnetite porphyroclasts: Growth and deformation history. *Tectonophysics* 510 (2011) 186-194, doi:10.1016/j.tecto.2011.06.027

Fueten, F., Flahaut, J., Le Deit, L., Stesky, R., Hauber E., and Gwinner, K., 2011, Interior layered deposits within a perched basin, southern Coprates Chasma, Mars: Evidence for their formation, alteration, and erosion, *J. Geophys. Res.* 116, E02003, doi:10.1029/2010JE003695

- Published Refereed Conference Proceedings
- Vargas, F. Fueten, J. Walmsley, R. Stesky, E. Hauber, 2018, The Subsurface Structure of Large Wrinkle Ridges, Valles Marineris, Mars. 49th Lunar and Planetary Science Conference (2018), Abstract #1035
- A. Burden, F. Fueten, R. Stesky, J. Flahaut, E. Hauber, 2018. Stratigraphy and Attitude Measurements of Interior Layer Deposits in East Candor Chasma, Valles Marineris, Mars. 49th Lunar and Planetary Science Conference (2018), Abstract #1180
- J. Walmsley, F. Fueten, R. Stesky, J. Flahaut, E. Hauber, 2018, Detailed Analysis of Hydraotes Chaos, Mars. 49th Lunar and Planetary Science Conference (2018), Abstract #1184
- A. Van Patter, F. Fueten, R. Stesky, J. Flahaut, E. Hauber. 2018, Layer Attitudes and Unconformities Within the Interior Layered Deposit, Ophir Chasma, Mars. 49th Lunar and Planetary Science Conference (2018), Abstract #1127
- J. J. C. Churchill, M. E. Schmidt, J. A. Berger, F. Fueten, L. L. Tornabene, L. E. Vargas, J. Walmsley. 2017, Possible Volcanic Avalanche Deposit North of Gale Crater. 48th Lunar and Planetary Science Conference (2017), Abstract #2411
- C. Brustel, J. Flahaut, E. Hauber, F. Fueten, R. Stesky, C. Quantin, G. R. Davies. 2017, Feeder Dikes as the Source of Volcanic Plains in the Vicinity of Valles Marineris. 48th Lunar and Planetary Science Conference (2017), Abstract #2269
- A. Burden, F. Fueten, R. Stesky, J. Flahaut, E. Hauber, 2017. Stratigraphy and Attitude Measurements of Interior Layer Deposits in East Candor Chasma, Valles Marineris, Mars, 48th Lunar and Planetary Science Conference (2017), Abstract #1527
- L. Vargas, F. Fueten, R. Stesky, E. Hauber. 2017, Detailed Study of Spur and Gully Topography Within Eastern Valles Marineris, Mars. 48th Lunar and Planetary Science Conference (2017), Abstract #1085
- C. Brustel, J. Flahaut, E. Hauber, F. Fueten, R. Stesky, C. Quantin, G. R. Davies. 2016, Valles Marineris Tectonic and Volcanic History Inferred from Dikes in Eastern Coprates Chasma Mars. 47th Lunar and Planetary Science Conference (2016), Abstract #2724
- F. Fueten, J. Flahaut, R. Stesky, E. Hauber. A. Pio Rossi, L. Le Deit, M. Ponerelli. 2015. A comparison of Interior Layered Deposits within Valles Marineris. STRATI 2015 - 2nd International Congress on Stratigraphy, Graz, Austria, 19-23 July 2015
- Le Deit, L., Hauber, E., Mangold, N., Pondrelli, M., Fueten, F., Bourgeois, O., Mège, D., Flahaut, J., Adeli, S., Le Mouélic, S. 2015. The Sedimentary Rock Record Of Mars As Viewed From The Last Decade Of Orbital Missions. Session No. 71. T171. Exploring the Sedimentary Rock Record of Mars. 2015 GSA Annual Meeting in Baltimore, Maryland, USA (1-4 November 2015)

Fueten F., Flahaut, J., Stesky, R., Hauber, E., Pio Rossi, A., Le Deit, L., Pondrelli, M. 2015, A comparison of Interior Layer Deposits within Valles Marineris, Mars; STRATI 2015 2nd

International Congress on Stratigraphy, 19. - 23. July 2015, Graz, Austria (S09 - P01)

M. Minin, L. Vargas, F. Fueten, R. Stesky, E. Hauber 2015, A New Automated Technique

Within ArcGIS to Compute the Attitudes of Planar Topographic Features; 46th Lunar and Planetary Science Conference (2015), Abstract #1577

G. Schmidt, J. Flahaut, F. Fueten, E. Hauber, R. Stesky 2015, Evidence for an Unconformity Within the Interior Layered Deposit of Hebes Chasma, Valles Marineris, Mars; 46th Lunar and Planetary Science Conference (2015), Abstract #1237

J. Peralta, F. Fueten, R. Cheel, R. Stesky, J. Flahaut, E. Hauber 2015, Layer Attitude and Thickness Measurements in Western Portion of the Ophir Chasma Interior Layered Deposit, Valles Marineris, Mars; 46th Lunar and Planetary Science Conference (2015), Abstract #1153

Schmidt, G., Fueten, F., Flahaut, J., Hauber, E. and Stesky, R. 2014, Structure and Geometry of the Interior Layered Deposits Within Hebes Chasma, Valles Marineris, Mars; 45th Lunar and Planetary Science Conference, #1900

Timmons, S., Schmidt, G., Fueten, F., Flahaut, J., Hauber, E. and Stesky, R., 2014, Layer Attitude and Thickness Measurements of the Interior Layered Deposit Within Hebes Chasma, Valles Marineris, Mars; 45th Lunar and Planetary Science Conference, #1474

Hore, A., Fueten, F., Flahaut, J., Stesky, R., Rossi, A. P. and Hauber, E., 2014, Layer Thickness Measurements, Structural Analysis, and Mineralogical Investigation of the Ganges Chasma Interior Layered Deposit, Valles Marineris, Mars; 45th Lunar and Planetary Science Conference, #1577

Jaumann, R., Neukum, G., Tirsch, D., Hauber, E., Hoffmann, H., Roatsch, T., Gwinner, K., Scholten, F., Ansan, V., Baratoux, D., DiAchille, G., Duxbury, T., Erkeling, G., Foing, B., Fueten, F., van Gasselt, S., Gupta, S., Head, J. W., Hiesinger, H., Ip, W. H., Keller,

H. U., Kleinhans, M., Kneissl, T., Le Deit, L., Mangold, N., McCord, T. B., Michael, G., Muller, J. P., Murray, J., Pacifici, A., Platz, T., Pinet, P., Pondrelli, M., Raack, J., Reiss, D., Rossi, A. P., Spohn, T., Sowe, M., Stephan, K., Wendt, L., Williams, D. A. and HRSC Science Team, 2014, The Martian Geomorphology as Mapped by the Mars Express High Resolution Stereo Camera (HRSC): Implications for Geological Processes and Climate Conditions; 45th Lunar and Planetary Science Conference, #1772

A.P. Rossi, E. Hauber, M. Spagnuolo, F. Fueten, M. Pondrelli, D. Breuer, M. Grott, M. Knapmeyer, C. Quantin Nataf, and V. Unnithan. Geological evidence and future detection of active tectonics on Mars. 2013, Geophysical Research Abstracts; Vol. 15, EGU2013-9020-1, 2013, EGU General Assembly 2013

Le Deit, L. and Hauber, E. and Fueten, F. and Pondrelli, M. and Rossi, A. P. and Jaumann, R., . 2013, Investigation of Possible Coastal and Periglacial Landforms in Gale Crater, Mars 44th Lunar and Planetary Science Conference, #2187

- Hore, A. and Fueten, F. and Flahaut, J. and Stesky, R. and Rossi, A. P. and Hauber, E. and Quantin-Nataf, C. 2013, Structural Analysis, Layer Thickness Measurements and Mineralogical Investigation of the Largest Interior Layered Deposit within Ganges Chasma, Valles Marineris, Mars. 44th Lunar and Planetary Science Conference, #1070
- Calvert, L. and Fueten, F. and Flahaut, J. and Stesky, R. and Rossi, A. P. and Hauber, E. and Quantin-Nataf, C. 2013, Layer Attitude and Thickness Measurements of Three Interior Layered Deposits Within Capri Chasma, Mars. . 44th Lunar and Planetary Science Conference, #1069
- Novakovic, N. and Fueten, F. and Flahaut, J. and Stesky, R. and Rossi, A. P. and Hauber, E. 2013, Layer Attitude and Thickness Measurements of the Three Interior Layered Deposits Mounds within Juventae Chasma, Mars. 44th Lunar and Planetary Science Conference, #1068
- J. Flahaut, C. Quantin, J. L. Bishop, F. Fueten, P. Allemand, N. Mangold, F. Poulet, J.-P. Bibring 2012, Mineralogic Investigation of Capri/Ganges/Eos Chasmata, Mars: Insights into the Geologic History of Valles Marineris. 43rd Lunar and Planetary Science Conference (2012), Abstract #1823
- C. Ismailos, F. Fueten, R. Stesky, J. Flahaut, A. Rossi, E. Hauber 2012, Layer Thickness Determination of the Interior Layered Deposit within Ganges Chasma, Mars. 43rd Lunar and Planetary Science Conference (2012), Abstract #1533
- C. Birnie, F. Fueten, R. Stesky, R. Cheel, A. P. Rossi 2012, Lithified Aeolian Bedforms as Evidence for Ancient Water Circulation in West Candor Chasma, Mars. 43rd Lunar and Planetary Science Conference (2012), Abstract #1292
- M. Pondrelli, A. Pio Rossi, S. Van Gasselt, L. Le Deit, F. Fueten, E. Hauber and T. Zegers 2012, Equatorial Layered Deposits in Arabia Terra, Mars: facies and process variability. 34th International Geological Congress
- L. Le Deit, E. Hauber, F. Fueten, N. Mangold, M. Pondrelli, A. Rossi, and R. Jaumann 2012, Model Age of Gale Crater and Origin of its Layered Deposits. The Third International Conference on Early Mars: Geologic and Hydrologic Evolution, Physical and Chemical Environments, and the Implications for Life (2012) Abstract# 7045
- L. Le Deit, E. Hauber, F. Fueten, M. Pondrelli, A. Rossi, N. Mangold, S. van Gasselt, M. Massé, and R. Jaumann 2011, Geological Analysis Of Gale Crater On Mars. EPSC-DPS Joint Meeting 2011, 02 - 07 October 2011, Nantes, France. Abstract #EPSC-DPS2011-966
- F. Fueten, R. Harvey, R. Stesky, E. Hauber, A. Rossi 2011, Layer Thickness Determination of Interior Layered Deposits, with Particular Emphasis on Candor Mensa, Mars. 42nd Lunar and Planetary Science Conference (2011), Abstract #1255
- C. Birnie, F. Fueten, R. Stesky, E. Hauber, 2011, Underlying Structural Control of Small Scale Fault and Fracture Orientations Viewed in HiRISE Images Within West Candor Chasma, Mars. 42nd Lunar and Planetary Science Conference (2011), Abstract #1488
- Le Deit, E. Hauber, F. Fueten, M. Pondrelli, T. Zegers, S. van Gasselt, M. Massé, C. Verpoorter, ISSI ILD Team, 2011, Geological Comparison of the Gale Crater Mound to Other Equatorial Layered Deposits

(ELDs) on Mars. 42nd Lunar and Planetary Science Conference (2011), Abstract #1857

- Pondrelli, A. P. Rossi, S. van Gasselt, L. Le Deit, F. Fueten, E. Hauber, T. Zegers. 2011. Equatorial Layered Deposits in Arabia Terra, Mars: Facies and Process Variability. 42nd Lunar and Planetary Science Conference (2011), Abstract #1825

h) Theses

Fueten, F. 1989 Deformation of Quartzo-Feldspathic Gneisses of the Thompson Belt, Manitoba: Ph.D. Thesis, University of Toronto

Fueten F. 1984 Spaced cleavage development in the metagreywackes of the Goldenville Formation, Meguma Group: M.Sc. Thesis, McMaster University

- Papers submitted for publication
- Papers presented at Conferences and Learned Societies (Note: category not used after 2008)
-

4) Grants Obtained

b) Refereed External Grants

Year	Granting Agency	Amount
2018-2023	NSERC Discovery	\$21,000/yr
2013-2018	NSERC Discovery	\$27,000/yr

- Work in progress

Work on several major research projects is presently ongoing. All can broadly be described as: Tectonics of Mars

- Other Scholarly Activities
- Referee

Referee for NSERC Operating Grant applications Referee for N.S.F. grant applications

Referee for Lithoprobe grant applications

1997, External Examiner, University of Toronto, Ph.D. Thesis Assessor for Ontario GeoScience Research Grant Program

Referee for Journal of Maps

Referee for Journal of Structural Geology Referee for Journal of Geophysical Research Referee for Planetary and Space Science

Referee for Journal Geological Society of London

Referee for Computers & Geosciences Referee for GSA
Bulletin

Referee for Canadian Journal of Earth Sciences Book reviewer for
American Mineralogist

- Memberships

American Geophysical Union (AGU) Geological
Association of Canada

1992 to 1995; Councillor of GAC Structural Geology and Tectonics Division 1995 to 1998,
Secretary of GAC Structural Geology and Tectonics Division

- Other

2013 I was invited to join the European Space Agency's Mars Express High Resolution Stereo Camera (HRSC) Science Team as a Co- Investigator. I am one of 53 Co-Is and the only Canadian.

2013 Member, NSERC Environmental Sciences RTI Evaluation Group

2012 Chair, NSERC Research Tools and Instruments EG1506 RTI Committee, Geosciences Evaluation Group

2011 Member NSERC Research Tools and Instruments (RTI), Geosciences Evaluation Group

1994 to present

Responsible for maintaining Canadian Tectonic group WWW site and email list.

- University/Community Services University

Services

2018-present

Chair, Dept. of Earth Sciences

2011-2018

Assorted Departmental Committees

2006-2011

Graduate Program Director, Earth Sciences Community Service.

2018 Supervisor for student in High School Mentorship program

2017 Supervisor for student in High School Mentorship program

2016 Supervisor for student in High School Mentorship program

2014 Supervisor for student in High School Mentorship program

2013 Supervisor for student in High School Mentorship program 2012 Supervisor for student in High School Mentorship program

12. *TEACHING ACTIVITIES/EXPERIENCE*

A. COURSES TAUGHT (updated August 2019)

Course No.	Course Name	Number of times taught
ERSC 1P94	Planetary Science	7
ERSC 2P17	Field Methods	8
ERSC 3P01	Structural Geology	8
Geol 3P95	Special Topics in Geology	1
Geol 3P99	Field Geology	7
Geol/Ersc 4P01	Advanced Structural Geology	7

Head, Martin

Personal information

Citizenship Canadian and British

Familial status Married with two children

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E-mail mjhead@brocku.ca

ACADEMIC AND PROFESSIONAL INFORMATION

A) ACADEMIC AND PROFESSIONAL QUALIFICATIONS

- Chartered Geologist, Geological Society, London, England, 1997.
- Ph.D. in Geology, University of Aberdeen, Scotland, 1991.
- B.Sc. Combined Honours in Geology and Biology, Aston University, England, 1980.

B) ACADEMIC DISTINCTIONS AND AWARDS

- Patronym: *Cristadinium headii* Willumsen et al., 2014; a low-latitude marker for the Lower Miocene. In: Willumsen, P.S., Dale, B., Jolley, D.W., and Vestergaard Laursen, G., 2014. Palynostratigraphy and palaeoenvironmental shifts in Oligocene and Miocene strata from offshore Angola, west-central Africa. *Palynology*, 38(2), 259–279.
- Visiting Scientist, Birbal Sahni Institute of Palaeobotany, Lucknow, India (February, 2011).
- Presidential Service Award, American Association of Stratigraphic Palynologists (2006).
- Visiting Professor (1st Class), Université Claude Bernard, Lyon, France (February, 2003).
- Visiting Fellow, Wolfson College, University of Cambridge (November 1999–June 2002).
- Patronym: *Decahedrella martinheadii* Manum, 1997; a high-latitude marker for the Upper Miocene. *Decahedrella martinheadii* Gen. et sp. nov. – A problematic palynomorph from the Northern Atlantic Miocene. *Palynology* 21, 67–77.
- Visiting Professor, Assuit University, Egypt (December 1996).
- Metcalf Fellow, Victoria College, University of Toronto, Canada (Sept. 1994–Sept. 1995).

C) ACADEMIC POSITIONS HELD

- Full Professor with tenure, Department of Earth Sciences, Brock University (July 2005–present); Chair of the Department of Earth Sciences, Brock University (July 2008–June 2011).

- Full Professor (status only), Department of Geology, University of Toronto (July 2006–present).
- Full Member, Graduate Faculty, University of Toronto (July 2006–present).
- Life Member, Wolfson College, University of Cambridge (from November 1999).
- Affiliated Lecturer, Godwin Institute for Quaternary Research, Department of Geography, University of Cambridge (October 2002–October 2005).
- Senior Research Associate, Godwin Institute for Quaternary Research, Department of Geography, University of Cambridge (November 1999–September 2002).
- Associate Member, Graduate Faculty, University of Toronto, Canada (October, 1989 to 2000)
- Research Associate, Lecturer, Special Lecturer, Department of Geology and Erindale College, University of Toronto, Canada (variously, April 1985–October 1999).

D) Creative/Scholarly activities

1. PUBLICATIONS

a) Books, monographs, and special issues of journals

13. Suganuma, Y., **Head, M.J.**, and Sagawa, T., in prep. Stratigraphy and paleoclimatic/paleoenvironmental evolution across the Early–Middle Pleistocene transition in the Chiba composite section, Japan, and other reference sections in East Asia. Special issue for *Progress in Earth and Planetary Science* (Springer).
12. **Head, M.J.**, Gibbard, P.L. and van Kolfschoten, T. (eds.), 2015. The Quaternary System and its formal subdivision. *Quaternary International*, 383: 1–208. [Published October 5, 2015]
11. **Head, M.J.** and McCarthy, F.M.G. (eds.), 2009. Special issue honoring the memory of Professor John H. Wrenn. *Palynology*, 33(2): 1–179.
10. **Head, M.J.** and Gibbard, P.L. (eds.), 2005. *Early–Middle Pleistocene transitions: the land–ocean evidence*. Geological Society of London, Special Publications 247, pp. i–vii + 1–326.
9. Beaudoin, A.B. and **Head, M.J.** (eds.), 2004. *The palynology and micropalaeontology of boundaries*. Geological Society, London, Special Publications, 230, pp. i–vii + 1–355.
8. Marret, F. and Zonneveld, K.A.F. with contributions from de Vernal, A., Edwards, L.E., Esper, O., Harland, R., **Head, M.J.**, Matsuoka, K., Matthiessen, J., Rochon, A., Targarona, J., Turon, J.-L., and Vink, A., 2003. Atlas of modern organic-walled dinoflagellate cyst distribution. *Review of Palaeobotany and Palynology*, 125: 1–200.
7. **Head, M.J.** and Beaudoin, A.B. (eds.), 2002. New frontiers and applications in palynology and micropaleontology: a Canadian perspective. Special issue of *Palaeogeography, Palaeoclimatology, Palaeoecology* 180(1–3): i + 1–251.
6. Rochon, A., de Vernal, A., Turon, J.-L., Matthiessen, J. and **Head, M.J.** 1999. Distribution of recent dinoflagellate cysts in surface sediments from the North Atlantic Ocean and adjacent seas in relation to sea-surface parameters. *American Association of Stratigraphic Palynologists, Contributions Series*, No. 35, pp. 1–152, including 42 text-figs., 14 pls., and 3 Appendices.
5. **Head, M.J.**, 1993. Dinoflagellate cysts, sporomorphs, and other palynomorphs from the marine uppermost Pliocene St. Erth Beds, Cornwall, southwestern England. *The Paleontological Society, Memoir* 31: 1–62, 19 pls.
4. Premoli-Silva, I., Haggerty, J.A., Rack, F. and 26 others including **M.J. Head**, 1993. *Proceedings of the Ocean Drilling Program, Initial Reports*, 144. College Station, Texas (Ocean Drilling Program), 1084 p.
3. **Head, M.J.** and Wrenn, J.H. (eds.), 1992. *Neogene and Quaternary dinoflagellate cysts and acritarchs*. American Association of Stratigraphic Palynologists Foundation, College Station, Texas, 438 p., 78 pls.
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d) Conference Abstracts, Presentations, and Invited Talks (since 2000)

- 214 Suganuma, Y., Okada, M., Kameo, K., Haneda, Y., Hayashi, H., Irizuki, T., Itaki, T., Izumi, K., Kubota, Y., Nakazato, H., Nishida, N., Okuda, M., Simon, Q., Satoguchi, Y., Takeshita, Y., **Head, M.J.**, 2020. The Chiba Section, Japan: a proposed Global Boundary Stratotype Section and Point (GSSP) for the Chibanian Stage/Age and Middle Pleistocene Subseries/Subepoch. 36th International Geological Congress, New Delhi, March 2–8, 2020.
- 213 **Head, M.J.**, 2019. Defining the Quaternary time scale using paleoclimate, paleomagnetism, and Earth System science. XXVI Konferencja: Stratygrafia Plejstocenu Polski, Mieszko resort, Pokrzywna, Poland. September 2–6, 2019. [Invited talk].
- 212 **Head, M.J.**, 2019. Challenges in defining the Upper Pleistocene Subseries – an Antarctic ice core as a potential Global boundary Stratotype Section and Point (GSSP). INQUA 2019 – 20th Congress of the International Union for Quaternary Research, Dublin, Ireland, July 25–31, 2019.
- 211 **Head, M.J.**, 2019. Formal subdivision of the Quaternary System: a review and ongoing initiatives. INQUA 2019 – 20th Congress of the International Union for Quaternary Research, Dublin, Ireland, July 25–31, 2019.
- 210 **Head, M.J.**, 2019. The evolving geological time scale: a focus on the Quaternary including the Anthropocene. Institute of Geological Sciences, Polish Academy of Sciences (ING PAN), Krakow, Poland, July 12, 2019. [Invited talk]
- 209 **Head, M.J.**, 2019. Formal subdivision of the Quaternary System/Period: present status and future directions. STRATI 2019 – Third International Congress on Stratigraphy, Milan, Italy, July 2–5, 2019. [Invited talk]
- 208 **Head, M.J.**, 2019. Challenges in defining the Upper Pleistocene Subseries – an Antarctic ice core as a potential Global boundary Stratotype Section and Point (GSSP). STRATI 2019 – Third International Congress on Stratigraphy, Milan, Italy, July 2–5, 2019.
- 207 Mantilla Duran, F., **Head, M.J.**, Ferretti, P., and De Schepper, S., 2019. Influence of subpolar waters at central North Atlantic IODP Site U1313 during the Middle Pleistocene: insights from the dinoflagellate cyst record. STRATI 2019 – Third International Congress on Stratigraphy, Milan, Italy, July 2–5, 2019.
- 206 Waters, C.N., Zalasiewicz, J., **Head, M.J.**, McCarthy, F.M.G., Thomas, E.R., Kaiser, J., Ivar do Sul, J.A., Shoty, W., DeLong, K.L., Barnosky, A.D., Hadley, E.A., Stegner, M.A., An, Z., Fairchild, I.J., Himson, S., Rose, N.L., Gałuszka, A., Hajdas, I., Wągrzech, M., Summerhayes, C., Williams, M. 2019. Progress in the investigation for a potential Global Boundary Stratotype Section and Point (GSSP) for the Anthropocene Series. STRATI 2019 – Third International Congress on Stratigraphy, Milan, Italy, July 2–5, 2019. [Invited talk]
- 205 McCarthy, F.M.G., and **Head, M.J.**, 2019. Crawford Lake, Ontario, Canada. Invited talk. Anthropocene GSSP project meeting at the Haus der Kulturen der Welt, Berlin, May 28, 2019.
- 204 **Head, M.J.**, 2019. Explanation of the process involved in seeking formalization. Invited talk. Anthropocene GSSP project meeting at the Haus der Kulturen der Welt, Berlin, May 28, 2019.
- 203 McCarthy, F., Head, M., Patterson, R.T., McAndrews, J., Krueger, A., Heyde, A., Turton, C., Alderson, A., Cocker, S., and Tepavcevic, M., 2019. Defining the Anthropocene at Crawford Lake as an integral part of the Niagara Escarpment Geoheritage. Geological Association of Canada – Mineralogical Association of Canada Annual Meeting, Québec City, July 12–15, 2019. [Talk on 15 May].
- 202 **Head, M.J.**, 2019. Formal subdivision of the Quaternary System: a focus on the Holocene and Anthropocene. Geological Association of Canada – Mineralogical Association of Canada Annual Meeting, Québec City, July 12–15, 2019. [Talk on 15 May].
- 201 **Head, M.J.**, 2019. Shaping the Quaternary time scale: recent developments including the Holocene subdivision and progress on the Anthropocene. Invited talk, University of Cincinnati, USA, April 12, 2019.
- 200 Waters, C.N. and the International Anthropocene GSSP Analysis Team (Waters, C.N., Scherer, B., Barnosky, A.D., Zhisheng, A., Fairchild, I.J., Himson, S., Kaiser, J., McCarthy, F.M.G., Shoty, W., Thomas, E.R., Zinke, J., Duprey, N., Hajdas, I., **Head, M.J.**, Gałuszka, A., Ivar do Sul, J.A., Rose, N.L., Summerhayes, C., Vane, C.H., Williams, M., and Zalasiewicz, J.), 2019. Progress in the investigation of a potential Global Boundary Stratotype Section and Point (GSSP) for the Anthropocene Series. European Geosciences Union, General Assembly, Vienna, Austria, 7–12 April, 2019, *Geophysical Research Abstracts*, vol. 21, EGU2019-15123.

- 199 Zalasiewicz, J., Waters, C.N., **Head, M.J.**, and Oldfield, F., 2019. The Anthropocene as a potential new unit of the Geological Time Scale. Quaternary Research Association, Annual Discussion Meeting, University of Chichester, U.K., 3–5 January, 2019.
- 198 **Head, M.J.**, 2018. Formal subdivision of the Quaternary System: challenges and opportunities. Invited talk. One-day symposium marking the retirement of Prof. Philip L. Gibbard. University of Cambridge, UK, Sept 10, 2018.
- 197 **Head, M.J.**, 2018. SQS progress for Holocene stage definitions. Anthropocene Working Group Workshop, Max Planck Institute for Chemistry, Mainz, Germany; September 5–8. [Talk on September 6].
- 196 **Head, M.J.**, and McCarthy, F.M.G., 2018. Crawford Lake, Ontario, Canada: a prospective GSSP candidate for the Anthropocene Epoch. Anthropocene Working Group Workshop, Max Planck Institute for Chemistry, Mainz, Germany; September 5–8. [Talk on September 6].
- 195 **Head, M.J.**, 2017. The David Batten special symposium – an introduction. AASP – The Palynological Society, 50th Annual Meeting, Nottingham, UK, Sept 4–6, 2017.
- 194 **Head, M.J.**, Ellegaard, M.E., and Versteegh, G.J.M., 2017. Dual or unified taxonomy and nomenclature in dinoflagellates? – history, present status, and the revelations of molecular phylogeny. AASP – The Palynological Society, 50th Annual Meeting, Nottingham, UK, Sept 4–6, 2017.
- 193 El Beialy, S.Y., **Head, M.J.**, El Atfy, H., and El Khoriby, E.M., 2017. Late Eocene–Oligocene dinoflagellate cysts of the Dabaa Formation, Qattara Depression, north Western Desert, Egypt: age and paleoenvironments. AASP – The Palynological Society, 50th Annual Meeting, Nottingham, UK, Sept 4–6, 2017.
- 192 Al-Silwadi, S., **Head, M.J.**, and Louwye, S., 2017. Dinoflagellate cyst stratigraphy and paleoecology of the Upper Miocene–Pliocene, Rees Borehole, Northern Belgium. Dino 11 – Eleventh International Conference on Modern and Fossil Dinoflagellates. July 17–21, Bordeaux, France.
- 191 El Beialy, S.Y., **Head, M.J.**, El Atfy, H., and El Khoriby, E.M., 2017. Dinoflagellate cyst evidence for the age and paleoenvironments of the Late Eocene–Oligocene Dabaa Formation, Qattara Depression, north Western Desert, Egypt. Dino 11 – Eleventh International Conference on Modern and Fossil Dinoflagellates. July 17–21, Bordeaux, France.
- 190 **Head, M.J.**, Ellegaard, M.E., and Versteegh, G.J.M., 2017. Dual taxonomy and nomenclature in dinoflagellate cysts: history, present status, and exciting opportunities of molecular phylogeny. Dino 11 – Eleventh International Conference on Modern and Fossil Dinoflagellates. July 17–21, Bordeaux, France.
- 189 **Head, M.J.**, 2017. Challenges in subdividing the Quaternary System: from the Anthropocene to formal subseries for the Cenozoic. Geological Association of Canada, Annual Meeting, May 14–18, Kingston, Ontario.
- 188 Al-Silwadi, S., **Head, M.J.**, and Louwye, S., 2017. Marine palynology of the Miocene–Pliocene Rees Borehole, Belgium: biostratigraphy and paleoenvironments at the southern margin of the North Sea. Geological Association of Canada, Annual Meeting, May 14–18, Kingston, Ontario.
- 187 Dube, M.M., **Head, M.J.**, and Ferretti, P., 2017. Central North Atlantic (IODP Site U1313) paleoceanography and the structure of Marine Isotope Stage 21 (Early Pleistocene, 866–814 ka) based on a high-resolution dinoflagellate cyst record. Geological Society of America Joint Section Meeting, Pittsburgh, Pennsylvania, 19–21 March.
- 186 **Head, M.J.**, Zalasiewicz, J.A., and Waters, C.N., 2017. The geologic Anthropocene: analysis and current status. Geological Society of America Joint Section Meeting, Pittsburgh, Pennsylvania, 19–21 March.
- 185 Balota, E.J., **Head, M.J.**, and Okada, M., 2017. Western Pacific palaeoceanography across the Early–Middle Pleistocene boundary (~773 ka): dinoflagellate cysts of the Chiba composite section, Japan. Geological Society of America Joint Section Meeting, Pittsburgh, Pennsylvania, 19–21 March.
- 184 Al-Silwadi, S., **Head, M.J.**, and Louwye, S., 2016. Dinoflagellate cyst stratigraphy and paleoecology of the Rees Borehole, Northern Belgium. AASP – The Palynological Society, 49th Annual Meeting, September 18–23, Houston, Texas.
- 183 Abomriga, W.A., **Head, M.J.**, and Ferretti, P., 2016. Central North Atlantic (IODP Site U1313) Paleoceanography Based on a High-Resolution Dinoflagellate Cyst Record across the Early–Middle Pleistocene Boundary (Marine Isotope Stages 20–18, ~773 ka). AASP – The Palynological Society, 49th Annual Meeting, September 18–23, Houston, Texas.
- 182 **Head, M.J.**, 2016. Defining the Upper Pleistocene Subseries: assessing Antarctic ice cores for a potential global boundary stratotype section and point (GSSP). 35th International Geological Congress, Cape Town, South Africa, August 27–September 4, 2016. [Keynote address]
- 181 **Head, M.J.**, 2016. Defining the Lower–Middle Pleistocene Subseries boundary. 35th International Geological Congress, Cape Town, South Africa, August 27–September 4, 2016.
- 180 Lirer, F., Walker, M.J.C. and **Head, M.J.**, 2016. Invited lecture. The formal subdivision of the Holocene. Geocronologia e Cronostratigrafia del Quaternario, Luci e Ombre. AIQUA Congress, University of Bologna, Italy, June 16–17. [Invited lecture]

- 179 **Head, M.J.**, 2016. The Anthropocene: an unconventional challenge. SQS Anthropocene Working Group, international workshop. Fridtjof Nansen Institute, Oslo, April 21–24. [Invited lecture]
- 178 **Head, M.J.**, 2016. The Anthropocene: a cultural revolution or legitimate unit of geological time? Invited lecture. Museums in the Anthropocene: Toward the History of Humankind within Biosphere & Technosphere. International Symposium and Workshop. National Museum of Nature and Science, Tokyo, Japan, January 28–1 February, 2016.
- 177 **Head, M.J.**, 2015. Arduino to Zalasiewicz: standardizing geological time, with special focus on the Quaternary. Invited lecture. University of Toronto Mississauga, November 17, 2015.
- 176 **Head, M.J.**, Hennissen, J.A.I., De Schepper, S., and Groeneveld, J., 2015. Intensification of Northern Hemisphere glaciation in the latest Pliocene, and evidence of increased seasonality at 2.6 Ma. Invited lecture, National Institute of Polar Research, Tachikawa (Tokyo), Japan, August 24, 2015.
- 175 **Head, M.J.**, 2015. The Quaternary System and its official subdivision: past, present, and future. Invited plenary keynote talk, INQUA Congress, Nagoya, Japan, July 27–August 2, 2015.
- 174 **Head, M.J.**, Gibbard, P.L., Kumai, H., and Pillans, B., 2015. The Early–Middle Pleistocene transition, and progress towards defining the Lower–Middle Pleistocene Subseries boundary. INQUA Congress, Nagoya, Japan, July 27–August 2, 2015.
- 173 Saganuma, Y., Okada, M., Kazaoka, O., Kameo, K., **Head, M.J.**, Nishida, N., Yoshida, T., Ogitsu, I., Kameyama, S., Nirei, H., Kumai, H., 2015. Lithology and chronostratigraphy of the marine sequence at the Chiba section, central Japan: a well exposed Lower–Middle Pleistocene boundary succession. INQUA Congress, Nagoya, Japan, July 27–August 2, 2015.
- 172 Saganuma, Y., Okada, M., Kenji, H., Hiroshi, K., Takehara, M., Senda, R., Kimura, J.-I., Haneda, Y., Kawamura, K., Kazaoka, O., **Head, M.J.**, 2015. Age of Matuyama–Brunhes boundary constrained by U–Pb zircon dating of a widespread tephra. INQUA Congress, Nagoya, Japan, July 27–August 2, 2015.
- 171 **Head, M.J.**, 2015. Dinoflagellate cysts and acritarchs: their contributions to bio- and chronostratigraphy. STRATI 2015 – Second International Congress on Stratigraphy, Graz, Austria, July 19–23, 2015.
- 170 **Head, M.J.**, 2015. The Quaternary Period: official subdivision and future challenges. STRATI 2015 – Second International Congress on Stratigraphy, Graz, Austria, July 19–23, 2015.
- 169 Mertens, K.N., Carbonell-Moore, C., Pospelova, V., and **Head, M.J.**, 2015. Cyst-theca relationship of *Spiniferites* sp. with reduced processes from the Salton Sea, a hypersaline lake in California, U.S.A. International workshop on the dinoflagellate cyst genus *Spiniferites*. Flanders Marine Institute, Ostend, Belgium, July 6–9, 2015.
- 168 Matsuoka, K., Mertens, K.N., Takano, Y., and **Head, M.J.**, 2015. Phylogeny of gonyaulacoid cyst-forming dinoflagellates. International workshop on the dinoflagellate cyst genus *Spiniferites*. Flanders Marine Institute, Ostend, Belgium, July 6–9, 2015.
- 167 **Head, M.J.**, 2015. The Quaternary System/Period: its struggle for survival, and evidence of a climatic reorganization at 2.6 Ma. Bedford Institute of Oceanography, Geological Survey of Canada – Atlantic. Invited talk, 18 June.
- 166 Saganuma, Y., Okada, M., Kazaoka, O., Kameo, K., **Head, M.J.**, Nishida, N., Yoshida, T., Ogitsu, I., Kameyama, S., Nakazato, H., Izumi, K., Kubota, Y., Sugaya, M., Nirei, H., Kumai, H., 2015. The Chiba composite section (a candidate of the L–M Pleistocene GSSP): recent advances and future perspectives. Japan Geoscience Union Meeting, Chiba City, Japan, May 24–28, 2015.
- 165 Saganuma, Y., Okada, M., Horie, K., Kaiden, H., Takehara, M., Senda, R., Kimura, J.-I., Kawamura, K., Haneda, Y., Kazaoka, O., **Head, M.**, 2015. M–B boundary age constrained by high-precision U–Pb zircon dating of a widespread tephra in a sedimentary sequence. Japan Geoscience Union Meeting, Chiba City, Japan, May 24–28, 2015.
- 164 Louwye, S., Munsterman, D., and **Head, M.J.**, 2015. An overview of Neogene dinocysts from the southern North Sea basin. Coring North Sea Cenozoic (CONOSC): ICDP Scientific Workshop, Driebergen, Netherlands, March 18–21, 2015.
- 163 **Head, M.J.**, 2015. Stratigraphy and Geochronology. Invited talk. Coring North Sea Cenozoic (CONOSC): ICDP Scientific Workshop, Driebergen, Netherlands, March 18–21, 2015.
- 162 Saganuma, Y., Okada, M., Kenji, H., Hiroshi, K., Takehara, M., Senda, R., Kimura, J.-I., Haneda, Y., Kawamura, K., Kazaoka, O., **Head, M.J.**, 2015. SHRIMP U–Pb zircon age calibration of the Matuyama–Brunhes boundary in a sedimentary sequence with a high-resolution oxygen isotope record. 26th General Assembly of the International Union of Geodesy and Geophysics, Prague, Czech Republic, June 22–July 2, 2015.
- 161 El-Soughier, M., and **Head, M.J.**, 2015. Dinoflagellate cysts from the Lower and Middle Miocene and Pliocene–Pleistocene, GS9-1 borehole, northern Gulf of Suez, Egypt. 11th International Conference for Geosciences, King Saud University, Riyadh, Saudi Arabia; 12–14 May, 2015.
- 160 Okada, M., Kazaoka, O., Saganuma, Y., Kameo, K., **Head, M.J.**, Yoshida, T., Nishida, N., Ogitsu, I., Nirei, H., Aida, N., Kumai, H., 2015. Lithology and chronostratigraphy of the marine sequence at the Chiba section, central Japan: a well

- exposed Lower–Middle Pleistocene boundary succession. Field Workshop on the Lower–Middle Pleistocene Transition in Italy. University of Bari “Aldo Moro”, Bari, Italy, October 11–13, 2014.
- 159 **Head, M.J.**, 2014. Defining the Lower–Middle Pleistocene GSSP: procedures, practicalities, and pitfalls. Field Workshop on the Lower–Middle Pleistocene Transition in Italy. University of Bari “Aldo Moro”, Bari, Italy, October 11–13, 2014.
- 158 **Head, M.J.**, and Gibbard, P.L., 2014. The Early–Middle Pleistocene transition: latest developments and emphasis on Marine Isotope Stage 19. Field Workshop on the Lower–Middle Pleistocene Transition in Italy. University of Bari “Aldo Moro”, Bari, Italy, October 11–13, 2014.
- 157 **Head, M.J.**, Hennissen, J., De Schepper, S., Groeneveld, J., and Mertens, K.N., 2014. Dinoflagellates, past and present: advances in North Atlantic Plio–Pleistocene paleoceanography, and a “living fossil” from the Indo–Pacific Warm Pool. Invited talk. Department of Earth Sciences, Utrecht University, Netherlands, June 24, 2014. [Invited talk]
- 156 **Head, M.J.**, and Mertens, K.N., 2014. *Spiniferites pseudofurcatus* subsp. *obliquus*, *S. scabratus* – the David Wall holotypes. International Workshop on the Taxonomy of Pliocene to Modern *Spiniferites* and *Achomosphaera*. Université du Québec à Montréal, Canada, 14–17 April, 2014.
- 155 De Schepper, S., and **Head, M.J.**, 2014. *Spiniferites coniconcavus*, *S. splendidus*, *S. ludhamensis*, *S. ristingensis*, *S. rhizophorus*, *Invertocysta* and *S. rubinus*. International Workshop on the Taxonomy of Pliocene to Modern *Spiniferites* and *Achomosphaera*. Université du Québec à Montréal, Canada, 14–17 April, 2014.
- 154 McCarthy, F.M.G., Mertens, K.N., Takano, Y., Krueger, A.M., and **Head, M.J.**, 2013. Understanding cyst–theca relationships in freshwater dinoflagellates. Tenth International Conference on Modern and Fossil Dinoflagellates, Dino 10, San Francisco, California, October 20–24, 2013.
- 153 Paez-Reyes, M. and **Head, M.J.**, 2013. The Cenozoic gonyaulacacean dinoflagellate genera *Operculodinium* Wall, 1967 and *Protoperidinium* Bergh, 1881 and their phylogenetic relationships. Tenth International Conference on Modern and Fossil Dinoflagellates, Dino 10, San Francisco, California, October 20–24, 2013.
- 152 **Head, M.J.**, and Gibbard, P.L. 2013. The Early–Middle Pleistocene transition: a global perspective and focus on the Jaramillo Subchron. Invited talk. European Science Foundation Earthtime – European Union Scientific Meeting “The Early–Middle Pleistocene transition: significance of the Jaramillo Subchron in the sedimentary record. Centro Nacional de Investigación sobre la Evolución Humana (CENIEH), Burgos, Spain, 25–27 September, 2013. [Invited talk]
- 151 De Schepper, S., Groeneveld, J., Naafs, B.D.A., Van Renterghem, C., Hennissen, J., **Head, M.J.**, and Louwey, S., 2013. How to glaciare the Northern Hemisphere in a globally warmer world? 11th International Conference on Paleoceanography, Barcelona–Sitges, Spain, 1–6 September, 2013.
- 150 Kazaoka, O., Nirei, H., Aida, N., Kumai, H., **Head, M.J.**, and Pillans, B., 2013. A potential Lower–Middle Pleistocene GSSP with excellent magnetostratigraphy along the west Pacific margin: the Chiba section, Central Japan. First International Congress on Stratigraphy, STRATI 2013. Universidade Nova de Lisboa, Lisbon, July 1–7.
- 149 Edwards, L.E., Orndorff, R.C., **Head, M.J.**, and Fensome, R.A., 2013. It’s Time to Revitalize the Tertiary. First International Congress on Stratigraphy, STRATI 2013. Universidade Nova de Lisboa, Lisbon, July 1–7.
- 148 **Head, M.J.**, Gibbard, P.L., and van Kolfschoten, T., 2013. The Quaternary System/Period: current status and future challenges. First International Congress on Stratigraphy, STRATI 2013. Universidade Nova de Lisboa, Lisbon, July 1–7. Published in: *Ciências da Terra (UNL)*, 18: 77–80. [Invited talk]
- 151 Groeneveld, J., De Schepper, S., Naafs, B.D.A., **Head, M.J.**, Hennissen, J., Van Renterghem, C., and Louwey, S., 2013. Pliocene Marine Isotope Stage M2: a hiccup in the closure of the Panamanian Gateway. 4th PAGES Open Science Meeting, Goa, India, 11–16 February, 2013.
- 147 Mantilla-Duran, F., **Head, M.J.**, De Schepper, S. and Ferretti, P., 2012. Central North Atlantic paleoceanography during Marine Isotope Stage 16 (ca. 612–665 ka, Middle Pleistocene): insights from a centennial-scale dinoflagellate cyst record at IODP Site U1313. American Geophysical Union, Fall Meeting, December, San Francisco, CA.
- 146 Mahdaviourshari, M., and **Head, M.J.**, 2012. Dinoflagellate cysts from the latest Miocene–Early Pleistocene of the Caribbean Sea, ODP Site 1000: paleoceanography, climate, and shoaling of the Central American Seaway: preliminary results. 45th Annual Meeting of the AASP – The Palynological Society, University of Kentucky, Lexington, 21–25 July.
145. De Schepper, S., Groeneveld, J., Naafs, B.D.A., **Head, M.J.**, Hennissen, J., and Van Renterghem, C., 2012. How to glaciare the Northern Hemisphere in a globally warmer world? Bjerknes Centre for Climate Research 10-Year Anniversary Conference, Bergen, Norway, 3–6 September, 2012.
144. Kazaoka, O., Nirei, H., Aida, N., Kumai, H., **Head, M.J.**, and Pillans, B. The Chiba section, Central Japan: a potential Lower–Middle Pleistocene GSSP along the west Pacific margin. 34th International Geological Congress, Brisbane, Australia, 5–10 August, 2012.
143. **Head, M.J.** and Pillans, B., 2012. The Early–Middle Pleistocene boundary: background and overview of potential Global Stratotype Sections and Points (GSSPs). 34th International Geological Congress, Brisbane, Australia, 5–10 August, 2012.

142. **Head, M.J.**, 2011. Late Cenozoic dinocyst and acritarch biostratigraphy of the North Atlantic and adjacent basins. Invited talk, Statoil, Bergen, Norway, 30 November, 2011.
141. De Schepper, S., Groeneveld, J., Naafs, B.D.A., and **Head, M.J.**, 2011. The role of the North Atlantic in the mid-Pliocene glaciation of Marine Isotope Stage M2. Joint RCMNS-RCANS conference, Salamanca, Spain, 21–23 September, 2011.
140. Paez-Reyes, M., **Head, M.J.**, Westphal, H., 2011. Neogene long-term paleoecological trends in the Bahamian Platform: A dinocyst perspective. Ninth International Conference on Modern and Fossil Dinoflagellates, Dino 9, Liverpool, U.K., August 28–September 2, 2011.
139. Schreck, M, Matthiessen, J., and **Head, M.J.**, 2011. A magnetostratigraphic calibration of Middle Miocene to Pliocene dinoflagellate cyst and acritarch events in the Iceland Sea (Ocean Drilling Program Hole 907A). Ninth International Conference on Modern and Fossil Dinoflagellates, Dino 9, Liverpool, U.K., August 28–September 2, 2011.
138. De Schepper, S., Louwye, S., and **Head, M.J.**, 2011. Pliocene to Early Quaternary palynology of the Bering Sea: initial results from IODP Site U1341. Ninth International Conference on Modern and Fossil Dinoflagellates, Dino 9, Liverpool, U.K., August 28–September 2, 2011.
137. De Schepper, S., **Head, M.J.**, Groeneveld, J., Fischer, E.I., Mathiessen, J., Naafs, B.D.A., and Hennissen, J., 2011. A multi-proxy approach for investigating Pliocene–Pleistocene North Atlantic environmental change and dinoflagellate cyst palaeoecology. Invited talk. Ninth International Conference on Modern and Fossil Dinoflagellates, Dino 9, Liverpool, U.K., August 28–September 2, 2011.
136. Hennissen, J., **Head, M.J.**, Groeneveld, J., and De Schepper, S., 2011. Plio-Pleistocene dinocysts (MIS G7–102) and foraminiferal geochemistry (Mg/Ca, $\delta^{18}\text{O}$) from the eastern North Atlantic. Ninth International Conference on Modern and Fossil Dinoflagellates, Dino 9, Liverpool, U.K., August 28–September 2, 2011.
135. **Head, M.J.**, De Schepper, S., Groeneveld, J., Fischer, E.I., and Hennissen, J., 2011. North Atlantic Current instability during the early Pliocene, a new method for elucidating the ecology of Plio-Pleistocene dinoflagellate cysts, and possible relevance for reservoir-scale biostratigraphy in oilfield development. Invited talk. University of Tehran, Iran, May 8, 2011.
134. **Head, M.J.**, De Schepper, S., Groeneveld, J., Fischer, E.I., and Hennissen, J., 2011. Fluctuations in the North Atlantic Current during the Pliocene and Early Pleistocene, with particular focus on mid-Piacenzian cooling: results of a new proxy based on dinoflagellate cysts and foraminiferal geochemistry. Invited talk. National Centre for Antarctic and Ocean Research, Vasco-da-Gama, Goa, India, February 21, 2011; and National Institute of Oceanography, Dona Paula, Goa, India, February 23, 2011.
133. **Head, M.J.**, De Schepper, S., Groeneveld, J., Fischer, E.I., and Hennissen, J., 2011. Deciphering paleoceanographic changes in the North Atlantic during the Pliocene and Early Pleistocene using a new proxy combining dinoflagellate cysts and foraminiferal geochemistry. Invited talk. Birbal Sahni Institute of Palaeobotany, Lucknow, India, February 14, 2011.
132. **Head, M.J.**, 2011. The Quaternary and its subdivision, with special focus on the Early–Middle Pleistocene boundary. International Symposium on Type Section for Lower–Middle Pleistocene boundary. Invited talk / Keynote. INQUA Subcommission on Quaternary Stratigraphy of Asia and Pacific Region. Ichihara City, Chiba Prefecture, Japan, January 15–16, 2011.
131. McCarthy, F.M.G., Mahdavi, M., Kotthoff, U., and **Head, M.J.**, 2011. Lower to Middle Miocene palynology of the shallow New Jersey shelf: evidence of icehouse cooling. Joint Northeastern/North Central Section meeting of the Geological Society of America in Pittsburgh, March 2011.
130. **Head, M.J.**, De Schepper, S., Groeneveld, J., Fischer, E.I., and Hennissen, J., 2010. Dinoflagellate cysts and foraminiferal geochemistry: a new combined proxy for environmental change in the Pliocene and Early Pleistocene of the North Atlantic Ocean. Invited talk. 54th Annual Meeting of the Palaeontological Association, Ghent, Belgium, 17–20 December, 2010.
129. De Schepper, S., Groeneveld, J., and **Head, M.J.**, 2010. Unravelling the (palaeo)autecology of Pliocene dinoflagellate cysts. 54th Annual Meeting of the Palaeontological Association, Ghent, Belgium, 17–20 December, 2010.
128. De Schepper, S., Groeneveld, J., Naafs, B.D.A., and **Head, M.J.**, 2010. The role of the North Atlantic in the mid-Pliocene glaciation of Marine Isotope Stage M2. 54th Annual Meeting of the Palaeontological Association, Ghent, Belgium, 17–20 December, 2010.
127. Hennissen, J., **Head, M.J.**, Groeneveld, J., and De Schepper, S., 2010. Reconstructing western North Atlantic oceanic conditions during the mid-Pliocene MIS M2 (3.30 Ma): integrating palynology and foraminiferal geochemistry. 54th Annual Meeting of the Palaeontological Association, Ghent, Belgium, 17–20 December, 2010.
126. Paez-Reyes, M., **Head, M.J.**, and Westphal, H., 2010. Cyclic alternations on the Miocene slope of a neotropical carbonate ramp: product of diagenesis or response to short term sea-level variations? AASP–The Palynological Society, 43rd Annual Meeting, September 29–October 1, 2010, Halifax, Nova Scotia.

125. Paez-Reyes, M., and **Head, M.J.**, 2010. Tabulation reappraised for the dinoflagellate species *Protoceratium reticulatum* (Claparède & Lachmann) Bütschli 1885 and *Operculodinium bahamense* Head & Westphal 1999: phylogenetic implications. AASP–The Palynological Society, 43rd Annual Meeting, September 29–October 1, 2010, Halifax, Nova Scotia.
124. Ćorić, S., Soliman, A. El Beialy, S.Y., **Head, M.J.**, Piller, W., 2010. Lower and Middle Miocene biostratigraphy, Gulf of Suez, Egypt based on calcareous nannoplankton and dinoflagellate cysts. 13th International Nannoplankton Association Meeting, September 5–10, 2010, Yamagata, Japan.
123. De Schepper, S., Groeneveld, J., Naafs, B.D.A., and **Head, M.J.**, 2010. The role of the North Atlantic in the mid-Pliocene glaciation of Marine Isotope Stage M2. 10th International Conference on Paleoceanography, San Diego, CA, August 29–September 3.
122. Sihra, K.K., **Head, M.J.**, and Stancliffe, R.P.W., 2010. Integrating vitrinite reflectance, Rock-Eval pyrolysis, fluorescence microscopy, and palynology of the Athabasca Oil Sands, Kearn Lake, northeastern Alberta. Canadian Institute of Mining, Metallurgy and Petroleum (CIM), Conference and Exhibition, Victoria, B.C., May 9–12.
121. De Schepper, S., Groeneveld, J., **Head, M.J.**, and Naafs, D., 2010. Mid-Pliocene North Atlantic palaeoceanography based on palynology, planktonic foraminiferal Mg/Ca, and alkenones. European Geosciences Union General Assembly, Vienna, 2–7 May.
120. Fischer, E., **Head, M.J.**, and Groeneveld, J., 2009. Palynology and foraminiferal geochemistry of the Lower Pleistocene Olduvai Subchron (ca. 1.8 Ma) in DSDP Hole 603C, western North Atlantic. AASP – The Palynological Society, 42nd Annual Meeting, September 27–30, Kingsport, Tennessee, U.S.A.
119. De Schepper, S., **Head, M.J.**, and Groeneveld, J., 2009. North Atlantic Current variability through Marine Isotope Stage MIS M2 (ca. 3.3 Ma). Workshop on Pliocene Climate Change, 23–25 October, Bordeaux, France.
118. **Head, M.J.**, De Schepper, S., and Groeneveld, J., 2009. Unravelling the mysteries of Pliocene palaeoceanography in the North Atlantic using dinoflagellate cysts and geochemistry. Dinoflagellate Tree of Life Minimeeting, May 28–29, University of Maryland, Baltimore Invited talk.
117. De Schepper, S., **Head, M.J.**, and Groeneveld, J., 2009. Pliocene stratigraphy and palaeoceanography of the eastern North Atlantic based on dinoflagellate cysts and geochemistry. American Geophysical Union, Geological Association of Canada etc. Joint Assembly: A Meeting of the Americas, Toronto, 24–27 May 09; Abstracts.
116. **Head, M.J.**, 2009. The Tertiary and Quaternary: their status, duration, and progress towards recognition as official chronostratigraphic units. American Geophysical Union, Geological Association of Canada etc. Joint Assembly: A Meeting of the Americas, Toronto, 24–27 May 09; Abstracts.
115. De Schepper, S., and **Head, M.J.**, 2009. New dinoflagellate cyst and acritarch taxa from the Pliocene and Pleistocene of the eastern North Atlantic. International Workshop on Pacific Dinoflagellate Cysts: Morphology, Taxonomy, Distribution, and Ecology of Late Quaternary Dinoflagellate Cysts, 7–10 May, Victoria, Canada; Program and Abstracts, p. 11.
114. Radi, T., **Head, M.J.**, Pospelova, V., Marret, F., de Vernal, A., Limoges, A., and Kieft, J.-F., 2009. Dinoflagellate cysts in surface sediments from the northeast Pacific: ecological affinities and taxonomic considerations. International Workshop on Pacific Dinoflagellate Cysts: Morphology, Taxonomy, Distribution, and Ecology of Late Quaternary Dinoflagellate Cysts, 7–10 May, Victoria, Canada; Program and Abstracts, p. 23.
113. Papanikolaou, M.D., and **Head, M.J.**, 2009. Indications of temporal water masses variability at the junction of Eastern and Western Mediterranean sub-basins (ODP Site 963) during the Middle Pleistocene Transition. European Geosciences Union, General Assembly, 19–24 April, Vienna, Austria [Abstracts].
112. Papanikolaou, M.D., Triantaphyllou, M., **Head, M.J.**, Platzman, E., and Gibbard, P., 2009. Interplay between tectonics and eustasy on an uplifted Plio-Pleistocene marine sequence on Zakynthos island, Eastern Mediterranean. European Geosciences Union, General Assembly, 19–24 April, Vienna, Austria [Abstracts].
111. De Schepper, S., **Head, M.J.**, and Groeneveld, J., 2008. North Atlantic Current variability through Marine Isotope Stage MIS M2 (ca. 3.3 Ma) during the warm mid-Pliocene. Integrated Ocean Drilling Program, Workshop, Potsdam, February, 2009.
110. Paez, M., **Head, M.J.**, and Westphal, H., 2008. Long-term sea-level variations and diagenesis recorded on a Miocene subtropical carbonate platform as evidenced by palynological data, ODP Site 1007, Bahamas. Joint Meeting of The Geological Society of America, 5–9 October, Houston TX.
109. El Beialy, S.Y., El Atfy, H.S., **Head, M.J.**, El Khoriby, E.M., and Abu Zeid, R.H., 2008. Palynology, palynofacies, paleoenvironments and organic geochemistry of the Upper Cretaceous in well GPTSW-7, north Western Desert, Egypt. Paleontological Society of Egypt. Abstracts of papers presented at the Eighth Annual Meeting, Cairo, Wednesday, April 9, 2008:p. 10–11.

108. Popescu, S.-M., Jimenez-Moreno, G., Bazeley, O., Boroi, S., Sorrel, P., Dalesme, F., Jouannic, G., **Head, M.J.**, Klotz, S., Giosan, L., Lericollais, G., Çağatay, N., and Suc, J.-P., 2008. Mediterranean–Marmara–Black Sea connections during the last 20 ka.: palaeoenvironmental reconstruction in the context of global climate change and regional tectonic settings. 33rd International Geological Congress, Oslo, 6–14 August. Abstract on CD-ROM.
107. **Head, M.J.**, Gibbard, P.L., and Salvador, A., 2008. The Tertiary: a proposal for its formal definition. 33rd International Geological Congress, Oslo, 6–14 August. Abstract on CD-ROM.
106. **Head, M.J.**, Gibbard, P.L., and Salvador, A., 2008. The Quaternary: its character and definition. 33rd International Geological Congress, Oslo, 6–14 August. Abstract on CD-ROM.
105. **Head, M.J.**, Pillans, B., and Farquhar, S., 2008. The Early–Middle Pleistocene Transition: characterization and proposed guide for the defining boundary. 33rd International Geological Congress, Oslo, 6–14 August. Abstract on CD-ROM.
104. Popescu, S.-M., Jimenez-Moreno, G., Bazeley, O., Boroi, S., Sorrel, P., Dalesme, F., Jouannic, G., **Head, M.J.**, Klotz, S., Giosan, L., Lericollais, G., Çağatay, N., and Suc, J.-P., 2008. Mediterranean–Marmara–Black Sea connections during the last 20 k.a.: palaeoenvironmental reconstruction in the context of global climate change and regional tectonic settings. Turkish Geological Congress, 26–28 March, Ankara, Turkey.
103. McCarthy, F.M.G., Krueger, A.M., Gregg, H.A., and **Head, M.J.**, 2008. Resting cysts of freshwater dinoflagellates in Severn Sound, Georgian Bay (North American Great Lakes): taxonomy, taphonomy, and paleolimnological applications. Eighth International Conference on Modern and Fossil Dinoflagellates, Dino 8, Montreal, 4–8th May.
102. Fischer, E., and **Head, M.J.**, 2008. Late Pliocene dinoflagellate cysts from the Chillesford Church Pit, Suffolk, Eastern England. Eighth International Conference on Modern and Fossil Dinoflagellates, Dino 8, Montreal, 4–8th May.
101. Soliman, A., **Head, M.J.**, and Louwye, S., 2008. Morphology and distribution of the Miocene dinoflagellate cyst *Operculodinium? borgerholtense* Louwye 2001, emend. Eighth International Conference on Modern and Fossil Dinoflagellates, Dino 8, Montreal, 4–8th May.
100. De Schepper, S. and **Head, M.J.** 2008. Another abstract, Canal tunnel or MIS M2– check with Stijn for title. Eighth International Conference on Modern and Fossil Dinoflagellates, Dino 8, Montreal, 4–8th May.
99. De Schepper, S. and **Head, M.J.** 2008. Stratigraphic utility of new dinoflagellate cysts and acritarchs from the Pliocene and Pleistocene of the eastern North Atlantic. Eighth International Conference on Modern and Fossil Dinoflagellates, Dino 8, Montreal, 4–8th May.
98. Farquhar, S.A., and **Head, M.J.**, 2008. Lower Pliocene dinoflagellate cysts from the Rossello Composite Section, and their statistical analyses. Eighth International Conference on Modern and Fossil Dinoflagellates, Dino 8, Montreal, 4–8th May.
97. Paez, M., **Head, M.J.**, and Westphal, H., 2008. Preliminary Miocene dinoflagellate cyst and acritarch biostratigraphy of a subtropical carbonate platform: ODP Site 1007, Bahamas. Eighth International Conference on Modern and Fossil Dinoflagellates, Dino 8, Montreal, 4–8th May.
96. Popescu S.-M., Suc J.-P., Clauzon, G., Melinte-Dobrinescu, M.C., Escarguel, G., Quilévéré, F., Sîrbescu, M.-L.C., Dalesme, F., Jouannic, G., **Head, M.**, Süto-Szentai, M., Bakrac, K., Mertens, K., Vercauteren, D., 2008. Mediterranean–Paratethys connections before and after Messinian Salinity Crisis. French–Romanian scientific workshop: What happened in southern Romania and Black Sea when the Mediterranean Sea desiccated 5.6 million years ago. February 29th to March 1st, 2008, Bucharest, Romania.
95. Escarguel, G., Popescu, S.-M., Dalesme, F., Jouannic, G., **Head, M.**, Melinte-Dobrinescu, M.C, Süto-Szentai, M., Bakrac, K., Clauzon, G., Suc, J.-P, Mertens, K., and Vercauteren, D., 2008. *Galeacysta etrusca* complex, dinoflagellate cyst marker of Paratethyan influxes into Mediterranean Sea, before and after the peak of the Messinian Salinity Crisis. French–Romanian scientific workshop: What happened in southern Romania and Black Sea when the Mediterranean Sea desiccated 5.6 million years ago. February, 29th to March 1st, 2008, Bucharest, Romania.
94. De Schepper, S., **Head, M.J.**, and Groeneveld, J., 2008. Evidence for on/off switching of North Atlantic Current during the warm Middle Pliocene. Integrated Ocean Drilling Program, Workshop, Hannover, February, 2008. [Winner of Best Poster Award].
93. El Beialy, S.Y., El Atfy, H.S., **Head, M.J.** El Khoriby, E.M., and Abu Zeid, R.H., 2008. Palynology, palynofacies, paleoenvironments and organic geochemistry of the Upper Cretaceous in well GPTSW-7, north Western Desert, Egypt. AAPG.
92. De Schepper, S., **Head, M.J.** and Groeneveld, J., 2007. Sea-surface conditions in the eastern North Atlantic spanning Middle Pliocene Marine Isotope Stage M2 (c. 3.30 Ma). *Ninth International Conference on Paleoceanography*, Shanghai, China, September, 2007.

91. Paez, M., **Head, M.J.**, McCarthy, F.M.G., and Westphal, H., 2007. Preliminary dinoflagellate cyst biostratigraphy of a Neogene subtropical carbonate platform: ODP Hole 1007C, Bahamas. *American Association of Stratigraphic Palynologists, Ann. Mtg.* (Panama), September, 2007.
90. McCarthy, F.M.G., Gregg, H.A., and **Head, M.J.**, 2007. Resting cysts of freshwater dinoflagellates in Holocene sediments from Georgian Bay (North American Great Lakes). *American Association of Stratigraphic Palynologists, Ann. Mtg.* (Panama), September, 2007.
89. **Head, M.J.**, 2007. Tracking the status and duration of the Quaternary – a resolution in sight? CANQUA Annual Meeting, Carleton University, Ottawa, June, 2007.
88. Paez, M. and **Head, M.J.**, 2007. Neogene dinoflagellate cysts and palaeoenvironments from the low-latitude Americas. Mapping the New Knowledges. Graduate Student & Faculty Research Conference, Brock University, St. Catharines, Ontario, April 10–11. Program and Abstracts, p. 21.
87. Ghasemi-Nejad, E., **Head, M.J.**, and Naderi, M., 2007. Palynology, palynofacies and evaluation of petroleum potential in the Kazhdumi Formation (Albian), South Pars Field, northern Persian Gulf. Mapping the New Knowledges. Graduate Student & Faculty Research Conference, Brock University, St. Catharines, Ontario, April 10–11. Program and Abstracts, p. 15.
86. **Head, M.J.**, 2007. Petroleum in Canada. Invited talk to the St. Catharines Public Library, Ontario, Canada. February 15, 2007.
85. De Schepper, S. and **Head, M.J.**, 2007. Plio–Pleistocene dinoflagellate cyst biostratigraphy and palaeoecology of the eastern North Atlantic (DSDP Site 610, Rockall Trough). Gemeinsames Kolloquium der DFG-Schwerpunkte: ICDP – International Continental Scientific Drilling Program – Deutschland und IODP - Integrated Ocean Drilling Program – Potsdam, Germany, March 19–21, 2007.
84. De Schepper, S., and **Head, M.J.**, 2006. Pliocene–Pleistocene dinoflagellate cyst biostratigraphy and palaeoecology of the eastern North Atlantic (Rockall Trough), International Workshop on Dinoflagellates and their Cysts: Their Ecology and databases for Palaeoenvironmental Reconstructions. Geological Survey of Denmark and Greenland, Copenhagen, 10–12 November, 2006.
83. De Schepper, S., and **Head, M.J.**, 2006. New dinoflagellate cyst and acritarch taxa from the Pliocene and Pleistocene of the eastern North Atlantic (DSDP Site 610) International Workshop on Dinoflagellates and their Cysts: Their Ecology and databases for Palaeoenvironmental Reconstructions. Geological Survey of Denmark and Greenland, Copenhagen, 10–12 November, 2006.
82. **Head, M.J.**, 2006. Marine palynology and evolution of the Baltic Sea during the Last Interglacial. Invited talk, Palaeontological Society of Austria, Karl-Franzens Universität, Graz, Austria, April, 2006.
81. **Head, M.J.**, 2005. The (pen-)insularity of Scandinavia during the Last Interglacial. Niagara Peninsula Geological Society, 2005. (Invited talk).
80. **Head, M. J.**, 2005. Hydrographic development of the Baltic Sea during the Last Interglacial. Quaternary Discussion Group, Godwin Institute for Quaternary Research, University of Cambridge, June 2005. (Invited talk).
79. Jiménez-Moreno, G., **Head, M.J.**, and Harzhauser, M. 2005. Early and Middle Miocene dinoflagellate cyst stratigraphy of the Pannonian and Vienna Basins, central Europe. Geologic Problem Solving with Microfossils. SEPM Conference, March, 6–11, Rice University, Houston, Texas, USA. Program and Abstracts, p. 88.
78. De Schepper, S., and **Head, M.J.** 2005. Plio-Pleistocene dinoflagellates from DSDP Hole 610A, eastern North Atlantic, and biostratigraphic application to shallow marine environments. Geologic Problem Solving with Microfossils. SEPM Conference, March, 6–11, Rice University, Houston, Texas, USA. Program and Abstracts, p. 38.
77. Soliman, A., **Head, M.J.**, and Piller, W., 2004. Palynology and dinoflagellate cyst stratigraphy of the Gharandal Group (Miocene), Kareem-30 borehole, Gulf of Suez, Egypt. 32nd International Geological Congress, Florence, August 20–28, 2004.
76. Sorell, P., Popescu, S.-M., and **Head, M.J.**, 2004. Hydrographic development of the Aral Sea during the past c. 1,500 yrs — preliminary results based on dinoflagellate cysts. 32nd International Geological Congress, Florence, August 20–28, 2004.
75. Popescu, S.-M., **Head, M.J.**, and Francois, L., 2004. Holocene Black Sea hydrography and vegetation history based on palynology. European Science Foundation, Assemblage Programme, Annual Meeting, Paris.
74. Popescu, S.-M., Boroi, S., **Head, M.J.**, Caner, H., Lericolais, G., Çad̂atay, N., and Algan, O., 2004. A new chronology to Mediterranean–Black Sea connections during the last 14 ka BP. European Geological Union, General Assembly, Nice, France.

73. **Head, M.J.**, and Gibbard, P.L., 2004. Early-Middle Pleistocene transitions: a review of the land-ocean evidence. 32nd International Geological Congress, Florence, August 20–28, 2004.
72. Papanikolaou, M. and **Head, M.J.**, 2004. Distribution of dinoflagellate cysts during the Early–Middle Pleistocene transition in the central Mediterranean Sea, ODP Site 963. 11th International Palynological Congress, Granada, Spain, July 4–9, 2004.
71. Soliman, A., **Head, M.J.**, Piller, W. and El Beialy, S., 2004. Miocene dinoflagellate cysts from the Shukheir-1 borehole, Gulf of Suez, Egypt. 11th International Palynological Congress, Granada, Spain, July 4–9, 2004.
70. De Schepper, S., **Head, M.J.** and Louwye, S., 2004. New dinoflagellate cyst and incertae sedis taxa from the Pliocene of northern Belgium, southern North Sea Basin. 11th International Palynological Congress, Granada, Spain, July 4–9, 2004.
69. Soliman, A., **Head, M.J.**, and Piller, W., 2004. Preliminary results on the Early–Middle Miocene dinoflagellate cysts, Gharandal Group, Gulf of Suez, Egypt. International Workshop on Dinoflagellate Cysts: promising markers of Mediterranean–Paratethys relationships, European Science Foundation, Eeden Programme, Université Claude Bernard–Lyon 1, France, April 17th, 2004.
68. **Head, M.J.**, 2004. Dinoflagellate cysts of the Mediterranean region during the Late Cenozoic. International Workshop on Dinoflagellate Cysts: promising markers of Mediterranean–Paratethys relationships, European Science Foundation, Eeden Programme, Université Claude Bernard–Lyon 1, France, April 17th, 2004.
67. **Head, M.J.**, 2004. Dinoflagellate cysts and their utility for solving geological problems in the Quaternary, Invited Lecture for MSc Course in Marine Micropalaeontology, University College, London. February, 2004.
66. Popescu, S.-M., **Head, M.J.**, and Lericollais, G., 2003. Holocene Black Sea environments according to palynology. Geological Society of America Annual Meeting, Seattle, USA.
65. **Head, M.J.**, 2003. Dinoflagellate cysts and hydrography of the Baltic Sea during the Last Interglacial (Eemian, ca. 128–115 ka). American Association of Stratigraphic Palynologists, Annual Meeting, St. Catharines, Canada, October, 5–8.
64. De Schepper, S., **Head, M.J.** and Louwye, S., 2003. Pliocene dinoflagellates from Belgium: sequence stratigraphic interpretations and refined taxonomy. American Association of Stratigraphic Palynologists, Annual Meeting, St. Catharines, Canada, October, 5–8.
63. **Head, M.J.**, 2003. Summary of dinoflagellate cyst research and closing remarks. Seventh International Conference on Modern and Fossil Dinoflagellates (Dino 7), September 21–25, Nagasaki, Japan. By invitation.
62. **Head, M.J.**, 2003. Hydrographic development of the Baltic Sea during the Last Interglacial (ca. 130 ka) deduced from the dinoflagellate cyst record. Seventh International Conference on Modern and Fossil Dinoflagellates (Dino 7), September 21–25, Nagasaki, Japan. Invited lecture.
61. Louwye, S., **Head, M.J.** and De Schepper, S. 2003. Palaeoenvironment and dinoflagellate cyst stratigraphy of the Pliocene in northern Belgium at the southern margin of the North Sea Basin. Invited lecture, Geologica Belgica Annual Meeting, Ghent, Belgium, 27th February.
60. **Head, M.J.**, 2003. Dinoflagellates and their applications to late Cenozoic stratigraphy and palaeoecology. Invited lecture, Université Claude Bernard–Lyon 1, France; 26th February.
59. **Head, M.J.**, 2003. Island Scandinavia: Eemian hydrography and the evidence from dinoflagellate cysts in the Baltic region. Invited lecture, Université Claude Bernard–Lyon 1, France; 19th February.
58. Louwye, S., **Head, M.J.** and De Schepper, S. 2002. Age and palaeoenvironments of a shallow marine Pliocene sequence in northern Belgium revealed by dinoflagellate cyst stratigraphy. Palaeontological Association Annual Meeting, University of Cambridge, U.K., December 15–18, 2002.
57. **Head, M.J.**, and Louwye, S. 2002. Late Neogene dinoflagellates and sequence stratigraphy of the Southern North Sea Basin. Palaeontological Association Annual Meeting, University of Cambridge, U.K., December 15–18, 2002.
56. **Head, M.J.**, and Louwye, S. 2002. Upper Cenozoic dinoflagellate cyst stratigraphy of the Southern North Sea Basin – a synthesis. AASP, TMS, NAMS Annual Meeting, University College London, September 12–15, 2002.
55. Louwye, S., **Head, M.J.** and De Schepper, S. 2002. Dinoflagellate cyst stratigraphy and palaeoenvironment of a shallow marine Pliocene sequence in northern Belgium (southern North Sea Basin). AASP, TMS, NAMS Annual Meeting, University College London, September 12–15, 2002.
54. **Head, M.J.** 2002. Continental shelf deposits and subdivision of the Pleistocene. Invited talk at the INQUA Commission on Stratigraphy Workshop: the Subdivision of the Quaternary, July 13, 2002, Leiden, The Netherlands.

53. **Head, M.J.** 2002. Baltic dinoflagellates of the Last Interglacial. Invited talk at Workshop on Mid-latitude Dinoflagellates, Halifax, Nova Scotia, Canada, April 29-May 3, 2002.
52. **Head, M.J.** 2002. Dinoflagellates and hydrography of the Last Interglacial (Eemian) at Licze, Poland and Peski, Russia. Invited talk at the BALTEEM Annual Meeting, Tvärminne Zoological Station, Finland, March 15–19, 2002.
51. **Head, M.J.** Gibbard, P.L., and Grøsfjeld, K. 2001. Dinoflagellates and hydrography of the last interglacial (Eemian, Mikulino) in the Baltic Sea–White Sea region. Abstract Volume, p. 79. Baltic Sea Science Congress. Stockholm University, November 25–29, 2001.
50. **Head, M.J.** 2001. Dinoflagellates and hydrography of the SW Baltic during the last interglacial (Eemian, ca. 130 ka). Palynology Group Meeting, British Micropalaeontological Society, University of Sheffield, March, 2001.
49. **Head, M.J.** 2001. Dinoflagellates and hydrography of the Last Interglacial (Eemian) in Denmark. Invited talk at the BALTEEM Annual Meeting, Lapanina Hotel, Kabli, Estonia, March 30–April 2, 2001.
48. **Head, M.J.** 2001. Dinoflagellates and hydrography of the southwestern Baltic Sea during the Eemian (Last Interglacial). Invited talk. Goldsmidt Lecture Series. Geological Survey of Norway, Trondheim, March, 2001.
47. **Head, M.J.** and Gibbard, P., 2000. Dinoflagellates from the Last Interglacial (Eemian) of Ristinge Klint, Denmark: evidence for elevated temperatures in the southwestern Baltic Sea. British Micropalaeontological Society AGM, Poster Session, University College London, November 2000.
46. **Head, M.J.** and Norris, G., 2000. Pliocene of eastern England dated by North Atlantic dinoflagellate cyst stratigraphy. Geological Society of America Annual Meeting, Reno, Nevada, November 2000.
45. **Head, M.J.**, 2000. Listening to cysts—dinoflagellates of the late Cenozoic. British Micropalaeontological Society AGM, Invited lecture, University College London, November 2000.
44. **Head, M.J.** and Norris, G., 2000. Pliocene dinoflagellate cyst stratigraphy of the western North Atlantic, and its applicability to shallow marine deposits of eastern England. GeoCanada 2000, Calgary, Alberta, May 29 - June 2 2000.
43. **Head, M.J.** and Gibbard, P., 2000. Marine dinoflagellates and palaeoenvironments of the Last Interglacial (Late Pleistocene, Eemian) at Ristinge Klint, southern Denmark. Geoscience 2000, Manchester, U.K., 17-20th April, 2000.
42. **Head, M.J.** 2000. Dinoflagellates and hydrography of the Last Interglacial (Eemian) at Ristinge Klint, southern Denmark. Invited talk at the BALTEEM Annual Meeting, Stensigmosø, Denmark, March 15–19, 2000.
41. **Head, M.J.**, 2000. Late Cenozoic dinoflagellates—new kids on the block. Quaternary Discussion Group, Godwin Institute for Quaternary Research, University of Cambridge, January 2000. (Invited talk).

A total of 40 conference abstracts and invited talks between 1985 and 1999.

e) Selected unrefereed contributions (since 2006)

5. Head, M.J., submitted. AASP – the Palynological Society bestows upon Professor David J. Batten the AASP Medal For Scientific Excellence for outstanding contributions to Mesozoic palynology especially in the fields of palynofacies analysis and Cretaceous terrestrial floras. Palynology. [Submitted 9 October, 2018]
4. Advanced course in Jurassic, Cretaceous, Cenozoic organic-walled dinoflagellate cysts: morphology, stratigraphy, paleoecology. Heidelberg University, Germany, September 13–19, 2015. Course Manual.
3. Ciaranfi, N., **Head, M.J.**, Marino, M., 2015. Report of the Field Workshop on the Lower-Middle Pleistocene transition in Italy. Quaternary Perspectives 22(1), 12–14. [Published May 2015]
3. Advanced course in Jurassic, Cretaceous, Cenozoic organic-walled dinoflagellate cysts: morphology, paleoecology and stratigraphy. Utrecht, June 25–29, 2012. Course Manual.
2. Brinkhuis, H., **Head, M.J.**, Pross, J., Riding, J.B., Schioler, P., and Sluijs, A., with contributions by Pearce, M.A., Weegink, J.W., Fensome, R., and Williams, G.L., 2009. Advanced course in Jurassic–Cretaceous–Cenozoic organic-walled dinoflagellate cysts: morphology, paleoecology and stratigraphy. Urbino, Italy, July 17–21, 2009. Course Manual, pp. 246 plus two CDs.
1. Brinkhuis, H., **Head, M.J.**, Pearce, M.A., Pross, J., Riding, J.B. with contributions from Fensome, R., Williams, G.L., Weegink, J.W., and Verreussel, R., 2006. Advanced course in Jurassic–Cretaceous–Cenozoic organic-walled

dinoflagellate cysts: morphology, paleoecology and stratigraphy. Urbino, Italy, July 13–17, 2006. Course Manual, pp. 116 plus CD.

2. OTHER CREATIVE/SCHOLARLY ACTIVITIES

a) Organization of Conferences and Symposia

- **Head, M.J.**, 2019. Convener: Special session: “Formal chronostratigraphy in the Quaternary”. INQUA Congress, 25–31 July, Dublin, Ireland.
- **Head, M.J.**, and Wolff, E., 2019. Co-conveners: Special session: “The Last Interglacial and interglacial comparisons: local records and global signals”. INQUA Congress, 25–31 July, Dublin, Ireland.
- **Head, M.J.**, 2019. Member, Scientific Committee. Third International Congress on Stratigraphy, STRATI 3, University of Milan, Italy, 2–5 July.
- **Head, M.J.**, Zalasiewicz, J.A., and Waters, C.N., 2019. Co-conveners: Quaternary stratigraphy and chronostratigraphy. Third International Congress on Stratigraphy, STRATI 3, University of Milan, Italy, 2–5 July, 2019.
- **Head, M.J.**, 2017. Convener: The David Batten special symposium. AASP – The Palynological Society, 50th Annual Meeting, Nottingham, UK, Sept 4–6.
- **Head, M.J.**, and Ellegaard, M.E., 2017. Co-convener: Session 2.4: Dinocyst systematics. Dino 11 – Eleventh International Conference on Modern and Fossil Dinoflagellates. July 17–21, Bordeaux, France.
- **Head, M.J.**, 2017. Convener: Session 1.5: Marine to freshwater transition and gradient in the dino world. Dino 11 – Eleventh International Conference on Modern and Fossil Dinoflagellates. July 17–21, Bordeaux, France.
- **Head, M.J.**, 2017. Member, International Scientific Committee. Dino 11 – Eleventh International Conference on Modern and Fossil Dinoflagellates. July 17–21, Bordeaux, France.
- Rovey, C.W. II, Lepper, K. and **Head, M.J.**, 2017. Co-conveners, session T36. Applications of OSL and TCN to Chronologic Problems along the Margins of the LIS. Geological Society of America Joint Section Meeting, Pittsburgh, Pennsylvania, 19–21 March.
- **Head, M.J.** Convener and Chair. The Quaternary System: precision and reliability in global correlation. 35th International Geological Congress, Cape Town, South Africa, August 27–September 4, 2016. [September 1]
- **Head, M.J.** Convener and Chair. Anthropocene: utility and definition. 35th International Geological Congress, Cape Town, South Africa, August 27–September 4, 2016. [August 28]
- **Head, M.J.**, Gibbard, P.L., Kumai, H., and Pillans, B. Conveners. Session 4: The Early–Middle Pleistocene transition: local records, global correlations. XIX INQUA Congress, Nagoya, Japan, July 27 – August 2, 2015.
- Chair: Biostratigraphy and Evolution of Dinoflagellates; session of Tenth International Conference on Modern and Fossil Dinoflagellates, Dino 10, San Francisco, California, October 20–24, 2013.
- Member, Scientific Committee. First International Congress on Stratigraphy, STRATI 2013. Universidade Nova de Lisboa, Lisbon, July 1–7.
- **Head, M.J.**, Gibbard, P.L., and Van Kolfschoten, T. (coordinators), The Quaternary System and its formal subdivision. A one-day special symposium held during the First International Congress on Stratigraphy, STRATI 2013. Universidade Nova de Lisboa, Lisbon, July 1–7.
- Member, Scientific Advisory Committee. DINO9: Ninth International Conference on Fossil and Living Dinoflagellates. Liverpool, U.K., Aug/Sept, 2011.
- **Head, M.J.**, and Matsuoka, K. (convenors), Session 4: Stratigraphy and evolution of dinoflagellates. DINO9: Ninth International Conference on Fossil and Living Dinoflagellates. Liverpool, U.K., Aug/Sept, 2011.
- Member, Organizing Committee and Scientific Committee. DINO8: Eighth International Conference on Fossil and Living Dinoflagellates. Montréal, 4–10 May, 2008.
- **Head, M.J.**, and Masare, E., (convenors), Session 4: Biostratigraphy and paleoecology of fossil dinoflagellates. DINO8: Eighth International Conference on Fossil and Living Dinoflagellates. Montréal, 7 May, 2008.
- Member, Scientific Committee, Joint Meeting of The Micropaleontological Society and APLF, Muséum national d’histoire naturelle, Paris, 3–7 October, 2005.
- Member, Scientific Committee for the 11th International Palynological Congress, Granada, Spain, July 4–9, 2004.
- **Head, M.J.**, Masare, E., and Fensome, R.A.: Co-convenors. Dinoflagellate cysts and dinoflagellate biology. 11th International Palynological Congress, Granada, Spain, July 4–9, 2004.
- Beaudoin, A. and **Head, M.J.**: Co-convenors. Land–Sea correlation in the Quaternary and Cenozoic. American Association of Stratigraphic Palynologists, Annual Meeting, St Catharines, Ontario, October 5–8, 2003.
- **Head, M.J.** and Gibbard, P.L.: Co-organisers. Early–Middle Pleistocene transitions: the land–ocean evidence. International Conference, Godwin Institute for Quaternary Research, University of Cambridge, April 4, 2003.
- Beaudoin, A. and **Head, M.J.**: Co-convenors. The Palynology and Micropaleontology of Boundaries. Geological Association of Canada Joint Annual Meeting, Saskatoon, Saskatchewan, May 26–29, 2002.

- Beaudoin, A. and **Head, M.J.**: Co-convenors and co-chairs, Palynology and Micropaleontology in Canadian Geoscience: New Frontiers and Applications. GeoCanada 2000, Calgary, Alberta, May 29 - June 2 2000.
- **Head, M.J.** and Wrenn, J.H.: Co-convenors and co-chairs, Third Symposium on Neogene–Quaternary Dinoflagellates. Ninth International Palynological Congress, Houston, Texas, 1996.
- **Head, M.J.** and Norris, G.: Co-convenors, Special Session: Dinoflagellates and acritarchs of Mesozoic–Cenozoic oceans and marginal seas. American Association of Stratigraphic Palynologists, Annual Meeting, Ottawa, 1995.
- Member, Organizing Committee for the 5th International Conference on Modern and Fossil Dinoflagellates, Zeist, The Netherlands, 1993.
- **Head, M.J.** and Purnell, M.A.: Co-chairs, Symposium: Fossils, Large and Small. Geological Association of Canada Joint Annual Meeting, Toronto, 1991.
- **Head, M.J.** and Wrenn, J.H.: Co-convenors and co-chairs, Second Symposium on Neogene Dinoflagellates. 4th International Conference on Modern and Fossil Dinoflagellates, Woods Hole, Ma., 1989.
- Member, Organizing Committee for the 4th International Conference on Modern and Fossil Dinoflagellates, Woods Hole, Ma., 1989.
- Assistant Treasurer, 5th International Palynological Conference, Cambridge, U.K., 1980.

b) Instruction and Organization of Short Courses

- Instructor: Advanced course in Jurassic, Cretaceous, Cenozoic organic-walled dinoflagellate cysts: morphology, stratigraphy, paleoecology. British Geological Survey, Keyworth, Nottingham, 2–6 July, 2018.
- Instructor: Advanced course in Jurassic, Cretaceous, Cenozoic organic-walled dinoflagellate cysts: morphology, stratigraphy, paleoecology. Heidelberg University, Germany, September 13–19, 2015.
- Instructor: Advanced course in Jurassic, Cretaceous, Cenozoic organic-walled dinoflagellate cysts: morphology, paleoecology and stratigraphy. Utrecht, June 25–29, 2012.
- Instructor: Short course on late Cenozoic dinoflagellate cysts. Department of Geology, University of Tehran, Iran, May 8–11, 2011.
- Instructor: Training Programme on late Cenozoic organic-walled dinoflagellate cysts. Birbal Sahni Institute of Palaeobotany, Lucknow, India, February 15–19, 2011.
- Instructor: Advanced course in Jurassic, Cretaceous, Cenozoic organic-walled dinoflagellate cysts: morphology, paleoecology and stratigraphy. Urbino, Italy, July 17–21, 2009.
- Instructor: Advanced course in Jurassic, Cretaceous, Cenozoic organic-walled dinoflagellate cysts: morphology, paleoecology and stratigraphy. Urbino, Italy, July 13–17, 2006.
- Instructor: Late Cenozoic marine dinoflagellates. Universidad Nacional del Sur, Bahía Blanca, Argentina, September 3–7, 2001. Five-day nationally-attended short course offering postgraduate credit.
- Instructor: Chevron short course on organic-walled dinoflagellates—with focus on ecology, paleoecology, and sequence biostratigraphic applications using examples from the marine Late Cenozoic. Chevron Oil Company, Calgary, Alberta, December 7–9, 1993. Three-day international industry short course.
- Instructor: Neogene and Quaternary dinoflagellates; two-and-a-half days of a seven-day short course on: Upper Cretaceous–Tertiary Palynological Biostratigraphy. Held at Hirtshals, Denmark, October 27–November 2, 1991, organized by the Geological Survey of Denmark, sponsored by The Nordic Council of Ministers.
- Organizer and co-instructor (with L.E. Edwards and K. Steidinger): Short Course on Neogene–Recent Dinoflagellates, Tulsa October 15–17, 1989 (A three-day internationally-attended short course: and the first to be sponsored by the American Association of Stratigraphic Palynologists).

c) Organization of Scientific Workshops

- Pospelova, V., Matsuoka, K., Head, M.J., De Schepper, S., Masure, E., Servais, T., and Michoux, D., 2017. Taxonomy of fossil dinoflagellate cysts and acritarchs. Dino 11 – Eleventh International Conference on Modern and Fossil Dinoflagellates. July 21, Bordeaux, France.
- Ellegaard, M.E., Versteegh, G., and Head, M.J., 2017. Why dual nomenclature? Dino 11 – Eleventh International Conference on Modern and Fossil Dinoflagellates. July 21, Bordeaux, France.
- De Schepper, S., Head, M.J., and Matsuoka, K. Organizers: Taxonomy of Quaternary and Neogene dinoflagellate cysts. One-day Workshop. DINO9: Ninth International Conference on Fossil and Living Dinoflagellates. Liverpool, U.K., August 28–September 2, 2011.
- Head, M.J., Matsuoka, K., and Lewis, J. Organizers: Taxonomy of Quaternary and Neogene dinoflagellate cysts. One-day Workshop. DINO8: Eighth International Conference on Fossil and Living Dinoflagellates. Montréal, 4–10 May, 2008.
- Head, M.J., Munsterman, D.K., and Verreussel, R.M.C.H. A one-day workshop on Neogene dinoflagellate cysts. Held in conjunction with the Advanced course in Jurassic, Cretaceous, Cenozoic organic-walled dinoflagellate cysts: morphology, paleoecology and stratigraphy. Urbino, Italy, July 18, 2006.

- Head, M.J., Grøsfjeld, K., Poulsen N.E. and de Vernal, A. Co-organizers for the Fifth Workshop on Neogene Dinoflagellates. Held under the auspices of the 6th International Conference on Modern and Fossil Dinoflagellates, Trondheim, Norway, 1998.
- Head, M.J. and Wrenn, J.H. Co-organizers for the Fourth Workshop on Neogene–Quaternary Dinoflagellates. Held under the auspices of the Ninth International Palynological Congress, Houston, Texas, June 23, 1996.
- Head, M.J. and Versteegh, G. Co-organizers for the Third Workshop on Neogene Dinoflagellates. Held under the auspices of the 5th International Conference on Modern and Fossil Dinoflagellates, Zeist, The Netherlands, April, 19–25, 1993.
- Head, M.J. and Wrenn, J.H. Co-organizers for the Second Neogene Dinoflagellate Workshop. Held under the auspices of the 4th International Conference on Modern and Fossil Dinoflagellates, Woods Hole, April 1989.
- Head, M.J. Convenor for Computer Workshop. Held under the auspices of the 20th Annual Meeting of the American Association of Stratigraphic Palynologists, Halifax, 1987.
- Mudie, P.J., de Vernal, A. and Head, M.J. Co-organizers for the First Neogene Dinoflagellate Workshop. Held under the auspices of the 19th Annual Meeting of the American Association of Stratigraphic Palynologists, New York, 1986.

d) Editorial board memberships and website administration

- □□□□national Subcommittee on Quaternary Stratigraphy, webmaster (19 July, 2018–present).
- *Quaternary* (MDPI), Editorial Board Member (2017–present).
- *Boreas* (Wiley), Scientific Advisory Board Member (2015–present).
- *The Palaeobotanist* (Birbal Sahni Institute of Palaeobotany), Editorial Advisory Committee Member (2011–present).
- *Palynology* (Taylor & Francis), Editorial Board Member (2006–present).
- *Journal of Paleontology* (Cambridge University Press), Technical Editor (1998–2003), Associate Editor (2004–present).
- *Palaeogeography, Palaeoclimatology, Palaeoecology* (Elsevier), Editorial Board Member (1999–present).

e) Sabbaticants hosted at Brock University

- Dr. Maher El-Soughier, Aswan University, Egypt (July 2014–December 2014).
- Prof. Salah Y. El-Beialy, El Mansoura University, Egypt (August 2006–July 2007).
- Prof. Ebrahim Ghasemi-Nejad, Tehran University, Iran (November 2006–August 2007).

3. GRANTS OBTAINED SINCE ARRIVAL AT BROCK (2005)

a). External

- NSERC Ship Time Grant: Canadian participation in the International Ocean Discovery Program (IODP) Expedition Number 377: Arctic Ocean Paleoceanography (ArcOP). Co-PI. (\$362,000; cruise scheduled in 2018). Awarded December 11, 2017.
- NSERC Discovery Grant: Plio–Pleistocene paleoceanography of the northern and western Pacific (\$165,000 over 5 years; 2016–2021; = \$33,000 p.a.).
- NSERC Discovery Grant: Plio–Pleistocene dinoflagellate cysts and paleoceanography of the North Atlantic region (\$140,000 over 5 years; 2011–2015 = \$28,000 p.a.).
- NSERC Major Resources Support Grant, Co-PI (\$2.28 million over 4 years; 2010–2014).
- NSERC Discovery Grant (\$20,000 for one year; 2010–2011).
- Imperial Oil research contract (\$10,000; 2009).
- NSERC Discovery Grant (\$20,000 for one year; 2009–2010).
- NSERC RTI Equipment Grant (\$73,330; 2007).
- NSF grant (named collaborator) (US\$1,169,106 over three years; 2006–2008).
- NSERC Discovery Grant (\$68,700 over three years; 2006–2009).
- NSERC RTI Equipment Grant (\$21,119; 2006).

b). Internal

- Brock University Advancement Fund (\$1000 for one year, 2012–13).
- Grant in Lieu of Salary (\$20,000 for one year; 2009–10).
- Brock University startup funds (\$78,000 over two years; 2005–2007).

E) teaching activities (Since 2006)

1. COURSES TAUGHT

- ERSC 1F01 *Planet Earth* (Fall Term, 0.5-credit course).
- ERSC 2P03 *The History of the Earth* (0.25/0.5-credit course).
- ERSC 3P10 *Stratigraphy and Carbonate Sedimentology* (0.25-credit course).
- ERSC 3P12 *Stratigraphy* (0.5-credit course).
- ERSC 3P96 *Special Topics in Earth Sciences* (0.5-credit course).
- ERSC 4P50 *Petroleum Geology* (0.5-credit course).
- ERSC 4F91 *Final-Year Undergraduate Thesis* (1.0-credit course)
- ERSC 5P33 *Stratigraphic Palynology* (0.5-credit course).
- ERSC 5P95 *Graduate Seminars* (0.5-credit course).

2. GRADUATE STUDENTS SUPERVISED AND CO-SUPERVISED (SINCE 2006)

- Llew-Williams, Brendan (Brock University) MSc co-supervised with F.M.G. McCarthy. From September, 2019. Provisional thesis title: Crawford Lake, Ontario: hydrology, sedimentology and diagenesis of a latest Holocene varved succession.
- Taghi Farmani (Brock University) MSc supervised. From January 2019. Provisional thesis title: “Paleoceanography across the Pliocene–Pleistocene transition in the western North Pacific: dinoflagellate cysts from ODP Site 882.”
- Onyinye Sandra Okafor (Brock University) MSc supervised. From January 2019. Thesis title: Paleoceanography across the Pliocene–Pleistocene transition in the South China Sea: dinoflagellate cysts from ODP Site 1143.”
- Farzaneh Hajsoltan (Brock University) MSc supervised. From September 2017. Thesis title: “Paleoceanography across the Pliocene–Pleistocene transition in the southern Bering Sea: dinoflagellate cysts from IODP Site U1341.”
- Joshua Mitchell (Brock University) MSc supervised. From September 2017. Withdrew December 2017.
- Saif Al-Silwadi (University of Toronto) PhD supervised. From September 2017. Thesis title: “Paleoceanography across the Pliocene–Pleistocene transition in the Sea of Japan based on dinoflagellate cysts.”
- Ese Balota (Brock University) MSc supervised. From September 2015. “Western Pacific paleoceanography across the Early–Middle Pleistocene boundary (~773 ka, Marine Isotope Stage 19): dinoflagellate cysts of the Chiba Composite Section, Japan.”, p. 1–123. [Defended 17 October, 2018].
- Mukudzei Dube (Brock University) MSc supervised. From June 2015. “Central North Atlantic paleoceanography during the late Early Pleistocene (spanning Marine Isotope Stage 21) based on a high-resolution dinoflagellate cyst record.”, p. 1–100 (2019). [Defended 23 January, 2019].
- Jens De Clercq (Ghent University, Belgium) MSc co-supervised (“co-promotor”). September 2014 – August, 2015. Thesis title: Marine palynomorphs from the Pliocene and Lower Quaternary of the Bering Sea (IODP U1341): a biostratigraphical analysis and paleoenvironmental reconstruction. MSc thesis, Ghent University, Belgium, pp. i–xviii + 1–116.
- Walid Abomriga (Brock University) MSc supervised. From September 2014. Thesis title: “Central North Atlantic (IODP Site U1313) paleoceanography based on a high-resolution dinoflagellate cyst record across the Early–Middle Pleistocene boundary (Marine Isotope Stages 20–18, ~810–741 ka).”, p. i–xi, 1–113. Completed March 2018.
- Saif Al-Silwadi (Brock University) MSc supervised. From September 2014 to September 2017. Thesis title: “Dinoflagellate cyst stratigraphy and paleoecology of the Upper Miocene and Pliocene, Rees Borehole, Northern Belgium”. Completed September 2017.
- Cédéric Van Renterghem (Ghent University, Belgium) MSc co-supervised (“co-promotor”). Completed June 2011. Thesis title: Pliocene Panamanian Gateway tectonics and climate change at 3.3 Ma: palynological and Mg/Ca analysis of MIS M2 at Caribbean ODP Site 999”.
- Fernando Mantilla-Duran (Brock University) MSc supervised. From January 2011. Completed 2013. Thesis title: “Central North Atlantic paleoceanography during the Middle Pleistocene (ca. 726–603 ka): insights from the dinoflagellate cyst record.”
- Masoumeh Mahdavijourshari (Brock University) MSc supervised. From March 2011. Completed 2014. Thesis title: Dinoflagellate cysts from the latest Miocene through Middle Pleistocene of the Caribbean Sea, ODP Site 1000: biostratigraphy, paleoceanography, and shoaling of the Central American Seaway.”
- Eva Fischer (Brock University) MSc supervised. Completed 2011.
- Jan Hennissen (University of Toronto) PhD supervised. From January 2008. Completed 2012.
- Ida-Maria Jansson (University of Toronto) PhD co-supervised from September 2008, fully supervised from December 2012. Withdrew 2014.

- Manuel Paez (Brock University) MSc supervised. From October 2006. Completed 2014. Thesis title: “The Cenozoic gonyaulacacean dinoflagellate genera *Operculodinium* Wall, 1967 and *Protoceratium* Bergh, 1881 and their phylogenetic relationships”.
- Oliver Bazely (Robinson College, University of Cambridge) PhD co-supervised. Completed 2010.
- Kamalpreet Kaur Sihra (Brock University) MSc supervised. Completed 2010.
- Ida-Maria Jansson (University of Toronto) MSc co-supervised. Completed 2008.
- Maria Papanikolou (Wolfson College, University of Cambridge) PhD co-supervised. Completed 2008.
- Sarah Farquhar (Emmanuel College, University of Cambridge) PhD supervised. Completed 2008.
- Stijn De Schepper (Wolfson College, University of Cambridge) PhD supervised. Completed 2006.
- Ali Soliman (Karl-Franzens Universität, Graz, Austria) PhD co-supervised. Completed 2006.

Membership on supervisory committees of: Sebastien Joannin (Univ. Claude Bernard, Lyon 1, France; PhD) Maria Godoi (Darwin College, University of Cambridge; PhD), Holly Arnold (Brock University, MSc), Andrea Krueger (Brock University, MSc, PhD), Christina Mandri (Brock University, MSc), Olena Volic (Brock University, MSc), Matea Drljejan (Brock University, MSc), and April Dalton (PhD, University of Toronto).

3. UNDERGRADUATE STUDENTS SUPERVISED (SINCE 2006)

- Dylan J.W. Cochrane (Brock University) BSc supervised. September–April 2015. “Dinoflagellate Cyst Biostratigraphy of the Pliocene Yorktown Formation, Langley, Virginia, U.S.A.”
- Jagabir Ningthoujam (Brock University) BSc supervised. September–April 2013. “Paleoenvironmental and biostratigraphic analysis of upper Cenozoic deposits in eastern England, southern North Sea Basin”
- Joshua Mitchell (Brock University) BSc supervised. September–April 2016. “Palynological constraints on the opening of the Baltic Sea–White Sea connection during the Last Interglacial”.

F) University/Community service

1. UNIVERSITY COMMITTEES AND RESPONSIBILITIES (SINCE 2006)

- Member, Advisory Committee for the reappointment of Dean Ahmed (2016).
- Departmental Graduate Program Director (July 2014–June 2015).
- Academic contact for Dr. Maher El-Soughier (Aswan University, Egypt), visiting international scholar and member of my research group (July–December 2014).
- Departmental Undergraduate Advisor (September 2013–June 2014).
- Member: Faculty of M&S Tenure & Promotions Committee (September 2013–August 2014).
- Acting Chair of Department of Earth Sciences (May 2012).
- Chair of Department of Earth Sciences (July 2008–June 2011).
- Brock University representative for the Canadian Consortium for Ocean Drilling (2010–present).
- Acting Chair of Department of Earth Sciences (April–June 2008).
- Co-representative of Department’s Co-op program (2005–2008).
- Webmaster of Department of Earth Sciences (2006–present).
- Member, Advisory Committee for the reappointment of Dean Brindle (2007)
- Coordinator for Department of Earth Sciences seminar series (2006–2008)
- Academic contact for Professor Ebrahim Ghasemi-Nejad (Univ. Tehran, Iran), visiting international scholar and member of my research group (2006–2007).
- Academic contact for Professor Salah El Beialy (Mansoura University, Egypt), visiting international scholar and member of my research group (2006–2007).

2. NATIONAL COMMITTEES

- Inaugural Chair, Canadian Stratigraphy Commission of the Canadian Federation of Earth Sciences (2009–present).
- Executive member of the Association of Professional Geoscientists of Ontario (2008–2011).
- Member of the International Affairs Subcommittee of the Canadian Federation of Earth Sciences, (2008–2011).
- Chair of the Council of University Departments of Geoscience in Ontario (CUDGO) (2008–2011).
- Ontario representative and executive committee member of the Council of Chairs of Canadian Earth Science Departments (2008–2011).
- Canadian Association of Palynologists: Secretary-Treasurer (1987–1996), President-Elect (1998–1999), President (2000–

2001).

3. INTERNATIONAL COMMITTEES AND ACTIVITIES

- Chair, Nominations Committee for the International Commission on Stratigraphy (June 2019–September 2019).
- SQS Working Group on the Middle–Upper Pleistocene Boundary, Co-Convener (2018–present).
- Voting Member, ICS Subcommittee on Stratigraphic Classification (2016–present).
- Chair, Nominations Committee for the International Commission on Stratigraphy (Dec 2014–July 2015).
- Member of the International Association of Plant Taxonomy, International Commission on Botanical Nomenclature Special Committee on the Registration of Algal and Plant Names (including fossils) (2012–2016).
- Voting Member, SQS Working Group on the Upper Pleistocene Boundary (2013–present).
- Voting Member, SQS Working Group on the Anthropocene (2016–present).
- Chair, International Subcommittee on Quaternary Stratigraphy (SQS) (two terms 2012–2016, 2016–2020).
- Chair of the Committee for Fossils, International Association for Plant Taxonomy (2010–present; voting member, 2002–2010).
- Member of the International Association of Plant Taxonomy, International Commission on Botanical Nomenclature Special Committee on Electronic Publication (2009–present).
- Full member of the Stratigraphy and Chronology Commission (SACCOM), INQUA (2007–2015). Advisory Board Member (2015–2019).
- International Commission on Stratigraphy (ICS), ‘task group on the definition and rank of the term Quaternary’. Non-voting Member (2005).
- American Association of Stratigraphic Palynologists: Director-at-Large (1992–1994), Newsletter Editor (1994–1996), Webmaster (1995–2000), President-Elect (2003–2004), President (2004–2005), Past-President (2005–2006), Member of the CENEX Committee (2007–present).
- ICS Subcommittee on Quaternary Stratigraphy, Voting Member (2002–present).
- SQS Working Group on the Lower–Middle Pleistocene Boundary, Voting Member (2002–present), Co-Convener (2010–present).
- Shipboard palynologist, Ocean Drilling Program, Leg 144 (1992).
- Shipboard palynologist, Ocean Drilling Program, Leg 105 (1985).
- Group leader, Cambridge Spitsbergen Expedition (1983).

4. MEDIA COVERAGE (SELECTED)

- Audio interview by Pippa Johnstone for TVO podcast on the program “Word Bomb” in June, 2019, relating to the Anthropocene and Crawford Lake.
- Interviewed by La Presse (Montreal: www.lapresse.ca) regarding the Meghalayan Stage, on 9 October, 2018.
- Crawford Lake coring for the Anthropocene: Interviewed on CBC News radio in August 2018, and also on CTV radio (Toronto) on August 19. Also interviewed for CBC TV. <https://www.cbc.ca/news/canada/toronto/scientists-crawford-lake-sediment-anthropocene-1.4787756>
- Interviewed for CBC News and quoted on the CBC News website “You’re living in a new geologic age, the Meghalayan”, July 20, 2018 – <https://www.cbc.ca/news/technology/meghalayan-age-geologic-time-scale-1.4755351>. Also quoted in Sci News on July 18 at <http://www.sci-news.com/geology/meghalayan-06214.html>. Also quoted in numerous other sources around the world.
- Interviewed for piece in Canadian Geographic on the Meghalayan on July 30, 2018 and quoted at <https://www.canadiangeographic.ca/article/were-living-new-geological-age>.
- Interviewed about the “Geological Brexit” live on the “Larry Fedoruk Show” for about 12 mins. 610 CKTB Radio Station, St. Catharines, April 12, 2017, 5.15–5.27 pm, via phone.
- Interviewed for “Anthropocene”, a feature documentary by Baichwal, Burtynsky & de Pencier, on 23 April, 2016, in Oslo.
- Interviewed by Japan Broadcasting Corporation on August 18, 2015, about the Chiba section as a candidate GSSP (Reporter: Hajime Okada).
- Interviewed by Yumi Nakayama, staff writer for the Asahi Shimbun (one of the five national newspapers in Japan) on August 4, 2015 at the Tabuchi section, Japan.
- Interviewed on Japanese national TV on August 4, 2015 at the Tabuchi section, Japan. Item appeared on national TV news the following morning, on Tokyo Broadcasting System (Channel 1).
- Interviewed by *Nature* for article on the Anthropocene, 11 March 2015. “The human age”. Article on the Anthropocene by Richard Monastersky (a features editor for *Nature*), *Nature* vol. 519, p. 144-147.
- Interview on Studio 100 TV Italy, on the Fronte section, Taranto, as a potential global standard for the Upper Pleistocene. Aired October 14, 2014.
- Interview on RAI 3, the regional station of the main Italian National TV company, on the Montalbano Jonico section as a

potential global standard for the Middle Pleistocene. Aired October 12, 2014.

- Front-page headline, St. Catharines Standard, September 29th, 2009, p A1, A6, “Rewriting Earth’s time scale”.
- Interview on CHCH News (Hamilton) with graduate student on oil sands research, March 17, 2008.

5. REFERENCES

- **Prof. Philip L. Gibbard** PhD, ScD, Cambridge Quaternary, Department of Geography, University of Cambridge, Downing Street, Cambridge CB2 3EN, England, U.K. Email: plg1@cam.ac.uk
- **Dr. Robert A. Fensome** PhD, Natural Resources Canada, Geological Survey of Canada (Atlantic), Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, NS, Canada B2Y 4A2. Email: Rob.Fensome@NRCan-RNCan.gc.ca
- **Dr. James B. Riding** PhD, DSc, British Geological Survey, Keyworth, Nottingham NG12 5GG, U.K. Email: jbri@bgs.ac.uk

McCarthy, Dan

DANIEL P. MCCARTHY

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A. Formal Education:

- 1986/93 **Ph.D. Geography**, University of Saskatchewan
- 1980/85 **M.Sc. Geography**, University of Western Ontario
- 1977/79 **B.Sc. Geography / Biology**, University of Alberta
- 1976/77 Simon Fraser University

B. Academic Distinctions and Awards:

Recognition Award 2009, Earth Sciences Sector, Geological Survey of Canada

Teaching Fellowship, Faculty of Graduate Studies and Research, University of Saskatchewan, 1986/89

Hantelman Humanities Scholarship, Faculty of Graduate Studies and Research, University of Saskatchewan, 1986/87

C. Academic Positions Held:

Associate Professor. 2001-present. Depts. of Earth Sciences and Biology, Brock University

Associate Professor. 1999 Depts. of Geography, Earth Sciences and Biology, Brock University

Assistant Professor: 1995/98, Dept. of Geography, Brock University, St. Catharines, ON

Instructor (Continuing Position): 1994/95, Northwest Community College, Terrace, BC

Instructor (Probational): 1992/94, Northwest Community College, Prince Rupert, BC

Lecturer: 1986/92, Dept. of Geography, University of Saskatchewan, Saskatoon, SK

Teaching assistant: 1981/84, Dept. of Geography, University of Western Ontario, London, ON

D. Creative/Scholarly Activities:

D1. Publications:

a) books and chapters contributed to books:

- 1 **McCarthy, D.P.** 2002: Lichenometry: Nimis P.L., Scheidegger C. & Wolseley P.A. (eds.): *Monitoring with Lichens B Monitoring Lichens*, Kluwer Academic Publishers, The Netherlands, p. 379-383.
- 2 **McCarthy, D.P.** 2004: Long-life in the slow lane: How Rock Lichens Help Age our Glaciers. p. 32-33 in *Glacier Country* by J. Woods, Friends of Glacier and Mount Revelstoke National Park, 142p
- 3 **McCarthy, D.P.** 2006: Lichenometry. p.1399-1405. *Encyclopedia of Quaternary Sciences*. Elsevier.

- 4 **McCarthy, D.P.**, Craig, B. and U. Brand 2009. Lichen monitoring of urban air quality, Hamilton, Ontario. Legge, A.H., (ed.), *Air Quality and Ecological Impacts: relating sources to effects*. Developments in Environmental Science, Volume 9, Elsevier Science.Oxford, UK. p. 247-267.
- 5 **McCarthy, D.P.** 2013. Lichenometry. *Encyclopedia of Quaternary Sciences*. 2nd ed. Elsevier. p. 565–572.

b) articles in refereed journals:

- 1 **McCarthy, D.P.**, B.H. Luckman and P.E. Kelly, 1991. Sampling height-age error correction for spruce seedlings in glacial forefields, southern Canadian Cordillera. *Arctic and Alpine Research*, 23: 451-455.
- 2 **McCarthy, D.P.**, 1992. Dating with cushion plants: establishment of a *Silene acaulis* growth curve in the Canadian Rockies. *Arctic and Alpine Research*, 24: 50-55.
- 3 **McCarthy, D.P.** and B.H. Luckman, 1993. Estimating ecesis for tree-ring dating of moraines: a comparative study from the Canadian Cordillera. *Arctic and Alpine Research*, 25: 63-68.
- 4 **McCarthy, D.P.** and D.J. Smith, 1994. Historical glacier activity in the vicinity of Peter Lougheed Provincial Park, Canadian Rocky Mountains. *Western Geography*, 4: 94-109.
- 5 Luckman, B.H., J.A. Matthews, D.J. Smith, D. McCarroll and **D.P. McCarthy**, 1994. Snow avalanche impact landforms: A brief discussion of terminology. *Arctic and Alpine Research*, 26:128-129.
- 6 Smith, D.J., **D.P. McCarthy** and B.H. Luckman, 1994. Snow avalanche impact landforms in the Canadian Rocky Mountains. *Arctic and Alpine Research*, 26: 116-127.
- 7 Smith, D.J., **D.P. McCarthy** and M.E. Colenutt, 1995. Little Ice Age glacial activity in Peter Lougheed and Elk Lakes provincial parks, Canadian Rocky Mountains. *Canadian Journal of Earth Sciences*, 32: 579-589.
- 8 **McCarthy, D.P.** and D.J. Smith, 1995. Growth curves for calcium-tolerant lichens in the Canadian Rocky Mountains. *Arctic and Alpine Research*, 27: 290-297.
- 9 **McCarthy, D.P.**, 1997. Habitat selection and ecology of *Xanthoria elegans* (Link) Th. Fr. in glacier forefields: implications for lichenometry. *Journal of Biogeography* 24: 363-373
- 10 **McCarthy, D.P.**, 1999. A biological basis for lichenometry? *Journal of Biogeography*, 26: 379-386.
- 11 **McCarthy, D.P.** and K. Zaniewski, 2001. Digital analysis of lichen cover: a technique for use in lichenometry and lichenology. *Arctic, Antarctic, and Alpine Research*, vol. 33: 107-113.
- 12 **McCarthy, D. P.**, 2001. Crustose lichens: chronometers of alpine environmental change. *Research Links*, 9: 4, 12-13.

- 13 **McCarthy, D.P.** 2001. Identification and use of geoinicators in Glacier and Mount Revelstoke National Parks. p.38-42, in: Geoinicators for ecosystem monitoring in parks and protected areas. The proceedings of an international workshop, Gros Morne National Park, Newfoundland., Sept.10-14, 2001. *Parks Canada-Ecosystem Science Review Reports, Report 18.*
- 14 **McCarthy, D.P.** 2003. Estimating lichenometric ages by direct and indirect measurement of radial growth: a case study of *Rhizocarpon* agg. at the Illecillewaet Glacier, British Columbia. *Arctic, Antarctic, and Alpine Research*. 35(2): 203-213.
- 15 **McCarthy, D.P.** and N. Henry, 2012: Measurement of growth in the lichen *Rhizocarpon geographicum* using a new photographic technique. *Lichenologist*, 44(4): 1-15.
- 16 Osborn, G., **D. McCarthy**, A. LaBrie and R. Burke, 2015. "Lichenometric dating: Science or pseudo-science?" *Quaternary Research* 83(1): 1-12.
- 17 Osborn, G., **D. McCarthy**, A. LaBrie and R. Burke, 2015. "Corrigendum to "Lichenometric dating: Science or pseudo-science?" *Quaternary Research* 83(2): 394.
- 18 Osborn, G., **D. McCarthy**, A. LaBrie and R. Burke, 2016. Lichenometric dating: science or pseudo-science? -- Response to comments by M. O'Neal, *Quaternary Research* 86(2): 244-245.

c) creative work in the arts

- 1 **McCarthy, D.P.**, 2003. Measures in time: A science exhibit for the whole family. April 30 - October 19, 2003: Whyte Museum of the Canadian Rockies. The exhibit occupied approx. 1,200 ft² and was seen by approx. 30,000 visitors in Banff.
- 2 **McCarthy, D.P.**, 2003. Measures in time: a virtual museum. This web site has about 50 pages of original text, links to government documents and has a few interactive games for children. This is an on-line exhibit at the Whyte Museum homepage: <http://www.whyte.org>
- 3 Frontispiece: Two historical photographs and a caption. *Arctic, Antarctic and Alpine Research*, 35(2): 203-213.
- 4 *Changing Glaciers*: This plaque (ca. 17ft long) fills a kiosk at Illecillewaet Campground, Glacier National Park, British Columbia. It highlights my research and will be on display until 2016.

D1. g) Research based reports to governmental agencies:

Much of my research is based on field work done in national or provincial parks. Permission to conduct research in these parks is contingent on submission of progress reports.

- 1 Luckman, B.H. and **D.P. McCarthy**, 1987. Field investigations in the Canadian Cordillera in 1986. Report to Parks Canada and B.C. Parks Branch, February 1987, 49 pp.

- 2 **McCarthy, D.P.** 1990. Field investigations in Peter Lougheed and Elk Lakes Provincial Parks, 1988-1989. Report submitted to the Regional Directors of Alberta Recreation and Parks and the British Columbia Ministry of Environment and Parks. March 1990, 110 pp.
- 3 Luckman, B.H., **D.P. McCarthy**, E. Watson, R.S. St. George, T.A. Kavanagh, B.J. Robinson and M.E. Colenutt, 1998. Field investigations in the Canadian Rockies in 1997. Report submitted to Parks Canada and B.C. Parks Service. May 1998, 66 pp.
- 4 **McCarthy, D.P.** and R.J. Taylor, 2001. Geobotanical dating of glacial and environmental change in Glacier National Park: a report of research activities in 2001. Report submitted to Parks Canada, July 2001, 83 pp.
- 5 **McCarthy, D.P.**, 2004. Chemical analysis of heavy metals in lichens: a laboratory protocol. Unpublished report submitted to Brian Craig, Environmental Monitoring and Assessment Network Coordinating Office, Burlington, Ontario, March 2004. 15pp.
- 6 **McCarthy, D.P.**, 2004. Hamilton lichen survey 2004. Unpublished report submitted to: Environmental Monitoring and Assessment Network Coordinating Office, Burlington, Ontario, March 2004. 20pp.
- 7 **McCarthy, D. P.**, 2005. Ontario arboreal lichen monitoring program: summary report for 2005. Unpublished report to Wolfgang Scheider, Manager, Biomonitoring Section, Environmental Monitoring and Reporting Branch, Ontario Ministry of the Environment, 125 Resources Road, Etobicoke, Ontario. 23pp.
- 8 **McCarthy, D. P.** and M.N. Demuth, 2006. Report on glacier monitoring and field research activities in the Ragged Range, NT. Unpublished report to Parks Canada and the Aurora Research Institute, Inuvik, NT
- 9 **McCarthy, D.P.**, 2007. Feasibility study for using lichen biomonitoring to monitor the effectiveness of CEPA. A report to Science Risk Assessment Directorate, Science & Technology Branch, Environment Canada, March 2007, 65 pp.
- 10 **McCarthy, D.** and P. Tulumello, 2007. *Final report on Lichen Monitoring in Sarnia Best in Science Project 0505*. Submitted to Laura Fiore, Ontario Ministry of the Environment, Environmental Monitoring and Reporting Branch, Toronto, December 2007, 72p.
- 11 **McCarthy, D.P.**, 2008. Tracking transportation and industrial sources using lichen community analysis. Progress report on research activities in the spring and summer of 2008. 15p.
- 12 **McCarthy, D.P.**, U. Brand and J. Aherne, 2009. Monitoring ambient air quality using lichens and tree bark. Interim financial report and research milestones August 2009. Submitted to Chris Watson, Ontario Ministry of the Environment, August 2010, 16p.
- 13 **McCarthy, D.P.** and U. Brand, 2010. Lichen biomonitoring of airborne metallic traffic-pollutants at the MacDonald-Cartier Freeway (Hwy. 401), southern Ontario, Canada. A final report. Submitted to Chris Watson, Ontario Ministry of the Environment, April 2010, 51p.

- 14 Gray, A. and **McCarthy, D.P.**, 2012. A new protocol for the spectrophotometric determination of nitrate and sulphate on tree bark. Final Report Part 1: Grant funding Agreement between the "Ministry" and Brock University, signed March 1, 2008: Monitoring ambient air quality with lichens and tree bark. Submitted to: L. Benakoun and C. Charron, Ontario Ministry of the Environment, Terrestrial Monitoring Section, Environmental Monitoring and Reporting Branch. 88p.

D1. h) Theses:

McCarthy, D.P. 1993. Geobotanical dating in alpine carbonate terrain: a chronology for Little Ice Age glacial activity in Peter Lougheed and Elk Lakes Provincial Parks, Alberta and British Columbia, Ph. D. thesis, University of Saskatchewan, 237 pp.

McCarthy, D.P. 1985. Dating Holocene geomorphic activity of selected landforms in the Geikie Creek valley, Mount Robson Provincial Park, B.C., M.Sc. thesis, University of Western Ontario, 304 pp.

D3 Conference presentations/published abstracts:

All abstracts for these papers have been published in the conference proceedings.

- 1 **McCarthy, D.P.** 1989. Tree-ring dating of moraines at Bennington Glacier, B.C. Canadian Quaternary Association 1989, "Late glacial and post-glacial processes and environments in montane and adjacent areas." August 26-27, 1989. University of Alberta, Edmonton, Alberta, Program and Abstracts, p. 40.
- 2 **McCarthy, D.P.** 1990. New lichenometric data for use in dating late Holocene surfaces in the Canadian Rockies. 1990 CANQUA/AMQUA First Joint Meeting, June 4-6, 1990; Quaternary Sciences Institute, Waterloo, Ontario, Program and Abstracts, p. 25.
- 3 **McCarthy, D.P.** 1990. Lichenometric dating in the Canadian Rockies: problems and progress. Canadian Association of Geographers, Annual Meeting, Edmonton, Alberta, Program and Abstracts.
- 4 Smith, D.J., **D.P. McCarthy** and B.H. Luckman, 1990. Snow avalanche impact landforms in the Canadian Rocky Mountains. Canadian Association of Geographers, Annual Meeting, Edmonton, Alberta, Program and Abstracts.
- 5 Smith, D.J. and **D.P. McCarthy** 1991. Little Ice Age glacial activity in Peter Lougheed Provincial Park, Alberta. Canadian Association of Geographers, Annual Meeting, Kingston, Ontario, Program and Abstracts.
- 6 Smith, D.J. and **D.P. McCarthy** 1991. Little Ice Age history of Sarrail Glacier, Alberta. Annual Meeting of the Western Division of the Canadian Association of Geographers, March, 1991. Banff, Alberta. Program and Abstracts.
- 7 Smith, D.J., **D.P. McCarthy** and M.E. Colenutt, 1994. Little Ice Age glacial activity in Peter Lougheed Provincial Park, Canadian Rocky Mountains. International Conference on Tree Rings, Environment, and Humanity: Relationships and Processes. University of Arizona Laboratory of Tree-Ring Research, May 17-21, 1994. Hotel Park, Arizona, U.S.A.

- 8 **McCarthy, D.P.** 1996. Habitat selection and ecology of *Xanthoria elegans* in glacier forefields of the Canadian Rockies. American Bryological and Lichenological Section of the Biological Society of America - American Institute of Biological Sciences 47th Annual Meeting, Seattle, Washington; 4-8 August 1996.
- 9 **McCarthy, D.P.** 1996. The link between microscale and lichenometric age. Canadian Association of Geographers, Annual Meeting, Saskatoon, Saskatchewan, May 11-15, 1996. Program and Abstracts.
- 10 **McCarthy, D.P.** 1998: Use of Adobe Photoshop in lichenometry and teaching. Canadian Association of Geographers, Annual Meeting, Ottawa, Ontario, May 1998. Program and Abstracts.
- 11 **McCarthy, D.P.** and K. Zaniewski, 1999. Use of a digital camera and an inexpensive GIS system for lichenometry. Canadian Association of Geographers Ontario Division. Annual Meeting, McMaster University, Hamilton, Ontario, October 1999.
- 12 **McCarthy, D.P.** 1999. Can the lichen *Rhizocarpon geographicum* live for 5000 years? Canadian Association of Geographers, Annual Meeting, Lethbridge, Alberta, May 1999. Program and Abstracts.
- 13 **McCarthy, D.P.** and K. Zaniewski, 2000. Low-cost image analysis of lichen cover. Annual Meeting of the Canadian Association of Geographers, Brock University, May 2000.
- 14 **McCarthy, D.P.** 2000. Geobotanical investigations at the Illecillewaet Glacier. Columbia Mountains Institute of Applied Ecology, Annual Meeting, Revelstoke, British Columbia, April 2000. Program and Abstracts.
- 15 **McCarthy, D.P.** 2001. Identification and use of geoindicators in Glacier and Mount Revelstoke National Parks. International workshop on geoindicators for ecosystem monitoring in parks and protected areas. Gros Morne Park, Nfld., Sept.10-14, 2001.
- 16 **McCarthy D.P.** and H. Vaughan 2004. Arboreal lichens: preliminary indicators of Hamilton air quality. Upwind Downwind: a practical conference on improving air quality. March 29-30, Hamilton Convention Center, Hamilton, Ontario.
- 17 **McCarthy, D.P.**; M. Petersen and E. Ebbett, 2004. Inventory and analysis of historical changes at 205 glaciers in the Selkirk Mountains, Glacier National Park, BC. Joint Annual Meeting, Geological Association of Canada and Mineralogical Association of Canada, May 12-14, Brock University, St. Catharines, Ontario. Program and Abstracts.
- 18 D. Sivanesan, D. H. S. Richardson, **D. P. McCarthy**, Dudley, M. M. Finkelstein, E. Nieboer and G. Sorger, 2005. Calibration of a simple lichen monitoring system in Hamilton, Ontario. 37th Annual Air Pollution Workshop and International Symposium, April 25-28, Banff, Alberta.
- 19 **McCarthy, D.P.**, B. Craig, U. Brand, 2005. Lichen monitoring of urban air, Hamilton, Ontario. 37th Annual Air Pollution Workshop and International Symposium, April 25-28, Banff, Alberta.
- 20 Demuth, M.N., **McCarthy, D.P.**, Zdanowicz, C.M., Pinard, V., Robertson, L., Murray, D., Catto, S. 2006. Secular change in the glacier cover contributing flow to a World Heritage River initial findings from work in the Ragged Ranges and headwaters of the South Nahanni River, NWT. CMOS, CGU, AMS Congress 2007. "Air, Ocean, Earth and Ice on the Rock". May 28 - June 1, 2007. St. John's Congress Centre, Newfoundland and Labrador, Canada.

- 21 **McCarthy, D.P.**, M.N., Demuth and C.M. Zdanowicz, 2007. Use of digital photogrammetry to establish lichenometric dating controls in the Selwyn Mountains, NWT. CANQUA 2007, Ottawa, June 4-8, 2007.
- 22 **McCarthy, D.P.** and U. Brand, 2010. Lichen biomonitoring of Canada's busiest highway. The 42nd Air Pollution Workshop. April 12-14, 2010. Asheville, North Carolina.
- 23 **McCarthy, D.P.** 2012. Use of lichens and tree bark as biomonitors of urban air and nutrient loading. Invited oral presentation at Best in Science Environmental Science Symposium, May 31, 2012, Ontario Ministry of the Environment, Toronto.
- 24 **McCarthy, D.P.** 2012. Growth and survival of cushion plants in glacier forefields. CWRA-CGU Conference, Banff, Alberta, June 5-8, 2012.

Poster Presentations:

- 1 DeMan, J. and **D. McCarthy**, 2004. Digital measurement of percentage lichen cover. Leading Edge 2004. Quality Hotel Parkway Convention Centre, March 3-5, 2004, St. Catharines, Ontario.
- 2 Demuth, M.N., **D.P. McCarthy**, C.M. Zdanowicz, V. Pinard and L. Robertson. 2007. Secular change in the glacier cover contributing flow to a World Heritage River ▽ initial findings from work in the Ragged Ranges and headwaters of the South Nahanni River, NWT. CANQUA 2007, Ottawa, June 4-8, 2007.
- 3 **McCarthy, D.P.**, P. Tulumello and L. Fiore, 2008. *Ambient air quality monitoring using arboreal lichens in Sarnia and Hamilton*. Poster and abstract presented at Best in Science Environmental Science Symposium, March 7, 2008, Ontario Ministry of the Environment, Toronto.
- 4 **McCarthy, D.P.** 2012. Use of lichens and tree bark as biomonitors of urban air and nutrient loading. Poster presented at Best in Science Environmental Science Symposium, May 31, 2012, Ontario Ministry of the Environment, Toronto.
- 5 **McCarthy, D.P.** 2012. Lichen bags and lichen species richness give a crude measure of seasonal and spatial differences in airborne heavy metals. Poster and abstract presented at CWRA-CGU Conference, Banff, Alberta, June 5-8, 2012.

D4 Grants Obtained:

a) internal grants:

Brock University Student Research Award: (in 2005, to Vanessa Redwing)

for work as a researcher in my lab

\$3,250.00

Research Assistant (awarded but position not filled) \$4,480.00

Research Assistant - general (A. Kruger) \$1,535.04

Research Assistant - dendrochronology (J.R. Taylor) \$3,517.78

Research Assistant - dendrochronology (J.R. Taylor) \$6,715.20

Oct. to May 2001 \$11,768.02

Research Assistant - dendrochronology (J.R. Taylor) \$1,535.04

Research Assistant - dendrochronology (J.R. Taylor) \$6,549.50

Oct. to May 2002 \$8,084.54

Research Assistant (C. VanNess, J.R. Taylor)

Feb. to April, 2002 \$6,549.50

Web Developer (Student Web Development Team) \$5,000.00

Research Assistant and Web Developer

(D. Uyenaka, S. Beatty) Oct. to May, 2004 \$6,095.00

(V. Redwing, L. Neville) Oct. to May, 2005 \$7,804.00

Research Assistant (not hired) Oct. to May 2006 \$4,264.74

(L. Neville) May to August 2006 \$10,377.81

Instructional Technology Grant (summer 2003)

To develop virtual field trips and on-line labs \$1,500.00

Teaching & Learning Innovation Grant (summer 2019)

\$2,900.00

Northern Studies Training Grants

University of Saskatchewan

1987: Recent glacial activity in Kwadacha Wilderness, B.C.

University of Western Ontario

1984: A study of avalanche impact landforms in Kluane National Park, Yukon.

1982: Geomorphology of the Geikie Creek valley, B.C.

Release Time Research Award, Brock University.

1996: 1/2 course release: Establishment of a dendrochronology lab.

Research Seed Fund, Brock University.

2001: Climate change in the Columbia Mountains

1996: Dating historic glacial activity on the western flanks of the Canadian Rockies.

b) refereed external grants:

Royal Canadian Geographical Society Research Award

1986: Recessional history of the Illecillewaet Glacier, B.C. approx. \$3,000.00

NSERC Individual Research Grant:

1997-2000: Improving lichenometry for use in estimating the timing
of glacial events and geological hazards. approx. \$32,000.00

National Geographic Society: 2015-16

Establishing a biological foundation for lichenometric dating: measurement of lichen vital rates.
approx. \$19,000.00

National Geographic Society: a joint application with K. Turner and H. Ugalde: submitted May 2019, awaiting decision: Ice loss and wetland change in the headwaters of the Columbia River basin, BC, Canada. Approx.. \$78,000

c) research contracts/external grants:

Ontario Ministry of the Environment, "Best in Science Grant" (2011-12):

Use of tree bark as a biomonitor of nutrient hypertrophication. \$38,800.00

Science Horizons Youth Internship program – Govt. of Canada, June-Nov. 2011

6 month research internship for recent M.Sc. student (grant was awarded, but I declined) \$10,000.00

Ontario Ministry of the Environment (2008):

Tracking transportation sources using lichen community analysis. \$50,000.00

Ontario Ministry of the Environment (2008-2011):

Monitoring ambient air quality with lichens and tree bark. \$150,000.00

Geological Survey of Canada (summers 2005, 2006, 2007, 2018)

Ragged Ranges Glacier Research - Nahanni National Park Reserve

ca. \$16,000 per year (shared helicopter flights and field assistants) \$65,000.00

Environment Canada (March 2007)

Feasibility study for using lichen biomonitoring to monitor the effectiveness of CEPA.

A report to Science Risk Assessment Directorate, Science & Technology Branch \$ 9,600.00

Ontario Ministry of the Environment: Best in Science Grant" (2005)

Ontario Urban Lichen Monitoring Program					\$25,000.00
<i>Ontario Ministry of the Environment (2005): Instrumentation</i>					
Multi-year loan of a LICOR 6200 Photosynthesis Analysis System					\$20,000.00
<i>Parks Canada: Nahanni National Park: (2005)</i>					
Airfare, helicopter flights (14 hrs) and accommodation, July 2005.					\$17,000.00
<i>Salamander Foundation (2005) Grant in aid of research.</i>					
Lichen monitoring in Ontario.					\$5,500.00
<i>City of Hamilton (2005): Arboreal lichen monitoring/survey</i>					
					\$5,000.00
<i>Hamilton Community Foundation: McCallum McBride Fund 2005.</i>					
Lichen monitoring in Hamilton.					\$5,000.00
<i>Environment Canada: Ecological Monitoring and Assessment Network (EMAN) (2005)</i>					
Lichen chemical analysis					\$3,500.00
<i>Environment Canada: Ecological Monitoring and Assessment Network (EMAN) (2004)</i>					
Arboreal lichen survey of Hamilton					\$5,000.00
Development of EMAN protocol for digital measurement of arboreal lichen cover					\$3,000.00
Design and production of lichen photo stands and sampling chains					\$ 600.00
Upwind Downwind Conference registration					\$ 290.00
<i>Parks Canada: Glacier National Park: (2003)</i>					
Grant and in-kind support for my research in 2002 on Lichen ecology/Environmental change					
Free housing	1 wk.	Free field assistant	1 wk.		
Travel expenses					\$1,000.00
<i>Whyte Museum of the Canadian Rockies (2003)</i>					
Served as scientific expert, produced virtual museum and on site exhibit: <i>Measures in time</i>					
Web site development and exhibit funding					\$6,000.00
Travel and accommodation to open the exhibit					\$1,500.00
<i>NRCAN Geological Survey of Canada, Terrain Sciences, Glaciology Division (2003)</i>					
Web Site Development					\$2,000.00

E. Teaching activities:

I have taught more than a dozen different university courses in the past twenty-four years. Ten of these courses are new to Brock and most have a lab, field and/or computer component. I emphasize the importance of reading, writing, oral presentation and critical thought and mark student research papers for grammar as well as scientific content. I am drawn to new technology. I was the first professor in the Dept. of Geography to use PowerPoint in my lectures and have used WebCT and Sakai since the early 1990s. I have also worked with the Brock Center for Teaching and Learning and Brock's Student Web Development Team to develop learning objects and I am using 3D/4D modelling in my teaching and research. In 2003 my work on the Measures in Time exhibit at the Whyte Museum helped to educate over 30,000 people about the nature of environmental change in the Canadian Rockies. My biomonitoring work with EMAN and later with the Ontario Ministry of the Environment included citizen science training events and the development of outreach/distance learning materials. Collaboration with Parks Canada also led to a self-guided hiking trail and pamphlet for the RockGarden Trail in Glacier National Park. I am now using 3D modelling and differential GPS in both research and teaching and hold an RPAS pilot (basic) license.

E1 Courses taught:

* includes lab design, demonstration, marking + night course

Brock University, St. Catharines, ON

Year/Duration: Enrolment: Course Number & Title:

2000-01 D3		222	Geog 1F91 Introduction to Physical Geography
1998-99 D1		264	(I taught 2 of the full course each time)
1996-97 D1+		64	
1995-96 D1		348	
2003-04 D3	33		Ersc 2P00* Natural Hazards
2001-02 D3	28		
2012-13 D2	28		Ersc/Geog 2P09 Principles of Biogeography
2011-12 D2	31		
2010-11 D2	31		
2009-10 D2		43	
2008-09 D2	58		
2007-08 D2	53		
2005-06 D2	46		
2004-05 D2		19*	
2003-04 D2	19*		

2002-03 D2	19*	
2001-02 D2	19*	
2000-01 D2		29*
1999-00 D2		
1998-99 D2		23
1997-98 D3	53	
1996-97 D2		32
1995-96 D3	48	
2018-19 D2	31	Ersc 2P61 Environmental Geoscience
2017-18 D2	22	
2016-17 D2	18	
2015-16 D2	16	
2014-15 D2	23	
1998-99 D2		9* Geog 3P32 Biogeography: Patterns and Processes
1997-98 D2	19	
2015-16 D3	11	Ersc/Geog 3P33 Biodiversity
2012-13 D3	8	
2011-12 D3	13	
2010-11 D3		22
2009-10 D3	16	
2008-09 D3	15	
2007-08 D3	11	
2006-07 D2	14	
2005-06 D3	13	
2004-05 D3	12	
2003-04 D2	12	
2001-02 D2		13*
2000-01 D3		20
1999-00 D3		1* Geog 3P33 (taught while on sabbatical)
1998-99 D3	12	
1996-97 D3		15

1995-96 D3		14*	Geog 3P33 Applied Biogeography
2018-19 D3		6	Ersc/Geog 3P35 Biomonitoring and environmental
2017-18 D3	7		stress assessment
2016-17 D2		18	
2015-16 D2		9	
2008-09 D2	6		
2006-07 D2		11	
1997-98 D2		17	Geog 3P56 Physical Geography Field course
1996-97 D2		23	
2003-04 D4		1	Biol 3V94 Special topics in biology
1997-98 D3	13		Geog/Biol3V91 Ecology of Recently Deglaciaded Terrain
1997-98 D2		5	Geog 3V92 Directed Readings: Rocky Mountains
2018-19 D3		24	Biol/Ersc/Geog 3P85 Ecology of a Changing Planet
2017-18 D3		30	
2016-17 D3		36	
2015-16 SP		24	
2012-13 D3		30	
2011-12 D2		29	
2010-11 D2		50	
2009-10 D2		58	
2008-09 D3		58	
2007-08 D3	39		
2005-06 D3	59		
2004-05 D3	46		
2003-04 D3		42	
2002-03 D3		68	
2001-02 D3		43	

2001-02 D2		1	Ersc 3P95 Special Topics	
2012-13 D2			4	Ersc 3Q99 Environmental Geoscience Field Course
2000-01 D2		5	Geog 4P35 Vegetation and Climate Change	
1998-99 D2		1		
1997-98 D3			10	
1996-97 D3		7		
1995-96 D1			5	
2004-05 D2		7*	Ersc/Geog 4P80 Dendrochronology	
2018-19 D2		6	Biol/Ersc/Geog 4P85 Ecosystems & Changing Disturbance	
2017-18 D2	18	Regimes		
2016-17 D3		16		
2011-12 D3	19			
2010-11 D3	25			
2015-16 D4		1	Biol 4F90	Honours Thesis
2005-06 D2		3		
2004-05 D2		2		
2003-04 D3			1	
2002-03 D2		1		
2008-09 D2/3		1	Biol 4F92 Literature research and seminar	
2007-08 D2/3	1			
2006-07 D3	1			
2005-06 D3		3		
2004-05 D2		2		
2003-04 D2		1		
2002-03 D3		1		
2002-03 D2		1	Geog 4P95 Directed Readings	

2000-01 D3	1	
2001-02 D3	1	Geog 4P95 Directed Readings
2001-02 D2	1	
2015-16 D2		1 Ersc 5V92 Techniques in Biomonitoring
2006-07 D2	1	
2005-06 D3		1
2010-11 D3	1	Ersc 5P92 Biomonitoring in urban environments
2009-10 D3	1	
2008-09 D2	2	
2005-06 D2	1	
2009-10 D2/3	1	Ersc 5P95 M.Sc. Research Seminar in Earth Sciences
2008-09 D2/3	1	
2007-08 D2/3	1	

Northwest Community College, Terrace, BC

1994-95 D2	20	Geog 150.3*	Introductory Physical Geography: I
1994-95 D3	20	Geog 160.3*	Introductory Physical Geography: II
1994-95 D3	8	Geog 202.3*	Ecosystems
1994-95 D3	8	Geog 203.3*	Geomorphology

Northwest Community College, Prince Rupert, BC

1993-94 D2	20	Geog 150.3*	Introductory Physical Geography 1
1992-93 D2	20		
1993-94 D3	19	Geog 160.3*	Introductory Physical Geography 2
1992-93 D3	19		
1993-94 D2	20	Biol 101.3*	Introductory Biology 1
1992-93 D2	20		
1992-93 D3	20	Biol 102.3*	Introductory Biology 2
1993-94 D3	20		

1993-94 D2 30 Geog 225.3 Regional Geography of British Columbia
1992-93 D2 30
1993-94 D3 30 Geog 226.3 Regional Geography of Canada
1992-93 D3 30

University of Saskatchewan, Saskatoon, SK

taught 11 sections

1986 to 92 100 Geog 110.6 Introductory Physical Geography

Theses supervised:

Graduate Theses Supervised:

Bukovics, T. 2012-16. Photogrammetric exploration of demographic change in juvenile *Rhizocarpon geographicum* thalli. M.Sc. thesis, Dept. of Biological Sciences, Brock University, 96pp. Main Supervisor

Kaczmarczyk, A. 2009-15. Use of tree bark as a biomonitor of nitrate. M.Sc. Candidate, Dept. of Earth Sciences, Brock University. Main Supervisor.

Henry, N. 2007-11. Measurement of growth in the lichen *Rhizocarpon geographicum* using a new photographic technique. M.Sc. thesis, Dept. of Biological Sciences, Brock University. Main Supervisor.

Redwing-Shaw, V. 2006-10. Use of milkweed as a biomonitor of ambient ozone, southwestern Ontario. M.Sc. Candidate, Dept. of Earth Sciences, Brock University. Main Supervisor.

Tulumello, P. 2004-10. Lichen monitoring of ambient air quality in Sarnia Ontario. M.Sc. thesis, Dept. of Earth Sciences, Brock University. Main Supervisor.

Undergraduate Theses Supervised:

Gervais, E. 2016. Tracking areole zonation in the lichen *Rhizocarpon geographicum* agg. Honours B.Sc. thesis, Department of Biology, Brock University. Main Supervisor.

Henry, N. 2006. Photosystem II response to sulphur dioxide loading in the lichen *Parmelia sulcata*. Honours B.Sc. thesis, Department of Biology, Brock University. Main Supervisor.

Redwing, V. 2006. Photosynthetic response to sulphur dioxide loading in arboreal lichens. Honours B.Sc. thesis, Department of Biology, Brock University. Main Supervisor.

Ventresca, S. 2006. Estimation of copper, lead and nickel LD₅₀ values and their effects on photosynthesis in arboreal lichens. Honours B.Sc. thesis, Department of Biology, Brock University. Main Supervisor.

Marshall, K. 2006. Impact of substrate pH on Photosystem II in arboreal lichens. Honours B.Sc. thesis, Department of Biology, Brock University. Main Supervisor.

Mason, M. 2005. Estimation of copper and lead LD₅₀ values and the effects on photosynthesis in the lichen *Parmelia sulcata*. Honours B.Sc. thesis, Department of Biology, Brock University. Main Supervisor.

VanWyck, K. 2005. Chlorophyll fluorescence studies on the lichen *Parmelia sulcata*. Honours B.Sc. thesis, Department of Biology, Brock University. Main Supervisor.

Kadir, S. 2004. Digital measurement of percentage arboreal lichen cover, Welland, Ontario. Honours B.Sc. thesis, Department of Biology, Brock University. Main Supervisor.

Medeiros, A. 2003. The use of image analysis to measure lichen community development on the Illecillewaet Glacier forefield, Glacier National Park, BC. Honours B.Sc. thesis, Department of Biology, Brock University. Main Supervisor.

Burke, M. 1999. Composting of organic fast-food industry waste. Honours B.Sc. thesis, Environmental Sciences - Biology stream, Brock University. Co-supervisor

Sadowski, E.M. 1998. The biogeography of alpine amphibians. Honours B.Sc. thesis, Department of Geography, Brock University. Main Supervisor.

VanRhee, M. 1998. Dendrochronological investigations at two sites in southwestern British Columbia. Honours B.Sc. thesis, Department of Geography, Brock University. Main Supervisor.

E3 Other contributions devoted to pedagogical interest:

I have long been a user of Computer Aided Instruction (CAI). This started in Geog 1F91 (1996-2001) and has been ongoing in all of my courses - with annual revision of Powerpoint lecture materials. I contributed to and oversaw the development of the Geography department web page. I have written field manuals and have tested and revised more than 200 original laboratory exercises. I have developed and tested a new CAI approach that can be used in undergraduate instruction (D3 paper #10) and developed a dendrochronology lab for research and teaching at Brock. Since 1990 I have attended over a dozen effective teaching workshops at Brock, Northwest College and the University of Saskatchewan and I have always earned high teaching evaluations from students. I have presented several seminars in Brock's Biology Department, the Department of Geography at McMaster University and at the Ontario Ministry of the Environment. I have worked on the Campus Risk Management Committee where I helped develop safety protocols for the design and approval of academic field trips.

F University/Community Service:

Brock:

Member: Technical Environmental Working Group. Region Niagara Planning and Development Dept. 2000

Observer: Senate Rules Committee: Brock University Faculty Association, 1997/98

Member: Research Committee, Brock University, 1998, 2001

Member: Science Safety Committee, Brock University. 1996-2005

Member: Field Trip Safety Subcommittee of Science Safety Committee, Brock University. 1999

Member: BUFA Committee on the Terms and Conditions of Employment, 2003.

Member: BUFA Executive Committee, 2006, 2008

Member: BUFA Normal Departmental Workload Standards Advisory Committee 2010

Chair: BUFA Committee on Working Environment, 2003-06

Chair: Joint Health and Safety Subcommittee: Asbestos Risk Management Committee, 2004-06

BUFA representative to: Brock University Joint Health and Safety Committee, 2003-06

BUFA representative to: Campus Risk Management Committee 2004-05, 2009-10

Brock Department of Earth Sciences: Curriculum Committee, 2003-05

Brock Department of Earth Sciences: Departmental Library Representative, 2003-06, 2011, 2012, 2015-16

Member: Ontario Graduate Research Scholarships Review Committee. Biological Sciences. 2005.

Member: 2012-16 Faculty Tenure and Promotion Committee

Member: 2015: Senate Research and Scholarship Policy Committee

Senator, Brock University 2017

BUFA Observer: 2016-2017 Senate Research and Scholarship Policy Committee

BUFA Observer: 2017-2018 Information Technology and Infrastructure Committee

Member: 2018-2019 Information Technology and Infrastructure Committee

Northwest Community College:

Faculty Representative:

Biology/Geography Hiring Committee, 1994

Natural Resources Career Development Project, 1994

University Credit Planning Committee, 1994

U.N.B.C. Liason Committee, 1994

University credit course calendar committee, 1994

Shop Steward: C.U.P.E. 2409, 1993/94

Negotiator: Contract Bargaining Committee, Academic Workers Union, 1993

Faculty Representative: Health and Safety Committee, 1993

Chair: Library Committee, Prince Rupert Faculty Association, 1993

University of Saskatchewan:

Sessional Lecturer Representative: C.U.P.E. 3287

Arts-Commerce-Law: Health and Safety Committee, 1991/92

McCarthy, Francine

CURRICULUM VITAE- Francine M.G. McCarthy

A. FORMAL EDUCATION:

Institution	Degree Awarded	Year of Degree
Dalhousie University	Ph.D.	1992
University of Toronto	M.Sc.	1986
Dalhousie University	B.Sc (Hons.)	1984

B. ACADEMIC DISTINCTIONS AND AWARDS:

Killam Memorial Scholarship, 1988-91
NSERC Postgraduate Scholarship, 1984-86
CSPG Undergraduate Award, 1983
Dalhousie University Entrance Scholarship, 1980-81

C. ACADEMIC POSITIONS HELD:

Institution	Position	Dates
Brock University	Director, Graduate Program Earth Sciences	July 1, 2017- present
Brock University	Director, Graduate Program Sustainability Science	July 1, 2017- June 30/18
Brock University	Core member, Centre for Environmental Sustainability	May 1, 2017- present July 1, 2017- June 30/18
Brock University	Associate Member Biological Sciences	May 1, 2015- present

Brock University	Chair	July 1, 2011- June 30/15
	Earth Sciences	
Brock University	Professor	July 1, 2002- present
	Earth Sciences	
Brock University	Director, Great Books/ Liberal Studies Program	July 1, 2001- Aug. 1, 2004; July 1, 2006- June 30/07
Brock University	Associate Professor	July 1, 1996-June 30/02
	Earth Sciences	
Brock University	Director, Environmental Sciences Program	Jan. 1, 1998- July 1, 2000
McMaster University	Adjunct Professor,	July 1, 1995-2000;
	Geography and Earth Sciences	2005-present
Brock University	Assistant Professor	July 1, 1992-June 30/96
	Earth Sciences	
Brock University	Lecturer	July 1, 1991- May 1/92
St. Francis Xavier University	Lecturer	Jan.1, 1990- Dec. 31/90

D. SCHOLARLY ACTIVITIES

1. PUBLICATIONS

a) *Chapters/ articles in refereed books:* (student coauthors underlined)

5. **McCarthy, F.M.G.**, Krueger, A.M. (2013). Freshwater dinoflagellates in paleolimnological studies: *Peridinium* cysts as proxies of cultural eutrophication in the southeastern Great Lakes region of Ontario, Canada. In Lewis, J. M., Marret, F. & Bradley, L. (eds) *Biological and Geological Perspectives of Dinoflagellates*. The Micropalaeontological Society, Special Publications. Geological Society, London, 2013, p. 133-139 (65% contribution)

b) *Articles in refereed journals:* (student coauthors underlined)

Waters, C.N., Fairchild, I.J., **McCarthy, F.M.G.**, Zalasiewicz, J., Turney, C.S.M., and Williams, M. (2018). How to date natural archives of the Anthropocene. *Geology Today* 34(5):182-187.

Monecke, K., **McCarthy, F.M.G.**, Hubeny, J.B., Ebel, J.E., Brabander, D.J., Kielb, S., Howey, E., Janigan, G., and Pentesco, J. (2018). The AD 1755 Cape Ann earthquake in lake sediments of eastern New England - an

- interdisciplinary paleoseismic approach. *Seismological Research Letters*, Vol. 89 (3): 1212-1222. (20% contribution).
- McCarthy, F.M.G.**, Gu, H., Mertens, K.N., Carbonell-Moore, M.C., Krueger, A.M., Takano, Y., & Matsuoka, K. (2018). Reassigning *Peridinium wisconsinense* (Dinophyceae) to the family Thoracosphaeraceae, genus *Fusiperidinium* gen. nov. *Phycological Research* 66(2): 137-148 (40% contribution).
- Hubeny, J.B., Kristiansen, E., Danikas, A., Zhu, J., **McCarthy, F.M.G.**, Cantwell, M.G., Warren, B., and Allen, D. (2018). Multi-century record of anthropogenic impacts on an urbanized mesotidal estuary: Salem Sound, MA. *Estuaries and Coasts* 41: 404–420 (5% contribution).
- ***McCarthy, F.M.G.**, Riddick, N. L., Volik, O., Danesh, D.C., Krueger, A.M. (2018). Algal palynomorphs as proxies of human impact on freshwater resources in the Great Lakes region. *Anthropocene* 21:16-31 (30% contribution).
- Prader, S., Kotthoff, U., **McCarthy, F.M.G.**, Schmiedl, G., Donders, T.H., and Greenwood, D.R. (2017). Vegetation and climate development of the New Jersey Hinterland during the Late Middle Miocene (IODP Exp. 313 Site M0027). *Palaeogeography, Palaeoclimatology Palaeoecology*, 485: 854-868 (15% contribution).
- Wang, N; Luo, Z; Mertens, K; **McCarthy, F.**; Gu, L; Gu, H. (2017). Cyst-motile stage relationship and molecular phylogeny of a new freshwater dinoflagellate *Gymnodinium plasticum* from Plastic Lake, Canada. *Phycological Research* 65: 312-321 (5% contribution).
- McCarthy, F.M.G.**, Drljepan, M., Hubeny, J.B., Krueger, A.M., Pilkington, P.M., Riddick, N.L. and MacKinnon, M.D. (2017). The influence of dissolved oxygen on dinoflagellate cyst distribution across Sluice Pond, a meromictic lake in NE Massachusetts, USA. *Palynology* v. 41(4), p.516-532 (35% contribution).
- Riddick, N.L., Volik O., **McCarthy, F.M.G.**, and Danesh, D.C. (2017). The effect of acetolysis on desmids. *Palynology* v. 41(1), p. 171-179 (20% contribution)
- Volik, O., **McCarthy F.M.G.**, Riddick, N.L. (2016). Insights from pollen, non-pollen palynomorphs and testate amoebae into the evolution of Lake Simcoe. *J. Paleolimnology* 56: 137-152. (40% contribution).
- Luo Z., Mertens, K.N., Bagheri, S. Aydin, H., Takano, Y., Matsuoka, K., **McCarthy, F.M.G.**, Gu, H (2016). Cyst-theca relationship and phylogenetic positions of *Scrippsiella plana* sp. nov. and *S. spinifera* (Peridinales, Dinophyceae). *European Journal of Phycology* v. 51(2), p. 188-202. (5% contribution)
- Krueger, A.M. and **McCarthy F.M.G.** (2016). Great Canadian *Lagerstätten* 5: Crawford Lake – a Holocene lacustrine *Konservat-Lagerstätte* with two-century-old viable dinoflagellate cysts. *Geoscience Canada* v. 43(2), p.123-132. (45% contribution)
- Hubeny, J.B., **McCarthy, F.M.G.**, Lewis, J., Cantwell, M., Drljepan, M., Morissette, C., King, J.W., Crispo, M.L. (2015). Holocene stratigraphy, environmental history and regional hydroclimate significance of Sluice Pond, northeastern MA. *Journal of Paleolimnology* 53(3): 251–287 (20% contribution)
- Drljepan, M., **McCarthy, F.M.G.**, Hubeny, J.B. (2014). Natural and cultural eutrophication of Sluice Pond, MA recorded by algal and protozoan microfossils. *The Holocene* v. 24(12), p. 1731–1742 (40% contribution)
- Kotthoff, U., Greenwood, D.R., **McCarthy, F.M.G.**, Müller-Navarra, K., Prader, S., Hesselbo, S.P. (2014). Late Eocene to middle Miocene (33 to 13 million years ago) vegetation and climate development on the North American Atlantic Coastal Plain (IODP Expedition 313, Site M0027). *Climate of the Past Discussions*, v. 10, p. 1523–1539. (20% contribution)
- Danesh, D., **McCarthy, F.M.G.**, Volik, O., Drljepan, M. (2013). Non-pollen palynomorph record of cultural eutrophication in Lake Simcoe. *Palynology* v. 37, p. 231–245 (35% contribution)

- McCarthy, F.M.G.**, Katz, M.E., Kotthoff, U., Browning, J.V., Miller, K.G., Zanatta, R., Williams, R., Drljejan, M., Hesselbo, S., Bjerrum, C., Mountain, G. (2013). Eustatic control of New Jersey margin architecture: palynological evidence. *Geosphere* v. 9(6), p. 1457–1487. (60% contribution)
- Browning, J.V., Miller, K.G., Sugarman, P.J., Barron, J., **McCarthy, F.M.G.**, Kulhanek, D.K., Katz, M.E., Feigenson M.D. (2013). Chronology of Eocene-Miocene sequences, on the New Jersey shallow shelf: implications for regional, interregional, and global correlations. *Geosphere* v. 9(6), p. 1434–1456 (10% contribution)
- Fang, L., Bjerrum, C., Hesselbo, S.P., Kotthoff, U., **McCarthy, F.M.G.**, Huang, B., Ditchfield, P.W. (2013). Carbon-isotope stratigraphy from terrestrial organic matter through the Monterey Event, Miocene, New Jersey margin (IODP Expedition 313). *Geosphere* v. 9(6), p. 1303–1318. (5% contribution)
- McCarthy, F.M.G.** and McAndrews, J.H. (2012). Early Holocene drought in the Great Lakes basin caused hydrologic closure of Georgian Bay. *Journal of Paleolimnology* v. 47, p. 411-428. (75% contribution)
- McCarthy, F.M.G.**, Tiffin, S.H., Sarvis, A.P., McAndrews J.H., Blasco, S.M. (2012). Early Holocene brackish closed basin conditions in Georgian Bay: microfossil evidence. *Journal of Paleolimnology* v. 47, p. 429–445. (50% contribution)
- McCarthy, F.M.G.**, Mertens, K.N., Ellegaard, M., Sherman, K., Pospelova, V., Ribeiro, S., Blasco, S., Vercauteren, D. (2011). Resting cysts of freshwater dinoflagellates in southeastern Georgian Bay (Lake Huron) as proxies of cultural eutrophication. *Review of Palaeobotany and Palynology* v. 166, p. 46-62 (40% contribution)
- Neville, L.A., **McCarthy, F.M.G.**, MacKinnon, M.D., Swindles, G.T., and Marlowe, P. (2011). Thecamoebians (testate amoebae) as proxies of ecosystem health and reclamation success in constructed wetlands in the oil sands of Alberta, Canada. *Journal of Foraminiferal Research*, v. 41, p. 230- 247 (30% contribution)

c) Published conference proceedings (incl. abstracts): (*denotes invited contribution)

Conference Proceedings:

- Neville, L.A., Gammon, P., Patterson, R.T., **McCarthy, F.M.G.**, MacKinnon, M.D., and Macumber, A. (2013). Responses of benthic microorganisms (thecamoebians) to oil sands process-affected materials, providing endpoints for gauging aquatic reclamation success. *Proceedings, International Oil Sands Tailings Conference* (IOSTC), 10 pp
- McCarthy, F.M.G.**, Blasco, S.M., Lewis, C.F.M., Harrison, P.H. (2011). The submerged early postglacial beach off Flowerpot Island- implications for major climate-driven changes in water level and water quality in the recent geologic past. Conference Proceedings, *Leading Edge*, St. Catharines
<http://escarpment.org/education/conference/eleven/index.php> (65% contribution)
- Krueger, A.M., **McCarthy, F.M.G.**, McAndrews, J.H., Turton, C. (2011). Cultural eutrophication of Crawford Lake- a palynological perspective. Conference Proceedings, *Leading Edge*, St. Catharines
<http://escarpment.org/education/conference/eleven/index.php> (35% contribution)

Conference Abstracts:

- Danesh, D.C., **McCarthy, F.M.G.**, Sangiorgi, F., and Cumming, B.F. 2019. Assessment of the utility of freshwater dinoflagellate cysts in paleoecological studies: a 33-lake calibration set and down core analysis from NW Ontario, Canada. *AASP 2019*, Ghent, July 2019. (25% contribution).
- McCarthy, F.M.G.**, Krueger, A.M., Gurdebeke, P., Mertens, K., Fensome, R., and Lucas-Clark, J. 2019. The Peridiniacean lineage and its transition to freshwater environments: the strange case of *Peridinium limbatum*. *AASP 2019*, Ghent, July 2019. (50% contribution).

- Krueger, A.M., **McCarthy, F.M.G.**, Danesh, D.C., Gurdebeke, P., Mertens, K.N., Cumming, B.F. Ecology and taphonomy of the recent freshwater dinoflagellate *Peridinium limbatum*: insights from sediment trap and lakebed studies. *AASP 2019*, Ghent, July 2019. (35% contribution).
- Waters CN., Zalasiewicz J., Head MJ., **McCarthy FMG.**, Thomas ER., Kaiser J., Ivar do Sul JA., Shotyk W., DeLong KL., Barnosky AD., Hadley EA., Stegner MA., An Z., Fairchild IJ., Himson S., Rose NL., Gajuszka A., Hajdas I., Wagnreich M., Summerhayes C., Williams M. (2019). Progress in the investigation for a potential Global Boundary Stratotype Section and Point (GSSP) for the Anthropocene Series. *STRATI 19*, Milan, July 2-5, 2019. (5% contribution).
- McCarthy, F.M.G.**, Burt, A. and McAndrews, J.H. 2019. Lake Ontario's sensitivity to climate- a Holocene perspective. *IAGLR 2019*, Meeting of the International Association for Great Lakes Research, Brockport, NY. (65% contribution).
- Pilkington, P.M., **McCarthy, F.M.G.**, Garner, C.S., Krueger, A.M., Kornecki, K.M., and Katz, M.E. 2019. The Queen of American Lakes: Algal palynomorphs and pollen as indicators of disturbance in the Lake George Watershed. *IAGLR 2019*, Brockport, NY. (35% contribution).
- McCarthy, F.M.G.** Head, M.J., Patterson, R.T., McAndrews, J.H., Krueger, A.M., Heyde, A., Turton, C., Alderson, A., Cocker, S., Tepavecic, M. 2019. Defining the Anthropocene at Crawford Lake as an integral part of the Niagara Escarpment Geoheritage. *GAC MAC 2019*, Quebec City. (50% contribution).
- Waters, C.N. and the Anthropocene Working Group (B. Scherer, A.D. Barnosky, Z. An, I.J. Fairchild, E.A. Hadly, S. Himson, J. Kaiser, **F.M.G. McCarthy**, W. Shotyk, E.R. Thomas, J. Zinke, N. Duprey, I. Hajdas, M.J. Head, A. Gałuszka, N.L. Rose, M.A. Stegner, C. Summerhayes, M. Williams, J. Zalasiewicz), 2019. Progress in the investigation of a potential Global Boundary Stratotype Section and Point (GSSP) for the Anthropocene Series. *EGU 2019*, Vienna, April 7-12, 2019. (5% contribution).
- Krueger, A.M., **McCarthy, F.M.G.**, Paterson, A Vasseur, L. (2018). A dinoflagellate's journey through the water column to the lakebed: A case study from Plastic Lake, and Harp Lake, ON, Canada. *CANQUA*, Ottawa (25% contribution).
- Pilkington, P.M., **McCarthy, F.M.G.** (2018). Rise of the green algae: algal palynomorphs record anthropogenic impact. *CANQUA*, Ottawa (35% contribution).
- McCarthy, F.M.G.**, Krueger, A.M., Danesh, D.C, and Kuzmina, O.B. (2018). Canadian research on freshwater dinoflagellates and their cysts – paleoecological, biostratigraphic, and taxonomic insights. Abstract, Meeting of *AASP - the Palynological Society*, Calgary, AB. (50% contribution).
- McCarthy, F.M.G.**, Neville, L.A., Garner, C.S., and Patterson, R.T. (2018). Pollen and non-pollen palynomorphs as biomonitors in oil sands operations. Abstract, Meeting of *AASP - the Palynological Society*, Calgary, AB. (50% contribution).
- McCarthy, F.M.G.**, Volik, O., Riddick, N.L., and Danesh, D. (2018). *Really* long-term monitoring of water quality in Lake Simcoe- palynomorphs in Holocene sediments. Abstract, *IAGLR 2018*, Meeting of the International Association for Great Lakes Research, Toronto, ON. (50% contribution).
- Hussein, S., **McCarthy, F.M.G.**, and Dupont, D. (2018). Institutional challenges of water use management in the Great Lakes- St. Lawrence river basin, in comparison with Ghana. Abstract, *IAGLR 2018*, Meeting of the International Association for Great Lakes Research, Toronto, ON. (25% contribution).
- Garner, C.S., **McCarthy, F.M.G.**, Krueger A.M., Hemon, G., Pilkington, P.M., Kornecki, K.M., Schuller, M., Katz, M.E., Relyea, R.A., Schaller, M.F., Stager, J.C., Boylen, C.W., Eichler, L., and Nierzwicki-Bauer, S.A. (2018). Natural perturbation or anthropogenic impact? Non-pollen palynomorph assemblages as biomonitors in Lake

- George. Abstract, *IAGLR 2018*, Meeting of the International Association for Great Lakes Research, Toronto, ON. (35% contribution).
- McCarthy, F.M.G.**, Garner, C.S., Kornecki, K.M., Schuller, M., Pilkington, P.M., Krueger A.M., Katz, M.E., Relyea, R.A., Schaller, M.F., Stager, J.C., Boylen, C.W., Eichler, L., and Nierzwicki-Bauer, S.A. 2018. Teasing out anthropogenic from natural perturbation on the Lake George ecosystem – evidence from non-pollen palynomorphs in “pollen slides”. Abstract, Meeting, NE Section, Geological Society of America, Burlington VT. (50% contribution).
- Krueger, A.M., **McCarthy, F.M.G.**, Schuler, M.S., Pilkington, P.M., Kornecki, K., Garner, C.S., Vasseur, L., Relyea, R., Katz, M. and Eichler, L. 2018. Dinoflagellates in Lake George- from the water column to the lakebed. Abstract, Meeting, NE Section, Geological Society of America, Burlington VT. (10% contribution).
- Pilkington, P.M., Chen, R., Mitchell, J., Haj Soltan, F., Viscek, J., **McCarthy, F.M.G.**, Knights, C., Newcombe, H., Hubeny, J.B., and Monecke, K. 2018. Rise of the green algae: algal palynomorphs record the history of Walden Pond. Abstract, Meeting, NE Section, Geological Society of America, Burlington VT.
- Passaretti, M., Anaya, M., Wong, S., Monecke, K., Brabander, D.J., Hubeny, J.B. and **McCarthy, F.M.G.** 2018. A multiproxy analysis of sediment cores from Walden Pond, Concord, MA: investigating natural processes and human impacts. Abstract, Meeting, NE Section, Geological Society of America, Burlington VT.
- Kornecki, K.M., Katz, M.E., **McCarthy, F.M.G.**, Schaller, M.F., Gillikin, D.P., and Stager, C. 2017. Calibrating paleo-biomonitoring in Lake George, NY sediments with modern geochemical and limnological measurements. *Annual Meeting of the Geological Society of America*, Seattle, WA.
- McCarthy, F.M.G.**, Mertens, K.N., Gu, H., Carbonell-Moore, M.C., Krueger, A.M., Takano, Y., & Matsuoka, K. (2017). Phycological and palynological evidence of marine – freshwater transition in the family Thoracosphaeraceae. Oral presentation, *DINO11*, Bordeaux France (50% contribution).
- Krueger, A.M., **McCarthy, F.M.G.**, Vasseur, L., Hubeny, J.B., Schuler, M.S., and Paterson, A. (2017). A dinoflagellate’s sedimentary journey: from the water column to the lakebed. poster presentation, *DINO11*, Bordeaux France (35% contribution).
- Danesh, D, **McCarthy, F.M.G.**, Cumming, B.F. (2017). Freshwater dinoflagellate ecology determined from 40-lake calibration set in the Experimental Lakes Area in northwest Ontario, Canada. Oral presentation, *DINO11*, Bordeaux France (10% contribution).
- Pilkington, P.M., F.M.G. McCarthy (2017). A tale of two lakes: algal palynomorphs record the history of Walden Pond and Sluice Pond since the Pilgrims landed in eastern Massachusetts. Poster (Honourable Mention, *Jerôme H. Remick Poster Award*) *GAC MAC Annual Meeting*, Kingston, Ontario (35% contribution).
- Gao, C., D.C. Crabtree, F.M.G. McCarthy, J. Menzies, S. Huot, J.H. McAndrews, S. Clarke and C.L. Turton (2017). Surficial stratigraphy, past ice flows and their implications for drift prospecting in the Hudson Bay Lowlands, Canada. Abstract, *GAC MAC Annual Meeting*, Kingston, Ontario (5% contribution).
- McCarthy, F.M.G.**, Gao, C., Kerr-Lawson, L.J., McAndrews, J.H., Turton, C.L., Karrow, P.F. (2017). Paleobotanical record of Sangamonian interglacial deposits from eastern North America – insights for the 21st century. Abstract, *Joint Meeting, NE-NC Sections, Geological Society of America*, March 2017 (50% contribution)
- Pentesco, J.P., **McCarthy, F.M.G.**, Brooks, G.R., Monecke, K., Hubeny, J.B., Ebel, J., Hughes, D., and Garner, C.S. (2017). Palynofacies Analysis in Eastern North American Lakes Applied to Studies of Paleoseismicity. Abstract, *Joint Meeting, NE-NC Sections, Geological Society of America*, March 2017 (20% contribution)
- Monecke, K., **McCarthy, F.M.G.**, Ebel, J., Hubeny, J.B., Brabander, D., Knights, C., Passaretti, M., Pentesco, J., and Pilkington, P.M. (2017). Multiproxy analysis of unusual sedimentary units of possible seismic origin in

- the lacustrine records of Sluice and Walden Ponds, eastern Massachusetts, USA Abstract, *Joint Meeting, NE-NC Sections, Geological Society of America*, March 2017 (15% contribution)
- Knights, C., Hubeny, J.B, Monecke, K., **McCarthy, F.M.G.**, Knudstrup. R., Passaretti, M., and Stager, J.C. (2017). Paleolimnologic variability of multiple lake basins: Walden Pond, MA. Abstract, *Joint Meeting, NE-NC Sections, Geological Society of America*, January 2017 (10% contribution)
- Dziekan, M.R., Fisher, T.G., Loope, H.M., and **McCarthy, F.M.G.** (2017). Origin of basal sediment within kettle lakes in southern Michigan and northern Indiana: climate change, groundwater fluctuations, or trash. Abstract, *Joint Meeting, NE-NC Sections, Geological Society of America*, March 2017 (5% contribution)
- McCarthy, F.M.G.** and Riddick, N.L., 2016. Non-pollen palynomorphs as proxies of anthropogenic impact. *Annual Meeting of the Geological Society of America*, Denver CO, Sept. 2016.
- Kornecki, K., Katz, M., Relyea, R., Gillikin, D., Schaller, M.F, **McCarthy, F.**, Stager, C., and Wills, C. 2016. It's not our fault: evidence of eutrophication from stable isotopes of Lake George, NY. *Annual Meeting of the Geological Society of America*, Denver CO, Sept. 2016.
- McCarthy, F.M.G.**, Kornecki, K.M., Garner, C.S. and Katz, M.E., 2016. Non-pollen palynomorphs as biomonitors of anthropogenic impact on Lake George, NY. Oral presentation, *59th Conference on Great Lakes Research (IAGLR 2016)*, Guelph ON, June 2016.
- Riddick, N.L., Volik, O., **McCarthy, F.M.G.**, 2016. Review of anthropogenic impact on Lake Simcoe: A focus on Wendat (Huron). Oral Presentation, *59th Conference on Great Lakes Research (IAGLR 2016)*, Guelph ON, June 2016.
- Prader S., Kotthoff, U., **McCarthy, F.M.G.**, Greenwood D.R., 2016. Ecosystem reconstructions for the hinterland of the Atlantic Coastal Plain during the late Mid-Miocene Climatic Optimum (IODP Expedition 313). Abstract, *EGU2016-14831*, Vienna. March, 2016.
- Kornecki, K.M., Katz, M.E., Schaller, M.F., **McCarthy, F.M.G.**, and Stager, J.C., 2016. Testate amoebae and other microfossils of Lake George, NY: understanding the modern analog. Oral Presentation, *NE GSA*, March 2016.
- McCarthy, F.M.G.**, Mertens, K.N., Matusoka, K., Gu, H., Takano, Y., 2015. Constraining the origination of the freshwater dinoflagellate *Peridinium wisconsinense* Eddy from the marine *Scrippsiella* lineage using phylogenetic and biostratigraphic evidence. Oral presentation, *Annual Meeting of the Geological Society of America*, Baltimore MD, Nov. 2015.
- McCarthy, F.M.G.**, Drljepan, M., Hubeny, J.B., and Riddick, N.L., 2015. Refining the lake level history of Sluice Pond, MA using dinoflagellate cyst taphonomy. Poster, *Annual Meeting of the Geological Society of America*, Baltimore MD, Nov. 2015.
- Pentescio, J.T, and **McCarthy, F.M.G.**, 2015. Palynological evidence of climate-driven hydrologic isolation of Lake Superior from the rest of the Great Lakes; implications for future climate scenarios. Poster, *Annual Meeting of the Geological Society of America*, Baltimore MD, Nov. 2015.
- Riddick, N.L., Volik, O., **McCarthy, F.M.G.**, Krueger, A.M., and Danesh, D., 2015. Assessing the effect of acetolysis on desmids, a potentially valuable paleolimnological proxy. Poster, *Annual Meeting of the Geological Society of America*, Baltimore MD, Nov. 2015.
- Krueger, A.M., Garner, C.S. Riddick, N.L., Drljepan, M., and **McCarthy, F.M.G.**, 2015. The non-pollen palynomorph record of meromictic lakes: value in studies of anthropogenic impact. Poster, *Annual Meeting of the Geological Society of America*, Baltimore MD, Nov. 2015.

- Kornecki, K.M., Katz, M.E., Stager, C., **McCarthy, F.M.G.**, and Schaller, M.F., 2015. Using microfossils to reconstruct water quality history in Lake George, NY. Poster, *Annual Meeting of the Geological Society of America*, Baltimore MD, Nov. 2015.
- Kornecki, K.M., Katz, M.E., **McCarthy, F.M.G.**, Schaller, M.F., and Stager, J.C., 2015. Multi-proxy reconstruction of anthropogenic impact in Lake George, NY. Oral Presentation, 58th Conference on Great Lakes Research (IAGLR), May 2015.
- McCarthy, F.M.G.**, Volik, O., Riddick, N., and Danesh, D., 2015. Microfossil evidence of anthropogenic impact on Lake Simcoe. Oral Presentation, 58th Conference on Great Lakes Research (IAGLR), May 2015.
- Riddick, N., Nickel, M., Garner, C., **McCarthy, F.M.G.**, Nottrodt, R., Gunter, R., Cochrane, D., Al-Silwadi, S., and Abomriga, W, 2015. A preliminary paleolimnological study of Lake George, NY, using microfossils. Oral presentation, 58th Conference on Great Lakes Research (IAGLR), Burlington VT, May 2015.
- Garner, C., **McCarthy, F.M.G.**, Nickel, M., Drljepan, M., Kielb, S., and Hubeny, J.B. Non-pollen palynomorphs as indicators of anthropogenic impact on small and large lakes. Poster, 58th Conference on Great Lakes Research (IAGLR), Burlington VT, May 2015.
- McCarthy, F.M.G.**, Drljepan, M., Volik, O., Krueger, A.M., Danesh, D., Riddick, N., Garner, C., 2015. Non-Pollen Palynomorph Records of Natural (Climate-Driven) and Cultural Eutrophication, Oral presentation, AGU-CGU-GAC Joint Assembly, Montreal, May, 2015.
- Riddick, N., Krueger, A.M., **McCarthy, F.M.G.**, Volik, O., 2015. Using Microfossils to Observe the Occupancy of Pre-Historic Peoples: the Value of Non-Pollen Palynomorphs. Abstract, AGU-CGU-GAC Joint Assembly, Montreal, May, 2015.
- Prader S., Kotthoff, U., **McCarthy, F.M.G.**, Greenwood D.R., 2015. Mid-Miocene Vegetation and Climate Development on the Atlantic Coastal Plain (IODP Expedition 313). Abstract, AGU-CGU-GAC Joint Assembly, Montreal, May, 2015.
- McCarthy, F.M.G.**, Garner, C.S., Neville, L.A., 2015 Microfossil biomonitors of reclamation success. Abstract, AGU-CGU-GAC Joint Assembly, Montreal, May, 2015.
- Prader S., Kotthoff, U., **McCarthy, F.M.G.**, Greenwood D.R., 2015. Vegetation and climate development on the Atlantic Coastal Plain during the late Mid-Miocene Climatic Optimum (IODP Expedition 313). Abstract, EGU, Vienna. March, 2015.
- Kielb, S., Hubeny, J.B., Vaillancourt, T.S., Monecke, K, and **McCarthy, F.M.G.** 2015. Limnogeologic record of anthropogenic alterations preserved in Sluice Pond, Lynn, Massachusetts. Award-winning poster, GSA Annual Northeastern Section Meeting, Bretton Woods, NH, March 2015
- Kielb, S., Atanassova, I, Hubeny, JB, Monecke, K, and **McCarthy, F.**, 2014. Cultural eutrophication of Sluice Pond, Lynn Massachusetts, reconstructed from stable isotopes preserved in dated sediment cores. Abstract, GSA Annual Meeting, Vancouver BC, October 2014.
- McCarthy, F.M.G.**, Drljepan, M., Volik, O., Krueger, A., Danesh, D., 2014. Application of non-pollen palynomorphs in paleoenvironmental and geoarcheological studies. Abstract, GSA Annual Meeting, Vancouver BC, October 2014.
- Drljepan, M, **McCarthy, F.M.G.**, and Hubeny J.B., 2014. Dinoflagellates and protozoans as proxies of anthropogenic impact: a study from Sluice Pond, MA. Canadian Association of Geographers, St. Catharines, Canada, May, 2014.

- Volik, O., Danesh, D.C., **McCarthy, F.M.G.**, Drljepan, M. 2014. Temporal and spatial change in anthropogenic impact on Lake Simcoe: insights from pollen, non-pollen palynomorphs and thecamoebians. Abstract IAGLR Meeting, Hamilton, ON, May 2014.
- McCarthy, F.M.G.**, McAndrews, J.H., Papangelakis, E. 2014. Drought in the Lake Huron basin- causes and implications. Abstract IAGLR Meeting, Hamilton, ON, May 2014.
- Neville, L.A., **McCarthy, F.M.G.**, and MacKinnon, M.D. 2014. Nutrient loading speeds up reclamation process in tailings ponds. Abstract, GAC MAC Meeting, Fredericton, May 2014
- Krueger, A.M. and **McCarthy F.M.G.**, 2014. Crawford Lake – a geological, ecological and archeological gem. 2014. Abstract, GAC MAC Meeting, Fredericton, May 2014
- McCarthy, F.M.G.**, Mertens, K.N., Takano, Y., Krueger, A.M., and Head, M.J. 2013. Understanding cyst-theca relationships in freshwater dinoflagellates. Keynote talk, DINO10, San Francisco, Oct. 2013.
- Drljepan, M., **McCarthy, F.M.G.**, Hubeny, J., 2013. Dinoflagellates as a proxy of anthropogenic impact: a study from Sluice Pond, MA. Oral presentation, DINO10, San Francisco, Oct. 2013.
- Volik, O. and **McCarthy, F.M.G.** 2013. Algal palynomorphs response to paleoenvironmental and anthropogenic changes in Lake Simcoe, Ontario, Canada. Poster, DINO10, San Francisco, Oct. 2013.
- Kotthoff, U., **McCarthy, F.**, Greenwood, D., and Hesselbo, S. 2013. Oligocene and Miocene Vegetation and climate development on the Atlantic Coastal Plain (IODP Expedition 313) Geophysical Research Abstracts Vol. 15, EGU2013-4008, 2013
- McCarthy, F.M.G.**, Krueger, A.M., Danesh, D., Volik, O., Drljepan, M., Roy, H., and Hubeny, J.B. 2013. Palynological proxies of anthropogenic impact in North American lakes. Oral presentation at GAC MAC, Winnipeg, May 2013
- Volik, O. and **McCarthy, F.M.G.** 2013. Non-pollen palynomorphs and thecamoebians as proxies of paleoenvironmental change: a case study from Lake Simcoe, Ontario. Poster presented at PALS Symposium, Ottawa, May, 2013
- Volik, O. Danesh, D., **McCarthy, F.M.G.** 2013. Non-pollen palynomorphs as proxies of cultural eutrophication of Lake Simcoe, Ontario. Poster presented at NAMS Microfossils III Conference, Houston, March, 2013
- Neville, L.A., Gammon, P., Patterson, R.T., **McCarthy, F.M.G.**, MacKinnon, M.D., Macumber, 2012. A. Use of an aquatic ecosystem bio-indicator to gauge environmental impact and efficacy of remediation efforts in oil sands tailings ponds and lakes surrounding Fort McMurray. CONRAD conference, Edmonton, AB
- McCarthy, F.M.G.**, Drljepan, M., Zanatta, R., Mahdavi, M., Fischer, E., and Kotthoff, U., 2012. Palynological insights into continental margin architecture. Oral presentation at AASP Meeting, Lexington, KY, July, 2012
- McCarthy, F.M.G.**, Drljepan, M., Brears, E., and Krueger, A.M, 2012. Microfossil evidence of an 8000 year hiatus on the Crawford Lake shoreline. Poster presented at GAC MAC, St. John's May, 2012
- Krueger, A.M. and **McCarthy, F.M.G.** 2012. Iroquois and Euro-Canadian impact on Crawford Lake. Oral presentation at GAC MAC, St. John's May, 2012
- Drljepan, M., **McCarthy, F.M.G.**, Zanatta, R., Kotthoff, U., Mahdavi, M., 2011 Palynofacies from the New Jersey Shallow Shelf. Abstract, Joint AASP-TMS Meeting, Southampton, UK, Sept. 2011.
- Danesh, D., **McCarthy, F.M.G.**, Drljepan, M. Microfossils record the cultural eutrophication of Lake Simcoe, Laurentian Great Lakes region of Canada. Abstract, Joint AASP-TMS Meeting, Southampton

- McCarthy, F.M.G.** (2011). Freshwater dinoflagellates in paleolimnological studies. Abstract, DINO 9, Liverpool, UK, August 2011.
- Krueger, A.M., **McCarthy, F.M.G.** (2011). Cultural eutrophication of Crawford Lake- a dinocyst perspective. Abstract, DINO 9, Liverpool, UK, August 2011
- Krueger, A.M., **McCarthy, F.M.G.**, McAndrews, J.H., Turton, C., and Tobicoe, L.L. (2011). Cultural eutrophication of Crawford Lake- a palynological perspective. *Leading Edge Conference*, St. Catharines, May, 2011
- McCarthy, F.M.G.**, Blasco, S.M., Lewis, C.F.M., Harrison, P.H. and Calvert, M.B. (2011). The early Holocene beach off Flowerpot Island- implications for major climate-driven changes in lake level and water quality. *Leading Edge Conference*, St. Catharines, May 2011
- McCarthy, F.M.G.**, Mahdavi, M., Kotthoff, U., and Head, M.J. (2011). Lower to Middle Miocene Palynology of the Shallow New Jersey Shelf: Evidence of Icehouse Cooling. Abstract, Joint NE-NC GSA Meeting, Pittsburgh, March 2011
- McCarthy, F.M.G.**, Danesh, D. (2011). Holocene paleolimnology in the Great Lakes region- insights from non-pollen palynomorphs in Georgian Bay and in Lake Simcoe. Abstract, Joint NE-NC GSA Meeting, Pittsburgh, March 2011
- Hubeny, J. B., **McCarthy, F.M.G.**, Lewis, J., Cantwell, M., Morissette, C., Crispo, M.L., and Zanatta, R. (2011). Holocene stratigraphy and climate history of Sluice Pond, MA. Abstract, Joint NE-NC GSA Meeting, Pittsburgh, March 2011

d) Non-refereed books:

- Grubinko, V.V., Humenyuk, H.B., Volik, O.V., Svyanko, Y., **McCarthy, F.M.G.** (2013) *Ecosystem of a Regulated Man-Made Water Body Under Urban Pressure: A Case Study from Ternopil Pond, Ukraine*. Ternopil, Vector, 201 p. (in Ukrainian) (5% contribution).

f) Other non-refereed publications:

- McCarthy, F.M.G.** (2018). Palynology in Canada (1): Freshwater dinoflagellates and their cysts. *Canadian Association of Palynologists Newsletter* 41 (2), p. 2-9.
- McCarthy, F.M.G.** and McAndrews, J.H. (2016). New insights into the Don Brickyards Section. *Canadian Association of Palynologists Newsletter* 39 (1), p. 3-6.
- McCarthy, F.M.G.** (2015). Cysts of *Peridinium wisconsinense* Eddy 1930 = *Geiselodinium tyonekense* Engelhardt, 1976; implications for transitions to freshwater in the *Scrippsiella* clade. *Canadian Association of Palynologists Newsletter* 38 (2), p. 13-17.
- McCarthy, F.M.G.** (2015). Exploiting taphonomy to improve lake level reconstruction. *Canadian Association of Palynologists Newsletter* 38 (1), p. 4-8.
- McCarthy, F.M.G.**, McAndrews, J.H., Papangelakis, E. (2015). Paleoenvironmental context for early Holocene caribou hunting on the Alpena-Amberley Ridge, in Sonnenburg, E., Lemke, A.K. and O'Shea, J.M. *Caribou Hunting in the Upper Great Lakes: Archaeological, Ethnographic, and Paleoenvironmental Perspectives*, Memoir 57, University of Michigan, Museum of Anthropology, Ann Arbor, p. 13-29.
- McCarthy, F.M.G.** (2014). Dinoflagellates are funky things. *Canadian Association of Palynologists Newsletter* 37(2), p. 8-16.
- McCarthy, F.M.G.** (2013). NPP- or "what the heck are these things in my slides?" *Canadian Association of Palynologists Newsletter* 36(2), p. 11-18.

Volik, O., **McCarthy, F.M.G.**, Danesh, D., Drljepan, M. (2013). Non-pollen palynomorphs as proxies of anthropogenic impact on lake ecosystems (case study of Lake Simcoe, Ontario, Canada). (in Ukrainian). *Ukrainian Geographical Journal*, 80 (4) p. 14-22.

McCarthy, F.M.G. (2011). *Instructor's Manual to accompany Earth: an Introduction to Physical Geology 3rd Canadian Edition*, by Tarbuck, Lutgens, Tsujita & Hicock, Pearson, Toronto.

g) Research-based reports to government agencies, consulting companies

McCarthy, F.M.G. (2018). *Palynological analysis of samples from McClelland Lake, AB*. Report prepared for L.A. Neville, Enviro-Verse, April 13, 2018. 9 pp.

McCarthy, F.M.G. (2017). *Pollen analysis of lacustrine sediments, Thompson, Wall and Hunter Lakes*. Report prepared for Mitchell Dziekan, Tim Fisher, U. Toledo, March 27, 2017. 5 pp.

McCarthy, F.M.G. and Pentesco, J.P. (2016). *The Palynological Record of Lac Dasserat: Insights into Isolation from Lake Ojibway and Holocene Limnology*. Report prepared for the Geological Survey of Canada, October 4, 2016, 12 pp.

h) Theses:

McCarthy, F.M.G. (1992). *Quaternary climate change and the evolution of the mid-latitude western North Atlantic Ocean: palynological, foraminiferal, sedimentological, and stable isotope evidence from DSDP Sites 604, 607 and 612*. PhD thesis, Dalhousie University.

McCarthy, F.M.G. (1986). *Late Holocene water levels in Lake Ontario: evidence from Grenadier Pond*. M.Sc. thesis, University of Toronto.

McCarthy, F.M.G. (1984). *Intraspecific variation in Arcellacea and a selected biostratigraphic study*. B.Sc. Honours thesis, Dalhousie University.

2. Work Submitted for Publication:

Prader, S., Kotthoff, U., Greenwood, D.R., **McCarthy, F.M.G.**, Schmiel, G., and Donders, T. New Jersey's palaeoflora and climate through Palaeogene-Neogene warm phases. Manuscript submitted to *Review of Palaeobotany and Palynology* (10% contribution).

Fisher, T.G., Dziekan, M.R., Horton, J., Lepper, K., Curry, B.B., **McCarthy, F.M.G.**, Loope, H. Deglacial Chronology of the Sturgis Moraine and southern Great Lakes deglacial radiocarbon lags. Manuscript submitted to *Quaternary Research* (5% contribution).

Kornecki, K.M., Schuller, M., Katz, M.E., Relyea, R.A., **McCarthy, F.M.G.**, Schaller, M.F., Gillikin, D.P., Stager, J.C., Boylen, C.W., Eichler, L., and Nierzwicki-Bauer, S. (in revision). The canary in the coal mine: Testate amoebae record anthropogenic impacts in oligotrophic Lake George, NY sediments. *Journal of Foraminiferal Research* (5% contribution).

3. Papers presented at Workshops & other meetings: (* denotes invited contribution)

***McCarthy, F.M.G.**, Head, M.J. Patterson, R.T. and the Crawford Lake Working Group 2019. Annually laminated sediments in the meromictic basin of Crawford Lake – potential Anthropocene GSSP candidate. Anthropocene Working Group Meeting, *Haus de Kulturen der Welt*, Berlin, May 2019.

***McCarthy, F.M.G.** 2019. The Anthropocene- proposed GSSP in varved sediments from Crawford Lake, Milton, Ontario. EPEX 2019- 57th Ontario Petroleum Institute Conference and Trade Show, London, ON, May 2019.

***McCarthy, F.M.G.** 2017. Freshwater resources in the Great Lakes Region – yesterday, today, and tomorrow... Transdisciplinary Seminar, Centre for Environmental Sustainability, Brock University, November 17, 2017.

***McCarthy, F.M.G.** 2017. Algal palynomorphs in paleolimnological studies. Plenary talk, 58th PALS Conference, St. Catharines, ON, May 2017.

***McCarthy, F.M.G.** 2013. Paleoenvironmental context for possible early Holocene caribou hunting on the Alpena-Amberley Ridge. Invited participant, Workshop on early Holocene caribou hunting on the Alpena-Amberley Ridge, Ann Arbor, MI, Feb. 2013.

4. GRANTS OBTAINED

a) Internal Grants:

Year	Institution	Amount
2018	Mentorship funds	\$500
2017	ESRC Seed Funds	\$7260
2016	NSERC DDG Matching Funds	\$10,000
2015	NSERC DDG Matching Funds	\$10,000
2015	Mentorship funds	\$500
2014	Seed money, VP Research	\$2500
2013	Mentorship funds	\$500
2013	Grant in lieu of salary, Brock U	\$7000
2012	Grant in lieu of salary, Brock U	\$6500
2011	Grant in lieu of salary, Brock U	\$7655

b) External Grants:

Year	Institution	Amount
2019	NSERC Discovery Grant	\$23,000
2018	NSERC Discovery Grant	\$23,000
2017	ECO Canada SWILP Funds	\$4550
2016	NSERC Discovery Development Grant	\$10,000
2016	NSERC USRA (J. Pentesco)	\$ 4500
2015	NSERC Discovery Development Grant	\$10,000
2011	NSERC USRA (M. Drljejan)	\$ 4500

c) Consultantships:

2019	Geological Survey of Canada	\$8000
2018	Geological Survey of Canada	\$8000
2016	Geological Survey of Canada	\$2500
2016	Hamburg Museum	\$6,000

2015	Hamburg Museum	\$20,000
2014	Hamburg Museum	\$10,000
2013	Hamburg Museum	\$6,000
2012	Hamburg Museum	\$6,000
2011	Hamburg Museum	\$6,000

5. Work in progress

***McCarthy, F.M.G.** et al. Non-pollen palynomorphs in lacustrine sediments. Chapter 9 in Marret et al. (Eds), September 2019

Krueger, A.M., Gurdebeke, P., Mertens, K.N., **McCarthy, F.M.G.**, Danesh, D.C., Bogus, K., Louwye, S., Cumming, B.F. A review of the recent freshwater dinoflagellate *Peridinium limbatum*: taxonomy, life cycle, and ecology. Manuscript intended for submission to *Phycological Research*, September 2019.

Danesh, D.C., **McCarthy, F.M.G.**, Sangiorgi, F., and Cumming, B. Freshwater dinoflagellate ecology determined from 30-lake calibration set in the Experimental Lakes Area in northwest Ontario, Canada. Manuscript intended for *Review of Palaeobotany and Palynology* October 2019

McCarthy, F.M.G., Farley, M.J. and Oboh-Ikuenobe. *Microfossils and their Practical Applications*. Wiley Blackwell Publishers, London; book manuscript to be submitted December 2019.

Krueger, A.M., **McCarthy, F.M.G.**, Paterson, A., Vasseur, L. A dinoflagellate's journey through the water column to the lakebed: A case study from Plastic Lake ON, Canada. Manuscript intended for submission to *Review of Paleobotany and Palynology*, February 2020.

Krueger, A.M. and **McCarthy, F.M.G.** The effects of oxidation on common dinoflagellate cysts in lake sediments. Manuscript intended for submission to *Palynology*, February 2020.

Garner, C.S., McCarthy, F.M.G., Kornecki, K.M., Katz, M.E., 2018. The distribution of major non-pollen palynomorph (NPP) groups in modern sediments of a large, oligotrophic lake in Upstate New York. Intended for submission to the *Journal of Great Lakes Research*, May 2020.

Krueger, A.M., **McCarthy, F.M.G.**, Paterson, A., Vasseur, L. Non-Pollen Palynomorph assemblages in Dorset region Lakes- proxies of environmental change. Manuscript intended for submission to *Canadian Journal of Fisheries and Aquatic Sciences*, May 2020

Pilkington, P.M., **McCarthy, F.M.G.**, and Hubeny, J.B. A tale of two lakes – Sluice and Walden Pond, MA. Manuscript intended for a special volume of *Anthropocene* May 2020.

Krueger, A.M., **McCarthy, F.M.G.**, Schuler, M., Pilkington, P.M., Garner, C.S., Vasseur, L., Relyea, R., Eichler, L. A dinoflagellate's sedimentary journey: A case study from Lake George. Manuscript intended for submission to *Great Lakes Research*, September 2020.

6. Other scholarly activities

- **Referee** for papers submitted to *Palynology*, *Quaternary International*, *Journal of Foraminiferal Research*, *Journal of Paleolimnology*, *Journal of Phycology*, *Canadian Journal of Earth Sciences*, *Marine Geology*, *Micropaleontology*, *Marine Micropaleontology*, *Sedimentary Geology*, *Journal of Sedimentary Research*, *Limnology and Oceanography*, *Scientific Results of the Ocean Drilling Program*, *Quaternary Science Reviews*, *Quaternary Research*, and *Palaeogeography, Palaeoclimatology, Palaeoecology*, and for a draft manuscript of *Geology Today* by Barbara Murck and Brian Skinner for John Wiley and Sons, Inc.

- **Referee** for numerous NSERC and NSF grant applications, as well as NERC, FQRNT, CFCAS, New York Sea Grant, NWO Research Council for Earth and Life Sciences and KlimaProg grant proposals

b) Membership in:

- International Association for Great Lakes Research; Board member 2017 – present
- Chair of IAGLR Awards Committee and Co-chair of IAGLR 2020 Conference Committee (2019-2020)
- Geological Association of Canada (GAC)- Councillor, 2012 - 2015
- Canadian Association of Palynologists (CAP; President, 2013-2016; International Federation of Palynological Societies (IFPS) Councillor, 2018- present
- American Association of Stratigraphic Palynologists (AASP); Member of Executive, 2003-2009; International Federation of Palynological Societies (IFPS) 2012- 2016
- Geological Society of America (GSA); AASP Liaison with GSA (2014- 2016)

c) other:

- Interviewed for article “Humans vs. Earth” *Nature*, August 2019
- TVO podcast, *Word Bomb- Anthropocene*, June 2019
- Media interview, Al Jazeera English- *Lake in Canada could mark the beginning of human-influenced age*, October 2018
- Newspaper article, *A new age dawns at Crawford Lake*; front page of the *Hamilton Spectator*, August 22, 2018
- Media interview, Global News Radio 640- *Why scientists suspect proof of a turning point in Earth’s history is sitting in a lake in Milton, Ont.*, August 20, 2018
- Media interview, CBC News- *Why scientists suspect proof of a turning point in Earth’s history is sitting in a lake in Milton, Ont.*, August 14, 2018
- Media interview, CKTB 610 Radio- *Ontario lake to be studied by Brock-led team as possible geologic time reference site* August 12, 2018; follow-up, August 20, 2018
- Guest Speaker, *Precious Water*, Brock University Retirees Association, April 2017
- Guest Speaker, *The Big Freeze Exhibit*, Royal Botanical Gardens, Feb. 19 and Mar. 5, 2017
- *The Weather Network* filming on Crawford Lake, February and March 2011
- Member, PhD Defence Committee, K Kornecki, Rensselaer Polytechnic, 2018
- Member, PhD Committee, N Riddick, McMaster U (2016- present)
- External examiner, PhD defence, F. Oliva, U. Ottawa, 2017
- External examiner, MSc thesis, K. Tilotta, Lakehead U., 2016
- External examiner, MSc thesis, A. Agosta G’Meiner, Bishop’s U., 2016
- External examiner, MSc thesis, B. Gregory, McMaster U., 2014
- External examiner, Dissertation, S. Kihlman, Geological Survey of Finland, 2012
- External examiner, PhD defence, C. Avendano, U. Toronto, 2011
- External examiner, MSc thesis, S. Sandercombe, McGill U., 2011

Special awards or honours (including election or appointment by learned societies):

- Member, *Board of the International Association for Great Lakes Research* (2017 – present)
- Co-Chair (with R.T. Patterson, Carleton U), *ISTA 2020* conference

- Councillor, IFPS- *International Federation of Palynological Societies* (AASP representative 2012- 2015; CAP representative 2018 - present)
- Councillor, GAC- *Geological Association of Canada* (2012- 2015)

COURSES TAUGHT

Brock University

Course No.	Course Name	# of times	Enrolment	taught (range)
ERSC 1F01(1/2)	Planet Earth	1	140	
ERSC 2P03	Earth History	1	32	
ERSC 2P61	Environmental Geology	3	24-30	
ERSC 3P03	Paleontology and Paleobiology	5	19-23	
ERSC/GEOG 3P25	Quaternary Geology	5	12-16	
ERSC/BIOL 4P18	Paleobotany and Palynology	1	10	
ERSC 4P61	Surface Hydrology	3	10-13	
ERSC 5P35	Quaternary Palynology	5	1-4	
ERSC 5P36	Microfossils- Practical Applications	1	3	
ERSC 5P75	Limnogeology	4	1-3	
GBLS/LART 1F93	Order & Chaos in the Cosmos	3	30-40	
LART 3V93	Enlightenment and Humanity	1	14	
SSAS 5P80	Directed Study, Sustainability	1	1	

F. University/Community Services

- Member, President's task Force, Bringing Engineering to Brock (2017-18)
- Organiser, 50th Anniversary Celebration of Earth (Geological) Sciences at Brock
- Member, BUFA Grievance Panel (2011-2017; Assistant Grievance Officer 2014-15)
- Member, Academic Review Committee (ARC, 2010-2014)
- Senator (2011-2014)
- Member, Senate Governance (2012-13)
- Member, Senate Research Committee (Vice-Chair, 2011-12)
- Mentor (High School Mentorship Program): Heather Roy (2012-13); Mathew Nickel (2014-15); Roslyn Chen (2017-18)

- Judge, Niagara Region Science Fair (2012-15, 2018)
- Supervisor, B.Sc. research of M. Drljepan (2011-12); C. Garner (2014-15)
- Supervisor, visiting PhD student from Universitaet Hamburg: Sabine Prader (2014 & 2015)
- Member, PhD Supervisory Committee, N Riddick (McMaster U) (2016 – present)
- Member, MSc Supervisory Committee: E. Fischer (2008-2011); M. Paez (2007-2014); F. Mantilla (2010-2014); R. Gunter (2014- 2017), S. Al-Silwadi (2014- 2018), W. Abomringa (2014- 2018); D. Hughes (2015 – 2018); M. Dube (2015 – 2018); E. Balota (2015 – 18); J. Pentesco (2016-present); S. Cocker (2018-present); M. Tepavcevic (2016-present);

Supervision of Graduate Student Theses/ Major Research Papers:

- **Gostlin, Kevin E.** (1999). *Continental margin architecture: the palynological signature of glacioeustasy*. M.Sc. thesis, Earth Sciences, Brock University, 159 pp.
- **Sarvis, Adam P.** (2001). *Postglacial water levels in the Great Lakes region in relation to Holocene climate change: thecamoebian and palynological evidence*. M.Sc. thesis, Earth Sciences, Brock University, 169 pp.
- **Tiffin, Sarah H.** (2001). *Dinocyst biochronology and palynofacies-inferred systems tract character of Miocene sequences from the New Jersey Mid-Atlantic Transect (ODP Legs 174A and 174AX)*. M.Sc. thesis, Earth Sciences, Brock University, 144 pp.
- **Findlay, Duncan J.** (2004). *Anomalous carbonate preservation in the abyssal North Pacific, ODP Sites 882 and 1179: planktonic foraminiferal analysis, climate change and paleomagnetism*. M.Sc. thesis, Earth Sciences, Brock University.
- **Little, Martin L.** (2005). *Pollen and grain size records in abyssal sediments of the northwest Pacific Ocean as proxies of Plio-Pleistocene climate change*. M.Sc. thesis, Earth Sciences, Brock University.
- **Neville, Lisa A.** (2010). *Investigating the Potential of Thecamoebians (Testate Amoebae) as Bio-indicators of Impact of Oil Sands Mining Operations on Freshwater Environments in Northeastern Alberta*. M.Sc. thesis, Brock University, Earth Sciences, 210. p.
- **Krueger, Andrea M.** (2012). *The response of dinoflagellates in Crawford Lake to cultural eutrophication*. M.Sc. thesis, Earth Sciences, Brock University.
- **Volik, Olena** (2014). *Non-pollen palynomorphs and thecamoebians as proxies of paleoenvironmental and anthropogenic change: a case study from Lake Simcoe, Ontario, Canada*. M.Sc. thesis, Earth Sciences, Brock University.
- **Drljepan, Matea** (2014). *Algal and protozoan response to natural and anthropogenic environmental change in Sluice Pond, MA through the Holocene*. M.Sc. thesis, Earth Sciences, Brock University.
- **Riddick, Nicholas L.** (2016). *Utility of microfossils in archeology: a case study from Lake Simcoe, Ontario, Canada and methodological considerations*. M.Sc. thesis, Earth Sciences, Brock University.
- **Sylvia Hussein** (2018). *Resilience of water policy to major 21st century challenges, climate change and human population growth: comparison between Great Lakes jurisdictions and Ghana*. Major Research Paper, Sustainability Science and Society (co-supervised with D. Dupont).
- **Pilkington, Paul Michael** (2019). *The Rise of the Green Algae: Using Algal Palynomorphs as Proxies of Natural Events and Anthropogenic Activities*. M.Sc. thesis, Earth Sciences, Brock University.
- **Krueger, Andrea M.** (in prep.- 2021). *Freshwater dinoflagellates and their cysts: water column to lakebed studies*. PhD thesis, Biological Sciences, Brock University.
- **Aaron Alderson** (in prep. - 2022). *Assessing earthquake recurrence intervals in the Western Quebec Seismic Zone using palynomorphs*. (co-supervised with G. Brooks, GSC). M.Sc. thesis, Earth Sciences, Brock University.
- **Autumn Heyde** (in prep. - 2022). *The fossil record of consumers in sediments from Crawford Lake – insights into anthropogenic impact on trophic structure around the proposed Holocene-Anthropocene boundary*. M.Sc. thesis, Biological Sciences, Brock University.

II. ADDITIONAL INFORMATION ON TEACHING ACTIVITIES/EXPERIENCE

A. Student Evaluations (see separate document)

B. Professional Development

I organised the 2003 joint meeting of the American Association of Stratigraphic Palynologists (AASP), Canadian Association of Palynologists (CAP) and the North American Micropaleontological Section of the Society of Economic Paleontologists and Mineralogists (NAMS). I have been a member of the executives of both the Canadian Association of Palynologists and the American Association of Stratigraphic Palynologists. I have also assisted with the 2004 meeting of the Geological Association of Canada & Mineralogical Association of Canada, as Field Trip and Guest Activities Coordinator. I have put together several new courses (lectures & labs) in the Department of Earth Sciences, as well as in the Great Books/ Liberal Studies Program. I attended two short courses at the Geological Society of America Annual Meeting in Boston in 1993, *GIS and the Geosciences* and *Engineering/Environmental Geology and Landuse Planning*, both of which have direct applications to courses that I teach. I also took SEPM Short Course No. 33, *Climate Model Application in Paleoenvironmental Analysis* in August 1995; this benefits my students in my graduate course in paleoclimatology and in my undergraduate courses in paleoecology, environmental geology, and in Pleistocene geology. I have taken part in "Scientifically Yours", putting together workshops (environmental geology, paleontology, & forensic science), leading tours, etc. over years. As chair of the Status of Women in Science Committee for 2 years, I was also involved in coordinating the workshop and in public relations. I put together a module of exercises in environmental geology and led a field trip to look at Paleozoic invertebrate macrofossils as part of the Earth Sciences Workshop for high school teachers. I also mentored several grade 12 students who are interested in earth science and presented workshops on fossil classification and forensic science for high school teachers at the Niagara-Brock Science Interface workshop, and to school and girl guide groups.

Menzies, John

Professor John Menzies

Correspondence language: English

Contact Information

The primary information is denoted by (*)

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Language Skills

Language	Read	Write	Speak	Understand	Peer Review
English	Yes	Yes	Yes	Yes	Yes

Degrees

I. 1976/6 Doctorate, Geography, University
of Edinburgh Supervisors: Dr. J. B. Sissons,
1971/9 - 1976/6

II. 1971/6 Bachelor's Honours, Geography, University of Aberdeen

Recognitions

2017/10 - 2017/11 Research Gate Stats

Research Gate
Citation

As of 17th July 2019 = 37.25

User Profile

Employment

1990/7	Professor Earth Sciences, Math & Sciences, Brock University Full-time, Professor Tenure Status: Tenure
1997/7 - 2000/6	Chair of Geography Geography, Math & Sciences, Brock University Full-time Tenure Status: Tenure
1975/1 - 1977/6	Higher Scientific Officer Soil Science, Macaulay Institute for Soil Research Full-time Tenure Status: Non Tenure Track
1975/1 - 1977/6	Higher Scientific Officer Dept. of Soil Survey, Macaulay Land Use Research Institute Soil Surveyor

Leaves of Absence and Impact on Research

2018/4 - 2018/8	Medical, Brock University Eye surgery on both eyes due to glaucoma. Vision badly affect after intial surgery and medication
2017/5 - 2017/8	Medical, Brock University Absence due to Cancer Treatment
2013/6 - 2013/9	Medical, Brock University Vision problems - double vision - brain CT Scan - idiopathic diagnosis eventually.

Research Funding History

Awarded [n=2]

2009/8 - 2015/7

Principal Investigator

2009/8 - 2014/4

Principal Investigator

Micromorphology of Continuous Core, Grant

Funding Sources:

Heidelberg Uni-Nord (Fed. Geol Surv. Germany) Total Funding - 4,077

Portion of Funding Received - 4,077 Funding Competitive?: Yes

Micromorphology of Alpine Sediments, Grant

Funding Sources:

High Alpine Sedimentology with Austrian Geol Surv. Total Funding - 3,000

Portion of Funding Received - 3,000 Funding Competitive?: Yes

Completed [n=1]

2009/9 - 2015/4

Principal Investigator

Microsedimentology of UNiNord Cores from Heidelberg, Grant

Funding Sources:

German Federal Government Total Funding - 4,800

Portion of Funding Received - 4,800 Funding Competitive?: Yes

Student/Postdoctoral Supervision

Master's Thesis

2018/9 - 2020/5 Jamie Sapera (In Progress) , Brock University

Principal Supervisor Thesis/Project Title: **Glacial stratigraphy and till micromorphology at Pine Point, southern Northwest Territories, Canada - a microsedimentological analysis**
Present Position: Grad Student

Kaleb Wagner (Completed) , Brock University

2012/9 - 2014/6 Thesis/Project Title: Ribbed Moraine in Nouveau Quebec -a sedimentological study

Principal Supervisor Present Position: Quaternary Geologist, Minnesots Geological Survey

Jessey Rice (Completed) , Brock University

2011/7 - 2013/10 Thesis/Project Title: Micromorphology of tills near Hay River, NWT

Principal Supervisor Present Position: PhD program University of Waterloo

Doctorate [n=4]

2018/4 - 2020/5

Co-Supervisor 2013/9 - 2017/6

Co-Supervisor

2013/3 - 2017/6 Delaney E. Robinson (In Progress) , University of Houston, Houston TX, USA
Thesis/Project Title: Sediment characterization of subglacial processes in the Ross Sea, Antarctica: Substrate control on ice sheet behavior

Co-Supervisor Present Position: PhD student University of Houston

Marius Buechi (Completed) , University of Bern

2012/10 - 2015/7 Thesis/Project Title: Sedimentology of Overdeep Valleys in central Switzerland

Co-Supervisor Present Position: Post Doc Fellow

Daniel Jager (Completed) , University of Wurzburg

Thesis/Project Title: Debris flows in the Franconian Alps, Germany

Present Position: private Consultancy

Edouard Ravier (Completed) , University of Burgundy

Thesis/Project Title: Subglacial Soft Sediment Deformation mechanics

Present Position: Asst prof. University of Le Mans, France

Event Administration

2013/6 - 2015/7 Co-organiser & Leader, International Technical Workshop on Glacial
Micromorphology University of Wurzburg, Germany, Workshop,
2014/6 - 2014/6

Editorial Activities

2016/5 - 2021/5 Reviewer, Progress in Physical

Geography, Journal 2016/5 - 2019/1 Reviewer,

Earth & Planetary Science, Journal 2016/3 - 2019/1

Reviewer, Zeitschrift fur

Georphologie, Journal 2012/9 - 2015/12 Referee,

Journal of Geophysical Research, Journal 2010/10 -

2015/12 Referee, Geology, Journal

2006/4 - 2015/12 Referee, Professional

Geographer, Journal 2004/4 - 2015/12

Referee, Quaternary

International, Journal

2004/3 - 2015/12 Referee, Journal of Sedimentary

Research, Journal 2001/4 - 2015/12 Referee,

Journal of Quaternary Research, Journal 2000/10 -

2015/12 Referee, Boreas, Journal

2000/2 - 2015/12 Referee, Journal of

Glaciology, Journal 2000/1 - 2015/12

Referee, Earth Surface
Processes, Journal 1995/4 - 2015/12

Referee, Geomorphology,
Journal

1995/4 - 2015/12 Referee, Journal of Sedimentary
Petrology, Journal 1994/5 - 2015/12 Referee,
Canadian Journal of Earth Sciences, Journal 1991/3 -
2015/12 Referee, Sedimentology, Journal

1986/4 - 2015/12 Referee, Palaeogeography, Palaeoecology, Palaeoclimatology, Journal

1985/9 - 2015/12 Referee, Geological Society of America Bulletin, Journal

Organizational Review Activities

2010/7 - 2018/7 Referee, Netherlands Nat. Research Agency
Reviewing research proposals

2010/7 - 2017/7 Referee, American Chemical Society
Reviewing research proposals

2008/1 - 2013/12 Examiner, Marker and Course Designer, Association of Professional
Geoscientists of Ontario
Setting and marking exams for APGO

2007/12 - 2013/7 External Referee, Indian Institute of Technology
External referee for a Doctoral Thesis Examination

International Collaboration Activities

2013/7 - 2019/7 International Collaborator, Austria
Link with Geological Survey of Austria with Quat. Geologist (Jurgen
Reitner) in sampling and publishing work

2017/5 - 2017/7 Expert Consultant, Switzerland
Consultant to NAGRA (Swiss Nuclear Waste Disposal)

2012/7 - 2015/8 International Collaborator, France
Working on several project with team headed by J-F
Buonocristiana, University of Burgundy

2014/7 - 2015/7 International Collaborator, Switzerland
Link with Reserachers in DOVE project with researchers in Switzerland (U
Bern)

- 2014/5 - 2015/7 International academic collaborations, Germany
Academic link Geological Survey of Baden-Württemberg
- 2013/7 - 2015/7 International Collaborator, Germany
Link with D. Jaeger of University of Würzburg on mass movement micro-sedimentology work to be published soon.

Committee Memberships

- 2013/4 - 2015/12 Committee Member, Earth Sciences & Geography Joint Curriculum Committee, Brock University
- 2013/4 - 2013/5 Committee Member, Advisory Committee, Brock University
Advising on the appointment of Assoc Deans for Undergrad and Grad & Res.

Presentations

1. None. (2014). The mechanics of till deposition in vertical sections using micro-sedimentological techniques
 - a novel approach to glacial deformation mechanics – case examples from the Austrian Alps and the NWT, Canada. Guest lecture, Dijon, France

Main
Audience:
Researcher
Invited?: Yes,
Keynote?:
Yes

Publications

Journal Articles

1. Menzies, J., Paulen, R.C., Rice, J.M., McClenaghan, M.B., Oviatt, N.M., Dhillon, N. (2019). Deformation 'boundary front' movements in subglacial tills—A microsedimentological perspective from till sequences near Pine Point, NWT, Canada. *The Depositional Record*. 5(5): 230-246.
Published
Refereed?: Yes, Open Access?: Yes
2. Menzies, J., Reitner, J. M. (2019). Microstructures, subglacial till deposition, and shear band development revealing up-section changes in shear—A study from Weissbach, Austria. *Proceedings of the Geologists' Association*. 139(2): 196-209.
Published

Refereed?: Yes, Open Access?: Yes

3. Rice, J. M., Menzies, J., Paulen, R. C., McClenaghan, M. B. (2018). Microsedimentological evidence of vertical fluctuations in subglacial stress from the northwest sector of the Laurentide Ice Sheet, Northwest Territories, Canada. *Canadian Journal of Earth Sciences*. 56: 363-379. Published

Refereed?: Yes, Open Access?: Yes

4. Menzies, J. (2018). *Glacial Geomorphology*,. Reference Module in Earth Systems and Environmental Sciences. Elsevier, p. 16 pp.: 16. Published

Refereed?: Yes, Open Access?: Yes

5. *Buechi, M.W., Frank, S.M., Graf, H.R., Menzies, J., Anselmetti, F.S.,. (2017). Subglacial emplacement of tills and meltwater deposits at the base of overdeepened bedrock troughs. *Sedimentology*. 64: 658-685. Published

Refereed?: Yes, Open Access?: Yes

6. Stephen Riley, Thomas R. Binder, Taaja R. Tucker, John Menzies, Nick Eyles, John Janssen, Andrew
7. Muir, Peter C. Esselman, Nigel J. Wattrus, Charles C. Krueger. (2016). Islands in the ice stream: were spawning habitats for native salmonids in the Great Lakes created by paleo-ice streams?. *Fish and Fisheries*,. 18(2): 357-359. Published

Refereed?: Yes, Open Access?: Yes

8. Menzies, J. Reitner, J. M. (2016). Microsedimentology ice stream tills from the Eastern Alps, Austria – a new perspective on till microstructures. *Boreas*. 45: 904-827. Published

Refereed?: Yes, Open Access?: Yes

9. Menzies, J., *Hess, D., *Rice, J.M., *Wagner, K.G., *Ravier, E. (2016). A case study in the New York Drumlin Field, an investigation using microsedimentology, resulting in the refinement of a theory of drumlin formation. *Sedimentary Geology*. 338: 84-96. Published

Refereed?: Yes, Open Access?: No

10. Menzies, J., van der Meer, J.J.M. *Ravier, E. (2016). A kinematic unifying theory of microstructures in subglacial tills. *Sedimentary Geology*. 344: 57-70. Published

Refereed?: Yes, Open Access?: Yes

11. Hodder, T.J., Ross, M., Menzies, J.,. (2016). Sedimentary record of ice divide migration and ice streams in the Keewatin core region of the Laurentide Ice Sheet. *Sedimentary Geology*. 338: 97-114. Published

Refereed?: Yes, Open Access?: No

12. *Ravier, E., Buoncristiani, J.-F., Menzies, J., Guiraud, M., Portier, E. (2015). Clastic injection dynamics during ice front oscillations: A case example from Sólheimajökull (Iceland). *Sedimentary Geology*. 323: 92-109.
Published

Refereed?: Yes, Open Access?: No
13. Menzies, J. Ellwanger, D. (2015). Climate and paleo-environmental change within the Mannheim Formation near Heidelberg, Upper Rhine Valley, Germany: A case study based upon microsedimentological analyses. *Quaternary International*. 386: 137-147.
14. Larson, G. J., Menzies, J., Lawson, D. E., Evenson, E. B. Hopkins, N. R. (2015). Macro- and micro- sedimentology of a modern melt-out till – Matanuska Glacier, Alaska, USA. *Boreas*. 45: 235-251. Published

Refereed?: Yes, Open Access?: No
15. *Ravier, E., Buoncristiani, J.-F., Menzies, J., Guiraud, M., Clerc, S., Portier, E.,. (2014). Does porewater or meltwater control tunnel valley genesis? Case studies from the Hirnantian of Morocco. *Palaeogeography, Palaeoclimatology, Palaeoecology*. 418: 359-376.
Published

Refereed?: Yes, Open Access?: Yes
16. *Ravier, E., Buoncristiani, J.-F., Clerc, S., Guiraud, M., Menzies, J., Portier, E. (2014). Sedimentological and deformational criteria for discriminating subglaciofluvial deposits from subaqueous ice-contact fan deposits: A Pleistocene example (Ireland). *Sedimentology*. 61: 1382-1410.
Published

Refereed?: Yes, Open Access?: Yes
17. Menzies, J. (2014). *Glacitectonics-Field Guide*, E. Phillips, J.R. Lee, H.M. Evans (Eds.). Quaternary Research Association (2012),. *Proceedings of the Geologists' Association*. 124(6): 1022-1023. Published
Refereed?: Yes
18. *Ravier, E., Buoncristiani, J.-F., Guiraud, M., Menzies, J., Clerc, S., Goupy, B., Portier, E.,. (2014). Porewater pressure control on subglacial soft sediment remobilization and tunnel valley formation: a case study from the Alnif Tunnel Valley (Morocco). *Sedimentary Geology*. 304: 71-95.
Published

Refereed?: Yes, Open Access?: Yes
19. *Rice, J.M., Paulen, R.C., Menzies, J., McClenaghan, M.B.,. (2014). Micromorphological descriptions of till from pit K-62, Pine Point mining district, Northwest Territories;. Geological Survey of Canada, Open File. 7526: 30pp.
20. Menzies, J., Piotrowski, J.A.,. (2013). Subglacial environments – Introduction. *Boreas*. 42(2): 374-375. Published

Refereed?: No, Open Access?: No

21. Menzies, J., Gao, C., *Kodors, C. (2013). Microstructural analyses of a Middle Pliocene till from the James Bay Lowlands, Canada—evidence of “potential” fast ice streaming. *Proceedings of the Geologists' Association*,. 124(5): 790-801.
Published

Refereed?: Yes, Open Access?: No

Books

1. Menzies, J., Meer, J.J.M., (Editors). (2018). *Past Glacial Environments (Second Edition)*. 2nd: 859. Menzies, J., Meer, J.J.M., (Editors).

Book Chapters

- 1) Menzies, J., van der Meer, J.J.M.,. (2018). *Glacial Environments: Themes and Issues*, Chapter 22,. Menzies, J., van der Meer, J.J.M.,. *Past Glacial Environments (Second Edition)*:. 809-815. Published, Elsevier
Refereed?: Yes
- 2) Menzies, J., Meer, J.J.M.,. (2018). *Micromorphology and Microsedimentology of Glacial Sediments* Chapter 21. Menzies, J. van der Meer, J.J.M. *Past Glacial Environments (Second Edition)*. 2nd: 753-806. Published, Elsevier
Refereed?: Yes
- 3) Menzies, J., Meer van der, J.J.M., Shilts, W.W.,. (2018). *Subglacial Processes and Sediments*, Chapter 5 .Menzies, J. vsn der Meer, J.J.M. *Past Glacial Environments (Second Edition)*. 2nd: 105-158. Published, Elsevier
Refereed?: Yes
- 4) Ellis, C.J., Keron, J.R., Menzies, J., S.G., Monckton, Stewart, A. (2015). *For Immediate Occupancy: Cosy 3000 Year Old Heritage Winter House with River View Near Lake Huron. Apply to Terminal Archaic Realty..* B.G.G. Redmond and R.A. Genheimer. *Building the Past: Studies of Prehistoric Wooden Post Architecture in the Ohio Valley-Great Lakes Region*. 1st: 29-62. Published, University Presses of Florida Refereed?: Yes
- 5) Menzies J. & Hess D.P. (2013). *Glacial Depositional Features*. J.F. Shroder. *Treatise on Geomorphology*. 1st(8): 127-140. Published Academic Press
Refereed?: Yes
- 6) Menzies, J. and Hess, D.P. (2013). *Glacial Transport and Deposition—Process and Form: Depositional Features*. Shroder, J. *Treatise on Geomorphology*. (8): 127-140.

Reports

1. Menzies, J. (2019). Ward Block I Data Recovery Investigation, Honolulu, O'ahu, Hawaii, USA Coastal Salt Pan Complex. 98. Brock University
2. Menzies, J. & Swift, D.A. (2017). A Preliminary Analyses of some Subglacial Landscape Terrain Analogues in comparison to subglacial terrains within the LGM limits in Northern Switzerland. 20. Swiss Federal Research Station
3. Rice, J.M., Paulen, R.C., Menzies, J., McClenaghan, M.B., and Oviatt, N.M. (2013). Glacial stratigraphy of the Pine Point Pb-Zn mine site, Northwest Territories. 14. Geological Survey of Canada

Pisaric, Michael

CURRICULUM VITAE

Name: Michael F.J. Pisaric

Date: June 2019

Professor

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St. Catharines, ON

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mpisaric@brocku.ca

Education

Degree	University	Department	Year
Ph.D.	Queen's University, Canada	Geography	2001
M.Sc.	McMaster University, Canada	Geography	1996
B.Sc. (Hons.)	Brock University, Canada	Geography	1994

Thesis titles:

M.Sc. - *The late Quaternary vegetation history of the Lower Lena Region, Siberia.* (Dr. Glen MacDonald, supervisor)

Ph.D. - *Holocene environmental change at the subarctic alpine treeline in northern British Columbia and the southern Yukon Territory, Canada* (Drs. Julian Szeicz/Robert Gilbert, supervisors; both deceased)

Employment

a) Academic employment

From	To	Institution	Position
2016	Present	McMaster University	Adjunct Professor School of Geography & Earth Sciences

2015	Present	Brock	Professor Department of Geography
2013	Present	Brock	Associate member Dept. of Earth Sciences
2013	Present	Brock	Associate member Dept. of Biological Sciences
2013	Present	Carleton University	Adjunct Research Professor Department of Geography
2013	2015	Brock	Associate Professor Department of Geography
2012	2013	Brock	Assistant Professor Department of Geography
2007	2012	Carleton	Associate Professor Department of Geography
2007	2012	Ottawa-Carleton Geoscience Centre	Member
2003	2012	Carleton Institute of Environmental Science	Member
2002	2007	Carleton	Assistant Professor Department of Geography

2001	2002	Montana State University	Postdoctoral Research Fellow Big Sky Institute
2001	2001	Brock University	Instructor Department of Geography

Professional honours

2000	Biogeography Specialty Group - Student Paper Competition Award Recipient (American Association of Geographers Annual Meeting, Pittsburgh, PA)
2000	Biogeography Specialty Group - Student Grant Competition Award Recipient (American Association of Geographers Annual Meeting, Pittsburgh, PA)
2012	H.C. Cowles Award for the best publication in Biogeography in 2011 -Awarded by the Biogeography Specialty Group, American Association of Geographers
2012	FASS Research Award - Carleton University
2013	Brock Chancellor's Chair for Research Excellence (2013-16)
2014	Selected as a nominee by Brock University for the College of New Scholars, Artists and Scientists of the Royal Society of Canada
2016	I was one of two Canadian researchers invited to participate as a Partner in a COST Action Proposal (European research network) funded by the EU and will investigate alpine treeline ecology globally.

Publications (names in bold are students I have supervised)

1. Pisaric, M.F.J., Thienpont, J., Kokelj, S.V., Nesbitt, H., Lantz, T., Solomon, S., and Smol, J.P. 2011. Impacts of a recent storm surge on an Arctic ecosystem examined within a millennial timescale. *Proceedings of the National Academy of Sciences*. 108(22): 8960-8965. doi:10.1073/pnas.1018527108. (IF=9.681)

This paper was awarded the H.C. Cowles Award in February 2012 by the Association American Geographers – Biogeography Specialty Group.

2. Porter, T.J., and Pisaric, M.F.J. 2011. Temperature-growth divergence in white spruce forests of northwestern North America began in the late-19th century. *Global Change Biology*. 17, 3418-3430, doi: 10.1111/j.1365-2486.2011.02507.x. (IF=6.862)

This paper was selected to the Faculty of 1000 - F1000 Ecology section.

3. Wolfe, B.B., Humphries, M.M. Pisaric, M.F.J., Balasubramaniam, A.M., Burn, C.R., Chan, L., Cooley, D., Froese, D.G., Graupe, S., Hall, R.I., Lantz, T., Porter, T.J., Roy-Leveillee, P., Turner, K.W., Wesche, S.D. and Williams, M. 2011. Environmental change and traditional use of the Old Crow Flats in northern Canada: An IPY opportunity to meet the challenges of the new northern research paradigm. *Arctic* 64(1): 127-135. (IF=1.027)

4. Kokelj, S.V., Lantz, T.C., Solomon, S., Pisaric, M.F.J., Keith, D., Morse, P., Thienpont, J.R., Smol, J.P., and Esagok, D. 2012. Utilizing multiple sources of knowledge to investigate northern environmental change: Regional ecological impacts of a storm surge in the outer Mackenzie Delta, N.W.T. Arctic. (IF=1.027)

5. Deasley, K., Korosi, J.B., Thienpont, J.R., Kokelj, S.V., Pisaric, M.F.J., and Smol, J.P. 2012. Investigating the response of Cladocera to a major saltwater intrusion event in an Arctic lake from the outer Mackenzie Delta (NT, Canada). *Journal of Paleolimnology*. 48(2):287-296. (IF=1.898)

6. Thienpont, J.R., Johnson, D., Nesbitt, H., Kokelj, S.V., Pisaric, M.F.J. and Smol, J.P. 2012. Arctic coastal freshwater ecosystem responses to a major saltwater intrusion: a landscape-scale palaeolimnological analysis. *Holocene*. 22(12):1451-1460. (IF=2.595)

7. Deison, R. Smol, J.P., Kokelj, S.V., Pisaric, M.F.J., Kimpe, L.E., Poulain, A.J., Sanei, H., Thienpont, J.R., and Blais, J.M. 2012. Spatial and temporal assessment of mercury and organic matter in lakes affected by thawing permafrost in the Mackenzie Delta uplands, NT, Canada. *Environmental Science & Technology*. 46(16): 8748-8755. (IF=5.228)

8. Thienpont J.R., Rühland, K.M., Pisaric, M.F.J., Kokelj, S.V., Kimpe, L.E., Blais, J.M., and Smol, J.P. 2013. Biological responses to permafrost thaw slumping in Canadian Arctic lakes. *Freshwater Biology* 58(2): 337-353. (IF=3.290)

9. Vermaire, J.C., Pisaric, M.F.J., Thienpont, J.R., Courtney Mustaphi, C.J., Kokelj, S.V. and Smol, J.P. 2013. Arctic climate warming and sea ice declines lead to increased storm surge activity. *Geophysical Research Letters*. 40(7):1386-1390. (IF=2.959)

This paper has been selected as an Editor's Research highlight for the EOS, Transactions American Geophysical Union.

10. Porter, T.J., Pisaric, M.F.J., Field, R., Kokelj, S.V., Edwards, T.W.D., deMontigny, P., Healey, R. and LaGrande, A. 2013. April-July minimum temperatures since AD 1780 reconstructed from stable oxygen isotope ratios in white spruce tree-rings from the Mackenzie Delta, northwestern Canada. *Climate Dynamics*. 42(3-40):771-785. (IF=4.602)
11. Porter, T.J., Pisaric, M.F.J., Kokelj, S.V. and Peter deMontigny. 2013. A ring-width-based reconstruction of June-July minimum temperatures since AD 1245 from a network of white spruce stands in the Mackenzie Delta region, northwestern Canada. *Quaternary Research*. 80(2):167-179. (IF=2.515)
12. Courtney Mustaphi, C.J. and Pisaric, M.F.J. 2013. Varying influence of climate and aspect as controls of montane forest fire regimes during the late Holocene, south-eastern British Columbia, Canada. *Journal of Biogeography*. 40(10):1983-1996. (IF=4.544)
13. Klemm, J., Herzsuh, U., Pisaric, M.F.J., Telford, R.J., Heim, B. and Pestryakova, L.A. 2013. Assessment of a modern pollen-climate calibration set for Arctic tundra and northern taiga biomes from northern Yakutia (eastern Siberia) and its applicability to a Holocene record from the Lena delta. *Palaeogeography, Palaeoclimatology, Palaeoecology*. 386:702-713. (IF=3.215)
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15. Courtney Mustaphi, C. and Pisaric, M.F.J. 2014. Holocene climate-fire-vegetation interactions at a subalpine watershed in southeastern British Columbia, Canada. *Quaternary Research*. 81(2): 228-239. DOI: 10.1016/j.yqres.2013.12.002 (IF=2.811)
16. Lavery, J.M., Kurek, J., Rühland, K., Gillis, C.A., Pisaric, M.F.J. and Smol, J.P. 2014. Exploring the environmental context of recent *Didymosphenia geminata* blooms in Gaspésie, Québec, using paleolimnology. *Canadian Journal of Fisheries and Aquatic Sciences*. 71(4): 616-626, 10.1139/cjfas-2013-0442 (IF=2.655)
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23. Thienpont, J.R., Steele, C., Vermaire, J.C., Pisaric, M.F.J., Kokelj, S.V. and Smol, J.P. 2015. Synchronous changes in chironomid assemblages following a major saltwater intrusion in two coastal Arctic lake ecosystems. *Journal of Paleolimnology*. 53(2):177-189. DOI 10.1007/s10933-014-9815-1.

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26. Courtney Mustaphi, C., Davis, E., Perreault, J. and Pisaric, M.F.J. (2015). Spatial variability of recent macroscopic charcoal deposition in a small subalpine lake with implications for watershed scale fire regime reconstructions. *Journal of Paleolimnology*. 54(1): 71-86.
27. Courtney Mustaphi, C., Gedalof, Z., Daniels, L.D. and Pisaric, M.F.J. 2015. Paleoecological and sedimentological data from: "A classification for macroscopic charcoal morphologies found in Holocene lacustrine sediments." *Open Quaternary*.
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31. Davis, E.L., Courtney Mustaphi (double surname), C.J., Pisaric, M.F.J., Vermaire, J., and Moser, K.A. 2016. Determinants of fire activity at the wildland-urban interface of Jasper, Alberta over the last 3500 years. *Quaternary Research*. 86(3): 247-259.
32. Pisaric, M.F.J. 2017. Paleoclimatology. *In*, International Encyclopedia of Geography: People, the Earth, Environment, and Technology. Wiley-Association of American Geographers.
33. Korosi, J., Thienpont, J.R., Pisaric, M.F.J., Perreault, J.T., deMontigny, P., Armstrong, T., Kokelj, S.V., Blais, J.M. and Smol, J.P. 2017. Tracking extensive lake expansion into critical wood

bison habitat of the southern Northwest Territories, Canada using remote sensing and lake sediments. *Nature Communications*. Feb 23;8:14510. doi: 10.1038/ncomms14510

34. Courtney Mustaphi, C. and Pisaric, M.F.J. 2017. Forest vegetation change and disturbance interactions over the past 7500 years at Sasquatch Lake, Columbia Mountains, western Canada. *Quaternary International*. DOI: 10.1016/j.quaint.2017.03.045

35. Davis, E.L., Courtney Mustaphi (double surname), C.J., Pisaric, M.F.J. (Accepted June 2017). Forests, fire histories, and futures of Columbian and Rocky Mountain forests, western Canada. *Western Geography*.

36. Wesche, S.D., Thienpont, J.R., Armstrong, T., Pisaric, M.F.J., deMontigny, P., Kokelj, S.V., and Condon, W. (Submitted May 2017). Linking knowledge from multiple sources to address northern environmental change: Landscape flooding in the Mackenzie Bison Sanctuary (Northwest Territories, Canada). *Regional Environmental Change*.

37. McKenzie, S. Slater, G., Kim, S-T., Pisaric, M.F.J., and Arain, M.A. 2018. Influence of Seasonal Temperature on Tree-Ring $\delta^{13}C$ in Different-age Temperate Pine Forests. *Forest Ecology and Management*.

38. Prince, T., Pisaric, M.F.J. and Turner, K.W. 2018. Postglacial Fire History from sedimentary charcoal and pollen in the Southwest Yukon Territory, Canada. *Frontiers in Ecology and Evolution - Paleoecology*.

39. Thienpont, J.R., Perreault, J.T., Korosi, J.B., Pisaric, M.F.J., and Blais, J.M. 2019. Has natural lake expansion and landscape inundation resulted in mercury increases in flooded lakes of the Great Slave Lowlands (Northwest Territories, Canada)? *Journal of Paleolimnology*. 61(3): 345-354.

40. Zhu, L., Gunter, R., Rühland, K.M., Pisaric, M.F.J., Kokelj, S.V. and Smol, J.P. Accepted June 2019. Impacts of road dust on small subarctic lake systems. *Arctic*.

41. McKenzie, S.M., Khomik, M., Pisaric, M.F.J., Bing, X. and Arain, A.M. In review May 2019. Tree-ring chronologies as a tool for assessing growth response to forest management strategies within a red pine (*Pinus resinosa*) plantation in southern Ontario, Canada. *Canadian Journal of Forest Research*.

42. Lange, J., Carrer, M., Pisaric, M.F.J., Porter, T.J., Seo, J-W., Trouillier, M. and Wilmking, M. In review May 2018. Moisture-driven shift in the climate sensitivity of white spruce xylem anatomical traits across the northern treeline in Alaska and NW Canada. *Global Change Biology*.

43. Pisaric, M.F.J. and Smol, J.P. In review June 2019. Arctic Ecology: A Palaeoenvironmental Perspective. *In*, Arctic Ecology, Edited by David N. Thomas, Wiley-Blackwell.

In preparation

Ham, E.R., Martin, J-P. and Pisaric, M.F.J. Comparing strip bark and whole bark growth morphology trees in a subarctic conifer (*Pinus banksiana*).

Garner, C., Chin, K. and Pisaric, M.F.J. The impacts of recent wildfires on stream water chemistry and macroinvertebrate assemblages, Northwest Territories, Canada,

Technical Reports

1. Porter, T.J., deMontigny, P. and Pisaric, M.F.J. 2011. White spruce tree-ring chronologies of the Mackenzie Delta region: Indicators of past climate and environmental change. A report submitted to Indian and Northern Affairs Canada. 108 pp.

2. Pisaric, M.F.J. and Porter, T.J. 2011. Silent sentinels: Talking trees of the Old Crow Flats. Published in the magazine Yukon, North Of Ordinary. pg. 15.

3. deMontigny, P. and Pisaric, M.F.J. 2011. Lake level fluctuations and its impact on bison habitat: a climate reconstruction of the Fort Providence region, NWT. A report submitted to the Cumulative Impacts Monitoring Program, NWT. 29 pp.

4. Martin, J-P. and Pisaric, M.F.J. 2017. Tree-ring based streamflow reconstruction of the Snare River basin. Preliminary Report submitted to Government of Northwest Territories, Department of Public works and the Northwest Territories Power Corporation. 29 pp.

Papers Presented

a) *To learned societies*

1. Thienpont, J.R., Rühland, K.M., Pisaric, M.F.J., Kokelj, S.V., Blais, J.M., Kimpe, L.E., and J.P. Smol. 2011. Determining the impact of permafrost degradation on lakes from the western Canadian sub-Arctic using lake sediments. Society of Canadian Limnologists, Toronto Canada. January 2011.
2. French, T.D., Houben, A., Kokelj, S.V., Wang, X., Pisaric, M.F.J., Thienpont, J., deMontigny, P., Smol, J.P. and Blais, J.M. 2011. Coupled pH-DOC thresholds govern Mercury bioaccumulations in arctic lakes along a gradient of permafrost thawing. Society of Canadian Limnologists, Toronto Canada. January 2011.
3. Thienpont, J., Nesbitt, H., Deasley, K., Korosi, J., Kokelj, S., Pisaric, M. and Smol, J. 2011. Marine Storm Surge Damage to Arctic Freshwater Ecosystems. 4th Ontario-Quebec Paleolimnology Symposium (PALS), May 26-27, 2011, McGill University, Montreal, QC. Canada.
4. Pisaric, M.F.J., Marcantonio, R. and Sigurdson, K. 2011. Vegetation and climate controls on fire regimes in the southern Yukon Territory during the past 1200 years. Association of American Geographers, Seattle, WA. April 2011.
5. Porter, T.J., Pisaric, M.F.J., Kokelj, S.V. and Edwards, T. 2011. Reconstructing June-July temperatures from $\delta^{13}C$ of white spruce (*Picea glauca* [Moench] Voss) tree-rings at boreal treeline, Mackenzie Delta, northwestern Canada. Association of American Geographers, Seattle, WA. April 2011.
6. Courtney Mustaphi, C. and Pisaric, M.F.J. 2011. Lake sediment records of Holocene forest fire regimes from the Kootenay region, southeastern British Columbia, Canada. 4th Ontario-Quebec Paleolimnology Symposium (PALS), May 26-27, 2011, McGill University, Montreal, QC. Canada.
7. Vermaire, J.C., Courtney Mustaphi, C., Thienpont, J.R., Kokelj, S.V., Smol, J.P. and Pisaric, M.F.J. 2011. Storm surge frequency and magnitude over the last ~1000 years in the Mackenzie Delta region of the Northwest Territories, Canada. 4th Ontario-Quebec Paleolimnology Symposium (PALS), May 26-27, 2011, McGill University, Montreal, QC. Canada.
8. Vermaire, J.C., Courtney Mustaphi, C., Thienpont, J.R., Kokelj, S.V., Smol, J.P. and Pisaric, M.F.J.. 2011. Reconstructing storm surges and the resultant ecosystem impacts and recoveries in the western Canadian Arctic over the last ~1000 years. XVIII International Quaternary Association Congress. Bern, Switzerland. July 2011

9. Pisaric, M.F.J., Marcantonio, R. and Sigurdson, K. 2011. Vegetation and climate controls on fire regimes in the southern Yukon Territory during the past 1200 years. XVIII International Quaternary Association Congress. Bern, Switzerland. July 2011.
10. Wilmking, M., Hallinger, M., Jansen, F., Porter, T., and Pisaric, M. 2011, Ecosystem carbon storage and non-linear ecosystem shifts in northwestern North America, Talk at the workshop: "Recarbonization of the Biosphere", Institute for Advanced Sustainability Studies (IASS), Potsdam, Germany. March 2011.
11. Patterson, R.T., Clark, I.A., Crann, C., Falck, H., Galloway, J.M., Gammon, P.R., Griffith, F., Macumber, A.L., Muise, P., Neville, L.A., Pisaric, M.F.J., Prokoph, A., Roe, H.M., Swindles, G.T., Upiter, L., Vermaire, J.C. 2011. Paleoclimatological assessment of the central Northwest Territories, Canada: Implications for the long-term viability of the Tibbett to Contwoyto Winter Road. NWT Geoscience Conference. Yellowknife, NWT. November 2011.
12. deMontigny, P., Pisaric, M.F.J., Armstrong, T., Condon, W., Kokelj, S.V. and van der Wielen, S. 2011. Lake level fluctuations and its impact on bison habitat: a climate reconstruction of the Fort Providence region, NWT. NWT Geoscience Conference. Yellowknife, NWT. November 2011.
13. Muise, P., Pisaric, M.F.J., Falck, H., Patterson, R.T. 2011. The dendroclimatic signal in white spruce ring widths along the Tibbitt to Contwoyto ice road, Yellowknife, NWT. NWT Geoscience Conference. Yellowknife, NWT. November 2011.
14. Vermaire, J.C., Kokelj, S.V., Pisaric, M.F.J., Thienpont, J.R., Blais, J.M., and Smol, J.P. 2011. Paleoecology in Environmental Monitoring Programs. NWT Geoscience Conference. Yellowknife, NWT. November 2011.
15. Vermaire, J.C., Delaney, S., Thienpont, J.R., deMontigny P., Kokelj, S.V., Blais, J.M., Smol, J.P., and Pisaric, M.F.J. 2012. The impact of retrogressive permafrost slumps on lake sediment characteristics and chironomid assemblages. Canadian Conference For Fisheries Research, Moncton NB.
16. Vermaire, J.C., Steele, C.L., Courtney Mustaphi, C., Thienpont, J.R., Kokelj, S.V., Smol, J.P., and Pisaric, M.F.J. 2011. Historical storm surge magnitude and chironomid response over the last ~1200 years in the Mackenzie Delta region of the Northwest Territories, Canada. Canadian Conference for Fisheries Research, Moncton NB.

17. deMontigny, P., Pisaric, M.F.J., Armstrong, T., Condon, W., Kokelj, S.V., and S. van der Wielen. 2012. Lake level fluctuations and its impact on bison habitat: a climate reconstruction of the Fort Providence region, NWT. 2012 Ottawa-Carleton Student Northern Research Symposium. University of Ottawa, Ottawa, Canada.
18. Muise, P., Pisaric, M.F.J., Falck, H., and R.T. Patterson. 2012. The dendroclimatic signal in white spruce ring widths along the Tibbitt to Contwoyto ice road, Yellowknife, NWT. 2012 Ottawa-Carleton Student Northern Research Symposium. University of Ottawa, Ottawa, Canada.
19. Steele, C., Vermaire, J., Thienpont, J., Kokelj, S.V., and M.F.J. Pisaric. 2012. Using paleolimnology to track impacts of a recent storm surge on chironomid communities, Mackenzie Delta, NWT. 2012 Ottawa-Carleton Student Northern Research Symposium. University of Ottawa, Ottawa, Canada.
20. Courtney Mustaphi, C.J., Vermaire, J.C., Thienpont, J.R., Kokelj, S.V., Smol, J.P., and M.F.J. Pisaric. 2012. Recent storm surges in the Mackenzie Delta region, Northwest Territories, Canada, inferred from sediments collected from coastal lakes. 2012 Ottawa-Carleton Student Northern Research Symposium. University of Ottawa, Ottawa, Canada.
21. Pisaric, M.F.J., Porter, T.J., deMontigny, P., Dick, M., Perrault, J., Robillard, K-L. and Wertheimer, È. 2012. Development of a multicentennial eastern white pine tree ring chronology from salvaged river logs and its utility for dendroarcheological dating in eastern Ontario, Canada. Association of American Geographers Annual Meeting. February 2012, New York City, USA.
22. Porter, T.J. and M.F.J. Pisaric. 2012. 'Divergence' and implications for reconstructing warm season temperatures from white spruce tree-rings in Old Crow Flats, Yukon Territory, and neighboring N.W. North America. April 2012. IPY 2012 Conference, From Action to Knowledge. Montreal, Canada.
23. Humphries, M.M., Wolfe, B.B., Williams, M., Nagwan, L., Pisaric, M.F.J., Chan, L., Lantz, T., Hall, R.I., Cooley, D., Froese, D.G. and Burn, C.R. 2012. Environmental Change and Traditional Use of the Old Crow Flats: Meeting the Challenges of the New Northern Research Paradigm. April 2012. IPY 2012 Conference, From Action to Knowledge. Montreal, Canada.
24. Thienpont, J.R., Ruhland, K.M., Pisaric, M.F.J., Kokelj, S.V., Blais, J. and Smol, J.P. 2012. Biological responses to permafrost degradation in lakes of the Mackenzie Delta uplands (NT, Canada). April 2012. IPY 2012 Conference, From Action to Knowledge. Montreal, Canada.

25. Houben, A.J., French, T.D., Kokelj, S.V., Thienpont, J.R., Pisaric, M.F.J., Smol, J.P. Kimpe, L. and Blais, J.M. 2012. Permafrost Thaw Slumping Alters Limnology and Reduces Primary Productivity in Upland Tundra Lakes East of the Mackenzie River delta, NWT. April 2012. IPY 2012 Conference, From Action to Knowledge. Montreal, Canada.
26. Pisaric, M.F.J., Barwell, R. and Surtamm, C. 2012. Tree rings, climate change and mathematics. Ontario Association of Mathematics Educators. May 2012. Kingston, ON.
27. Pisaric, M.F.J., Porter, T.J., deMontigny, P., Dick, M., Perrault, J., Robillard, K-L. and Wertheimer, È. 2012. Development of a multicentennial eastern white pine tree ring chronology from salvaged river logs and its utility for dendroarcheological dating in eastern Ontario, Canada. Canadian Archaeological Association Annual Meeting. May 2012, Montreal, Canada.
28. Courtney Mustaphi, C. and Pisaric, M.F.J. 2012. Multiple lake sediment records of Holocene forest fire regimes from the Nelson area, southeastern British Columbia, Canada. 5th Ontario-Quebec Paleolimnology Symposium (PALS), May 23-25, 2012, University of Western Ontario, London, Ontario.
29. Vermaire, J.C. and Pisaric, M.F.J. 2012. Detecting changes in the primary driver of community composition through time: Implications for quantitative inferences of environmental variables. 5th Ontario-Quebec Paleolimnology Symposium (PALS), May 23-25, 2012, University of Western Ontario, London, Ontario.
30. Delaney, S., Kokelj, S.V. and Pisaric, M.F.J. 2012. Using paleolimnology to track geomorphological change in northwest Canada. 5th Ontario-Quebec Paleolimnology Symposium (PALS), May 23-25, 2012, University of Western Ontario, London, Ontario.
31. Courtney Mustaphi, C. and Pisaric, M.F.J. 2012. A new classification for sedimentary macroscopic charcoal morphology. 5th Ontario-Quebec Paleolimnology Symposium (PALS), May 23-25, 2012, University of Western Ontario, London, Ontario.
32. Steele, C., Vermaire, J., Thienpont, J., Kokelj, S.V., Smol, J.P. and Pisaric, M.F.J. 2012. Using paleolimnology to track impacts of a recent storm surge on chironomid communities, Mackenzie Delta, NWT. 5th Ontario-Quebec Paleolimnology Symposium (PALS), May 23-25, 2012, University of Western Ontario, London, Ontario.
33. Daniels, L.D., Greene, G.A., Cochrane, J.D., Marcoux, H., Nesbitt, J., Gergel, S., Gedalof, Z., Da Silva, E., Pisaric, M.F.J. and Courtney Mustaphi, C.J. 2012. Climate Variability and Altered Fire Regimes in the Mountain Forests of British Columbia, Canada. 5th International Fire Ecology and Management Congress. Portland, Oregon, December 3-7, 2012.

34. Courtney Mustaphi, C.J. and Pisaric, M.F.J. 2012. Multiple lake sediment records of Holocene forest fire histories from southeastern British Columbia, Canada. 5th International Fire Ecology and Management Congress. Portland, Oregon, December 3-7, 2012.
35. Thienpont, J.R., Ruhland, K.M., Deison, R., Pisaric, M.F.J., Kokelj, S.V., Blais, J.M., Smol, J.P. 2012. Aquatic ecosystem responses to permafrost thaw slumping in Canadian Arctic lakes. 12th International Paleolimnology Symposium Glasgow, Scotland. 21-24 August, 2012.
36. Courtney Mustaphi, C.J., Pisaric, M.F.J. 2012. Holocene fire records from small subalpine lakes in southeast British Columbia, Canada. 12th International Paleolimnology Symposium Glasgow, Scotland. 21-24 August, 2012.
37. Thienpont, J. R., deMontigny, P., Perreault, J., Pisaric, M.F.J., Armstrong, T., Kokelj, S.V., Condon, W, Wesche, S., Blais, J., Kimpe, L., and Smol, J. P. 2013. Landscape Flooding in the Mackenzie Bison Sanctuary. Cumulative Impacts Monitoring Program (CIMP) Results Workshop. Yellowknife, NWT. January 20-23, 2013.
38. Spence, C., Kokelj, S.V., Kokelj, S., Patterson, T., Galloway, J., English, M. and Pisaric, M.F.J. 2013. Changes to Taiga Shield Water Chemistry Regimes with Enhanced Winter Streamflow. Cumulative Impacts Monitoring Program (CIMP) Results Workshop. Yellowknife, NWT. January 20-23, 2013.
39. Kokelj, S.V., Chin, K., Culp, J., Delaney, S., Fraser, R., Lacelle, D., Lamoreux, S., Lantz, T.C., McGeer, J., Mochnac, N. Neyando, G., O'Neill, B., Pisaric, M.F.J., Semmler, M., and Thompson, A. 2013. A Watershed Approach to Monitoring Cumulative Impacts of Landscape Change. Cumulative Impacts Monitoring Program (CIMP) Results Workshop. Yellowknife, NWT. January 20-23, 2013.
40. Pisaric, M.F.J., Thienpont, J.R., deMontigny, P., Perreault, J., Armstrong, T., van der Wielen, S., Condon, W., Blais, J, Kimpe, L., Kokelj, S.V. and Smol, J.P. 2013. Recent lake expansion across the Great Slave Lowlands and Plain, Northwest Territories, Canada: implications for mercury mobilization and bison management strategies. Association of American Geographers Annual Meeting. Los Angeles, CA. April 8-13, 2013.
- *41. Perreault, J.T., Thienpont, J.R., deMontigny, P., Armstrong, T., Kokelj, S.V., Blais, J., Kimpe, L., Korosi, J.B., Condon, W., van de Wielen, S., Smol, J.P. and Pisaric, M.F.J. 2013. Is Lake Expansion Driving Mercury Deposition in Lake Sediments From the Great Slave Plain and

Lowlands Eco-region, Northwest Territories? Ottawa-Carleton Student Northern Research Symposium. Carleton University, Ottawa. March 8, 2013. (*Awarded the best poster).

42. Quann, S.L., Joshi, A., St-Onge, S.M., Kokelj, S.V., and Pisaric, M.F.J. 2013. Dendroclimatic analysis of *Pinus banksiana* radial growth in Yellowknife, Northwest Territories, Canada. Ottawa-Carleton Student Northern Research Symposium. Carleton University, Ottawa. March 8, 2013.

43. Desjardins CM, Kimpe LE, Thienpont J, Kokelj S, Korosi J, Pisaric MFJ, Smol JP, Blais JM. 2013. Potential impacts of climate change and industrial activity on organic carbon and polycyclic aromatic hydrocarbons in the Northwest Territories. Ontario-Quebec Paleolimnology Symposium, Ottawa, ON, May 15-17, 2013.

44. Perreault, J.T., Thienpont, J.R., deMontigny, P., Armstrong, T., Kokelj, S.V., Blais, J., Kimpe, L., Korosi, J.B., Condon, W., van de Wielen, S., Smol, J.P. and Pisaric, M.F.J. 2013. Is Lake Expansion Driving Mercury Deposition in Lake Sediments From the Great Slave Plain and Lowlands Eco-region, Northwest Territories? Ontario-Quebec Paleolimnology Symposium, Ottawa, ON, May 15-17, 2013.

45. Courtney Mustaphi, C.J., and Pisaric, M.F.J. 2013. An assessment of Holocene fire regime controls in southeastern British Columbia. Ontario-Quebec Paleolimnology Symposium, Ottawa, ON, May 15-17, 2013.

46. Delaney, S. R., Quinlan, R., Lamoureux, S.F., Kokelj, S.V., and Pisaric, M.F.J. 2013. Impacts of retrogressive permafrost thaw slumps on aquatic systems, Northwest Territories, Canada. Ontario-Quebec Paleolimnology Symposium, Ottawa, ON, May 15-17, 2013.

47. Daniels, L., Greene, G., Cochrane, J. Marcoux, H., Nesbitt, J., Gergel, S., Gedalof, Z. DaSilva, E., Pisaric, M. and Mustaphi, C. 2013. Climate Variability and Altered Fire Regimes in the Mountain Forests of British Columbia, Canada. Second American Dendrochronology Conference. Tucson, Arizona. May 13-17, 2013.

48. Quann, S., Joshi, A., St-Onge, S.M., Kokelj, S.V., and Pisaric, M.F.J. 2013. Investigating the influence of climate on intra-annual *Pinus banksiana* radial growth in Yellowknife, Northwest Territories, Canada. Canadian Association of Geographers Annual Meeting, Memorial University, August 11-15, 2013.

49. Thienpont, J.R., Kokelj, S.V., Korosi, J.B., Cheng, E., Desjardins, C., Kimpe, L.E., Blais, J.M., Pisaric, M.F.J. and Smol, J.P. 2013. Exploratory hydrocarbon drilling impacts to Arctic lake

ecosystems. Inuvik Petroleum Show Conference and Tradeshow Exposition. Inuvik, NWT. June 10-12, 2013.

50. Courtney Mustaphi, C.J., Pisaric, M.F.J., Daniels, L., Gedalof, Z., Greene, G., Chavardes, R. 2013. Charcoal records from interior British Columbia: fire regime variability on mountainous landscapes. PAGES Global Paleofire Working Group meeting, Oct 2-6, 2013, Frasné, France.

51. Thienpont, J.R., Perreault, J., deMontigny, P., Armstrong, T., Condon, W., Blais, J.M., Kimpe, L., Korosi, J.B., Kokelj, S.V., Smol, J.P., van der Wielen, S., Wesche, S., and Pisaric, M.F.J. 2013. Assessing the causes and ecological impact of significant landscape flooding in the Mackenzie Bison Sanctuary, Northwest Territories. NWT Environmental Monitoring Annual Results Workshop, Yellowknife, Northwest Territories, Canada. December 10, 2013.

52. Thienpont, J.R., Perreault, J., Armstrong, T., Kokelj, S.V., Blais, J.M., Smol, J.P., and Pisaric, M.F.J. 2014. Assessing the timing and impact of recent lake expansion in the Mackenzie Bison Sanctuary. Society for Canadian Limnologists Conference, Yellowknife, Northwest Territories, Canada. January 5, 2014.

53. Thienpont, J.R., Rühland, K.M., Kokelj, S.V., Blais, J.M., Pisaric, M.F.J., and Smol, J.P. Using sedimentary diatoms to infer aquatic habitat changes following permafrost thaw in the Great Slave and Mackenzie Delta regions of western Canada. (Poster presentation at THAW 2014 - Thermokarst Aquatic ecosystems Workshop: Freshwater ecosystems in changing permafrost landscapes, Quebec City, Quebec, Canada, March 12-15, 2014).

54. Pisaric, M.F.J., Delaney, S., Thienpont, J.R., Vermaire, J., Quinlan, R., Lamoureux, S., and S.V. Kokelj. 2014. Undoing 10,000 years of landscape development in the blink of an anthropogenic eye: Impacts of retrogressive permafrost megaslumps on aquatic ecosystems, Peel Plateau, Northwest Territories. Association of American Geographers Annual Meeting, Tampa Florida. April 8-12, 2014.

*55. Quann, S.L., Porter, T.J., Smith, D.J., Pisaric, M.F.J. 2014. A dendroclimatological investigation of the divergence problem using white spruce (*Picea glauca*), Northwest Territories, Canada. Paper presented at the 2014 Association of American Geographers annual meeting, Tampa, FL. April 8-12, 2014.

**Student won the best paper at the Masters level awarded by the Biogeography Specialty Group.*

56. Stretch, V., Gedalof, Z., Daniels, L. and Pisaric, M.F.J. 2014. Evidence of mixed-severity fire regimes in the Foothills of the Rocky Mountains, Alberta, Canada. Paper presented at the 2014 Association of American Geographers annual meeting, Tampa, FL. April 8-12, 2014
57. Quann, S.L., Porter, T.J., Smith, D.J., Pisaric, M.F.J. 2014. Assessing the potential of maximum density in developing divergence-free white spruce chronologies, Northwest Territories, Canada. Paper presented at the 2014 Canadian Association of Geographers annual meeting, St. Catharines, ON. May 26-30, 2014.
58. Davis, E., Courtney Mustaphi, C., Moser, K. and Pisaric, M.F.J. 2014. The influence of vegetation and climate on wildfires in Jasper National Park, Alberta, over the last 2000 years. Paper presented at the 2014 Canadian Association of Geographers annual meeting, St. Catharines, ON. May 26-30, 2014.
59. Eickmeyer, D.C., Kimpe, L.E., Kokelj, S.V., Pisaric, M.F.J., Smol, J.P., Sanei, H., Thienpont, J.R., and Blais, J.M. 2014. Spatial assessment of the interactions between PCBs, organochlorine pesticides and organic matter in retrogressive thaw slump-affected lake sediments of the Mackenzie River Delta uplands, Canada. Genomes to Biomes Meeting CSEE-SCZ-SCL, Montreal, Quebec, Canada, May 29, 2014.
60. Thienpont, J.R., Rühland, K.M., Kokelj, S.V., Blais, J.M., Pisaric, M.F.J., and Smol, J.P. 2014. Assessing aquatic habitat changes following permafrost thaw in the western Canadian sub-Arctic using lake sediment profiles. 4th European Conference on Permafrost, Évora, Portugal, June 18-21, 2014.
61. Pisaric, M.F.J., Delaney, S., Thienpont, J.R., Vermaire, J., Quinlan, R., Lamoureux, S., and S.V. Kokelj. 2014. Impacts of retrogressive permafrost megaslumps on aquatic ecosystems, Peel Plateau, Northwest Territories. 4th European Conference on Permafrost, Évora, Portugal, June 18-21, 2014.
62. Quinlan, R. Delaney, S. Lamoureux, S., Kokelj, S.V. and Pisaric, M.F.J. 2014. A thawing Arctic: possible alluvial damming of a lake basin downstream of permafrost slumping inferred from a lake sediment record. Canadian Association of Geographers Ontario Division (CAGONT) Annual Meeting. York University. October 24-25, 2014.
63. Quinlan, R. Delaney, S. Lamoureux, S., Kokelj, S.V. and Pisaric, M.F.J. 2015. Limnological changes to an Arctic pond downstream of permafrost slumping. Society of Canadian Limnologists Annual Meeting. January 8-11, 2015.

64. Thienpont, J.R., Korosi, J.B., Pisaric, M.F.J., and Smol, J.P. Climate warming results in more specialized cladoceran taxa in Canadian Arctic lakes. Society of Canadian Limnologists Annual Meeting. January 8-11, 2015.
65. Gunter, R., Pisaric, M.F.J. and Turner, K. 2015. The impact of dust from the Dempster Highway, NWT on surrounding aquatic ecosystems. Brock University Research Day Fair. February 2015, Brock University, St. Catharines, ON.
66. Thienpont, J.R., Korosi, J.B., Pisaric, M.F.J. and Smol, J.P. 2015. Climate Warming Results in More Specialized Cladoceran Taxa in Canadian Arctic Lakes. 2015 Association of American Geographers Annual meeting, Chicago, IL. April 21-25, 2015.
67. Pisaric, M.F.J., Weisner, R., Quann, S. and Porter, T.J. 2015. Intra-annual wood anatomical features of white spruce (*Picea glauca*) and their relationship to climate at northern treeline in Northwest Territories, Canada. 2015 Association of American Geographers Annual meeting, Chicago, IL. April 21-25, 2015.
68. Davis, E., Pisaric, M.F.J., Courtney Mustaphi, C.J., Vermaire, J.C. and Moser, K.A. 2015. Using a multi-proxy approach in fire history studies: Some advantages and challenges from Jasper National Park. AGU-GAC-MAC-CGU Joint Assembly, Montreal, Canada. May 2015.
69. McKenzie, S.M., Arain, M.A., Pisaric, M.F.J. and Kula, M. 2015. Environmental Controls on Tree-Ring Growth in an Age-Sequence of Planted Pine Forests. AGU-GAC-MAC-CGU Joint Assembly, Montreal, Canada. May 2015.
70. Kokelj, S.V., Tunnicliffe, J., Lacelle, D., Lantz, T.C., Fraser, R., Pisaric, M.F.J., and van der Sluijs, J. 2015. Retrogressive Thaw Slumps and the Landscape Sensitivity of Northwestern Canada. Yellowknife Geoscience Forum, Yellowknife Northwest Territories. November 2015.
71. Pisaric, M.F.J. 2015. Using the Past to Inform the Future: A Paleoecological Perspective of Climate and Environmental Change in the Northwest Territories. Yellowknife Geoscience Forum, Yellowknife Northwest Territories. November 2015.
72. Zhu, L., Rühland, K.M., Pisaric, M.F.J., and Smol, J.P. 2016. Effect of climate warming and road dust stressors on lakes near the Dempster Highway, N.W.T. Queen's Northern Research Symposium, Kingston, April 2016

73. Pisaric, M.F.J., Harmer, Z., Prince, T. and Stretch, V. 2016. The spatial and temporal record of wildfire across the Northwest Territories, Canada since 1965. Association of American Geographers Annual Meeting, San Francisco, United States. March 30, 2016.
74. Gunter, RA., Pisaric, M.F.J., Zhu, L, Rhuland, K, Kokelj, SV and Smol, JP. 2016. The impact of road dust on Arctic aquatic ecosystems, Northwest Territories, Canada. Association of American Geographers Annual Meeting, San Francisco, United States. March 30, 2016.
75. McKenzie, S.M., Arain, M.A., and Pisaric, M.F.J. 2016. Drought Events in a Temperate White Pine Plantation derived From Carbon Isotope Signatures. Whidden Lecture Series 2016, February 26, 2016. Poster presentation, McMaster University.
76. Gunter, R.A., Pisaric, M.F.J., Zhu, L., Rhuland, K., Kokelj, S.V. and Smol, J.P.(2016). The impact of road dust on Arctic aquatic ecosystems, Northwest Territories, Canada. The Ontario-Quebec Paleolimnology Symposium, Kingston, May 2016.
77. Pisaric, M.F.J., Harmer, Z., Prince, T. and Stretch, V. 2016. Using remotely sensed data to examine the spatial and temporal record of wildfire in the Northwest Territories, Canada between 1965-2015. Canadian Association of Geographers Annual Meeting, Halifax, Nova Scotia. June 2016.
78. Gunter, R., Pisaric, M.F.J., Zhu, L., Rhuland, K. and Smol, J.P. 2016. The impacts of dust loading from the Dempster Highway on aquatic ecosystems in the Northwest Territories, Canada. Canadian Association of Geographers Annual Meeting, Halifax, Nova Scotia. June 2016.
79. Garner, C., Pisaric, M.F.J., Chin, K.S. and Speakman, J.E. 2016. Determining the impact of wildfire on stream systems in the Dehcho and South Slave Regions (NWT) using water chemistry and benthic macroinvertebrate assemblages. Northwest Territories Geoscience Forum. Yellowknife, NWT. November 15-17, 2016.
80. Martin, J-P. and Pisaric, M.F.J. 2016. Meteorology and Synoptic Climatology of Streamflow in the Snare River Basin. Northwest Territories Geoscience Forum. Yellowknife, NWT. November 15-17, 2016.
81. Garner, C.G., Pisaric, M.F.J., and Chin, K.S. 2017. The Impacts of Recent Wildfires on Northern Stream Communities [Oral Presentation]. CABIN Science Forum; February 28th-March 1st. Edmonton, AB.

82. Garner, C.G., Pisarcic, M.F.J., and Chin, K.S. 2017. The Impacts of Wildfire on Benthic Macroinvertebrate Communities in Northern Stream Ecosystems [Oral Presentation]. American Association of Geographers Annual Meeting; April 4th-April 9th. Boston, MA.
83. Garner, C.G., Pisarcic, M.F.J., Chin, K.S., and Speakman, J. 2017. The Response of Northern Stream Communities to Recent Wildfires Within the North Slave and Dehcho Regions, Northwest Territories [Oral Presentation]. 12th Annual Mapping the New Knowledge (MNK) Graduate Student Research Conference; April 11th. St. Catharines, ON.
84. Prince, T., Pisarcic, M.F.J. and Turner, K.W. 2017. Postglacial reconstruction of fire history from a small lake in southwest Yukon Territory using sedimentary charcoal and pollen. American Association of Geographers Annual Meeting; April 4th-April 9th. Boston, MA. (*Won best student presentation for the Biogeography Specialty Group and the Paleoenvironmental Change Specialty Group*).
85. Harris, D., Pisarcic, M.F.J. and Martin, J-P. 2017. Assessing factors influencing the growth and cellular development of Jack pine (*Pinus banksiana*), Yellowknife, NT. American Association of Geographers Annual Meeting; April 4th-April 9th. Boston, MA.
86. Harris, D., Pisarcic, M.F.J. and Martin, J-P. 2017. Assessing factors influencing the growth and cellular development of Jack pine (*Pinus banksiana*), Yellowknife, NT. 12th Annual Mapping the New Knowledge (MNK) Graduate Student Research Conference; April 11th. St. Catharines, ON.
87. Prince, T., Pisarcic, M.F.J. and Turner, K.W. 2017. Postglacial reconstruction of fire history from a small lake in southwest Yukon Territory using sedimentary charcoal and pollen. Ontario and Quebec Paleolimnology Symposium, May 24-26, Brock University. (*Won best poster presentation*).
88. Bakkelund, A., Porter, T.J., Feakins, S.J., Pisarcic, M.F.J. and Prince, T. 2017. Holocene climate change at Spindly Pine lake, southwestern Yukon, inferred from the hydrogen isotope composition of plant waxes. Geological Society of America Annual Meeting, Seattle, Washington USA. October 22-25, 2017.
89. Garner, C.S., Pisarcic, M.F.J., and Chin, K.S. 2017. Response of stream macroinvertebrates to recent wildfires in the North Slave, South Slave, and Dehcho Regions, Northwest Territories, Canada. 45th Annual Yellowknife Geoscience Forum. Yellowknife, Northwest Territories. November 2018.

90. Martin, J.P. and Pisaric, M.F.J. 2018. Tree-ring reconstruction of streamflow in the Snare River Basin, Northwest Territories, Canada. 45th Annual Yellowknife Geoscience Forum. Yellowknife, Northwest Territories. November 2018.
91. Moser, K.A., Pisaric, M.F.J., Turner, K.W., Ceci, M., Garner, C., Harris, D.M., Martin, J.P., Prince, T., Sia, M., and Viscek, J.A. Using the past to inform the future: A paleoecological perspective of the impacts of drought and fire on lakes and forests. 45th Annual Yellowknife Geoscience Forum. Yellowknife, Northwest Territories. November 2018.
92. Harris, D.M., Pisaric, M.F.J., and Martin, J.P. 2018. Assessing factors influencing xylogenesis of Jack pine (*Pinus banksiana*), Yellowknife, Northwest Territories. 45th Annual Yellowknife Geoscience Forum. Yellowknife, Northwest Territories. November 2018.
93. Blais, J.M., Korosi, J., Thienpont, J.R., Pisaric, M.F.J., Kokelj, S.V., Smol, J.P. and Simpson, M.J. 2017. Broad-scale lake expansion and flooding inundates essential wood bison habitat in northwestern Canada. American Geophysical Union Fall Meeting, New Orleans USA. December 11-15, 2017.
94. Martin, J-P. and Pisaric, M.F.J. 2017. Tree-ring reconstruction of streamflow in the Snare River Basin, Northwest Territories, Canada. American Geophysical Union Fall Meeting, New Orleans USA. December 11-15, 2017.
95. Garner, C.G., Pisaric, M.F.J., and Chin, K.S. 2017. The Impacts of Recent Wildfires on Northern Stream Communities [Oral Presentation]. North and South Slave regions - CIMP Results Workshop. Fort Resolution, NT. October 17-18, 2017.
96. Pisaric, M.F.J., Moser, K.M., Prince, T., Ceci, M., Sia, M. and Warren, E. 2018. Fire and vegetation history during the Holocene epoch in the North Slave Region, Northwest Territories, Canada. European Geosciences Union General Assembly. April 8-13, 2018. Vienna, Austria.
97. Ham, E. and Pisaric, M.F.J. 2018. Microplastics in a Canadian water system: Implications for Niagara (Ontario) ecosystems and wastewater infrastructure Ontario and Quebec Paleolimnology Symposium, May 24-26, Brock University.
98. Ceci, M. R., and Pisaric, M. F. J. Reconstructing fire history and assessing changes in fire frequency in southern Northwest Territories. Poster presented at: 11th Annual Ontario-Québec Paleolimnology Symposium; 2018 May 23-25; St. Catharines, ON.

99. Harris, D. and Pisaric, M.F.J. 2018. Identifying xylogenesis and growth responses to weather in *Pinus banksiana* in a northern context. Mapping the New Knowledges Conference, April 12, 2018. Brock University, St. Catharines, ON.
100. Harris, D. and Pisaric, M.F.J. 2018. Xylogenesis and growth responses to changing weather conditions at the northern range limits of *Pinus banksiana*, Northwest Territories, Canada. Wood formation and tree adaptation to climate conference. May 23-25. Le Studium Loire Valley Institute for Advanced Studies, Orléans, France.
101. McKenzie, S.M., Arain, A. Pisaric, M.F.J., Slater, G., Kim, S-T. 2018. Stable isotope and dendroclimatological methods to evaluate water use in forest ecosystems. GWF Inaugural 2018 Annual Science Meeting. June 3-6, 2018. McMaster University, Hamilton, ON.
102. McKenzie, S.M., Arain, A., Pisaric, M.F.J. and Parker, W. 2018. Climate and stand density effects on growth in a red pine plantation in southern Ontario. June 10-14, 2018. 2018 Joint Meeting of the Canadian Geophysical Meeting. Niagara Falls, Canada.
103. Ham, E. and Pisaric, M.F.J. 2018. Microplastics in a Canadian water system: Implications for Niagara (Ontario) ecosystems and wastewater infrastructure. International Conference on Emerging Contaminants (EMCON). June 2018. Oslo, Norway.
104. Crann, C.A., Clark, I.D., Vogel, F. and Pisaric, M.F.J. 2018. Comparison of maple leaf and tree ring radiocarbon signatures near Ottawa, Canada 23rd International Radiocarbon Conference June 17-22, 2018. Trondheim, Norway.
105. Sia, M.E., Prince, T., Ceci, M., Martin, J-P., Moser, K.M. and Pisaric, M.F.J. 2018. Lake primary production response to wildfire and climate warming in the western boreal region, Northwest Territories, Canada. 14th International Paleolimnology Symposium. June 18-21, 2018. Stockholm, Sweden.
106. Ham, E. and Pisaric, M.F.J. 2018. Microplastics in a Canadian water system: Implications for Niagara (Ontario) ecosystems and wastewater infrastructure. Canadian Association of Geographers Ontario Division Annual Meeting. Toronto, October 2018.
107. Viscek, J.A., Turner, K.T., Pisaric, M.F.J., and Kokelj, S.V. 2018. Evaluating the Hydrology of Northern Boreal Lakes near Yellowknife, Northwest Territories and Their Response to Varying Catchment and Climatic Conditions. In, Irwin, D., Gervais, S.D., and Terlaky, V. (compilers), 2018. 46th Annual Yellowknife Geoscience Forum Abstracts; Northwest Territories Geological Survey, Yellowknife, NT. YKGSF Abstracts Volume, November 2018.

108. Arain, A., Boyce, J., Kim, S-T., Chen, J., and Pisaric, M. Southern forests water futures. Global Water Futures Operations Team - Second Annual Meeting. Saskatoon, Saskatchewan, January 21-23, 2019.
109. Pisaric, M.F.J., Ham, E., Martin, J-P., and Zugic, J. 2019. Is there evidence of CO₂ fertilization in jack pine (*Pinus banksiana*) trees with strip-bark growth morphology in northern Canada? Tree Rings in Archaeology, Climatology and Ecology (TRACE 2019), San Leucio - Caserta, Italy, May 7-10, 2019.
110. Ham, E., and Pisaric, M.F.J. 2019. The occurrence of microplastics and microfibrers in municipal water systems of the Niagara Region, Ontario, Canada. International Association of Great Lakes Research Conference, Brockport, NY, June 10-14, 2019.
111. Tepavcevic, M. and Pisaric, M.F.J. 2019. Microplastic occurrence and distribution in sediment from streams of the Niagara Peninsula, Ontario. International Association of Great Lakes Research Conference, Brockport, NY, June 10-14, 2019.
112. Epp, L.S., Herzsuh, U., Shapiro, B., Poinar, H., Froese, D., Pisaric, M., Olofson, J., Svenning, J-C., Roturier, S., Stammler, F., Roué, M., Nakashima, D., Crawhall, N., Hausner, V.H., and Alsos, I.G. 2019. Drivers of diversity and future scenarios for Arctic ecosystems from ethno-ecology, contemporary ecology and ancient environmental DNA. 8th International Barcode of Life Conference, Trondheim, Norway, June 17-20, 2019.
113. Epp, L.S., Alsos, I.G., Herzsuh, U., Shapiro, B., Poinar, H., Froese, D., Pisaric, M., Olofson, J., Svenning, J-C., Roturier, S., Stammler, F., Roué, M., Nakashima, D., Crawhall, N., and Hausner, V.H. 2019. Future ArcTic Ecosystems (FATE): drivers of diversity and future scenarios from ethno-ecology, contemporary ecology and ancient DNA. 20th INQUA Congress July 25-31, 2019, Dublin, Ireland.
114. Cocker, S., Murchie, T., Harvey, J., Jensen, B., Poinar, H., Pisaric, M., and Froese, D. 2019. Pleistocene extinction of megaherbivores from eastern Beringia using multiproxy paleoenvironmental records from central Yukon lake sediments: first results. 20th INQUA Congress July 25-31, 2019, Dublin, Ireland.
115. Pisaric, M., Crann, C., and Vogel, F. 2019. Do tree ring records from southern Ontario, Canada track local 14C releases from nuclear power plants? 20th INQUA Congress July 25-31, 2019, Dublin, Ireland.

b) To other academic bodies

1. Pisaric, M.F.J. (INVITED). 2012. Geomorphological change across northwest Canada in a warming world. Department of Geography, Brock University. February 2012.
2. Pisaric, M.F.J. (INVITED). 2012. Working at the interface: How local ecological knowledge and community-based science can inform our understanding of northern environmental change. Department of Geography, Brock University. November 2012.
3. Pisaric, M.F.J. (INVITED). 2013. Turning up the heat. Is northern tree line suffering from burnout in a warming world? Department of Biology. Brock University. April 2013.
4. Pisaric, M.F.J., Davis, E. and Moser, K. (INVITED). 2013. Where Do You Look for Evidence of Fires That Burned Thousands of Years Ago? Foothills Research Institute and Jasper National Park. July 2013. Hinton/Jasper, Alberta.
5. Pisaric, M.F.J. (INVITED) 2014. Using paleolimnology to inform management decisions in fire prone ecosystems. Healthy Landscapes Research Forum. University of Alberta, December 2014.
6. Pisaric, M.F.J. (INVITED) 2015. Environmental and climatic change in the Canadian Arctic: A paleoecological perspective of natural and human induced change from Inuvik, NWT. Department of Geography Speaker Series, University of Western Ontario. March 28, 2015.
7. Pisaric, M.F.J. (INVITED) 2015. Environmental and climatic change in the Canadian Arctic: A paleoecological perspective of natural and human induced change from Inuvik, NWT. Department of Biology Speaker Series, Laurier University. September 11, 2015.
8. Pisaric, M.F.J. (INVITED) 2016. Environmental and climatic change in the Canadian Arctic: A paleoecological perspective of natural and human induced change from Inuvik, NWT. Department of Geography Speaker Series, Guelph. March 18, 2016.

Scholarly and Professional Activities

Research Grants (all values in CDN\$)

a) Government or extra-university

<u>Year</u>	<u>Agency</u>	<u>Sum Received</u>
2011	Polar Continental Shelf Project	39,000.00
2011	DIAND (Department of Indian Affairs and Northern Development)	12,500.00
2011	Cumulative Impacts Monitoring Program (Northern Partners Terry Armstrong - Fort Providence)	13,000.00
2012	NSERC CRD (PI: Z. Gedalof - U. of Guelph)	59,750.00
2012	Polar Continental Shelf Project	32,000.00
2012	Cumulative Impacts Monitoring Program (Northern Partners Terry Armstrong - Fort Providence)	19,000.00
2012	Cumulative Impacts Monitoring Program (Northern Partners Steve Kokelj - Baker Creek)	5,000.00
2012	Cumulative Impacts Monitoring Program (Northern Partners Steve Kokelj - Peel Plateau)	14,400.00
2012	Cumulative Impacts Monitoring Program (Northern Partners Michael Palmer - Kakisa)	6,500.00
2013	Polar Continental Shelf Project	31,000.00
*2013	NSERC Discovery Grant	22,600.00/year (2013-2017)
*2013	NSERC Northern Supplement	15,000.00/year (2013-2017)
2013	CIMP - Changing Hydrology in the Taiga Shield: Geochemical and Resource Management Implications	5,000.00
2013	Cumulative Impacts Monitoring Program (Landscape scale flooding in Great Slave Lake Plain)	15,950.00
2014	Polar Continental Shelf Project	25,050.00
2014	Cumulative Impacts Monitoring Program (Landscape change on the Peel Plateau)	8,800.00
*2014	NSERC Discovery Grant	22,600.00/year (2013-2017)

*2014	NSERC Northern Supplement	15,000.00/year (2013-2017)
2014	Brock Chancellor's Chair for Research Excellence	60,000.00 (2014-16)
2015	Polar Continental Shelf Project	55,550.00
2015	Cumulative Impacts Monitoring Program (Impact of wildfire on northern stream ecosystems)	10,000.00
2016	Government of the Northwest Territories Climate Change Adaptation group	25,000.00
2016-19	Cumulative Impacts Monitoring Program (Using the past to inform the future: A paleoecological perspective of the impacts of drought and fire on lakes and forests)	165,000.00
2016	NSERC Engage Grant (Dendrohydrological reconstructions of stream flow from the Snare River basin, NWT to inform management decisions concerning power generation)	25,000.00
2016	Government of the Northwest Territories Public Works Division (Using the past to inform the future: A dendrohydrological assessment of Snare River (NT) flows during the past two centuries)	49,500.00
2017	Polar Continental Shelf Program	37,936.00
2017	The Ontario-Quebec Paleolimnology Symposium - Council for Research in Social Sciences (CRISS) of the Faculty of Social Sciences - Brock University	850.00
2017-2022	NSERC Discovery Grant	197,500.00
2017-2022	NSERC Northern Supplement	75,000.00
2017-2020	NSERC Discovery Accelerator Supplement	120,000.00
2018	Research in Social Sciences (CRISS) of the Faculty of Social Sciences - Brock University	3000.00
2018	Polar Continental Shelf Program	29,538.00
2018-2021	SSHRC Insight Development Grant	73,464.00 (6,265.00 my share)
2018-2021	Global Water Futures	500,000.00 (66,000.00 my share)
2018-2021	Belmont Forum	203,100.00 (67,700 my share)

*four-year grants while I was on the NSERC Discovery Grant Committee

Service to the Profession

a) *Scholarly assessments*

Scientific Reviewer for: Arctic, Antarctic and Alpine Research, Tree Ring Research, Quaternary Research, Canadian Journal of Botany, Ecological Monographs, Ecology, Ecoscience, Journal of Paleolimnology, Palaeogeography, Palaeoclimatology, Palaeoecology, Rhodora, Dendrochronologia, Journal of Forest Research, Holocene, Trees: Structure and Function, Proceedings of the National Academy of Sciences (PNAS), Canadian Geographer.

Assessment of research proposals for CFI, NSERC Discovery Grant competition, NSERC Collaborative Research and Development Grants and the Czech Science Foundation.

b) *Other*

Co-organizer and co-chair, Special session on “Dendrochronology: applications in ecology, climatology and the environment”, Canadian Association of Geographers Annual Meeting (May 26-30, 2014, Brock University).

Co-organizer and chair, Special session on “Temporal and Spatial Perspectives on Ecosystem Change”, Canadian Association of Geographers Annual Meeting. May 30-June 3, 2016, Halifax, Nova Scotia.

Co-organizer and chair, Special session on “Forest Hydrology and Biogeochemistry” Canadian Geophysical Union Meeting, Niagara Falls, ON. June 2018.

Academic Responsibilities (courses in bold are Brock courses)

a) *Undergraduate courses taught*

<u>Courses</u>	<u>Dates</u>
Introductory Geography	2002, 2003, 2004, 2005, 2006, 2007 (W), 2010 (W), 2013 (W), 2017(W)
Resource Assessment	2002

Biogeography	2003, 2004 (W), 2004 (F), 2005 (F), 2009 (F), 2010 (F), 2011 (F), 2014 (W), 2015(W), 2016(W), 2016(F)
Atmospheric and Climate Change	2004 (W), 2005 (W), 2006(W), 2007(W)
Honours Field Camp	2006(F)
Quaternary Geography	2011(W)
Fluvial Geomorphology	2012 (F)
Research Methods	2013 (W)
Stream Form and Function	2012 (F), 2013 (F), 2016(F), 2018(F)
Dendrochronology	2013 (F), 2017(W), 2019(W)

b) Graduate courses taught

Field Methods	2004(F), 2006(F), 2007(F)
Advanced Biogeography	2009(F)
Masters Research Workshop	2012(W)

c) Thesis Supervision

<u>Student</u>	<u>Program</u>	<u>Department</u>	<u>Completed/In progress</u>
<i>Undergraduate</i>			
1. Stephanie Delaney	B.A.	Geography	Completed - 2011
2. Peter deMontigny	B.A.	Geography	Completed - 2011
3. Joelle Crook	B.A.	Geography	Completed - 2011
4. Jessica Robb	B.A.	Geography	Completed - 2011
5. Melissa Ireland	B.A.	Geography	Completed - 2011
6. Achla Joshi	B.Sc.	Env. Science	Completed - 2012
7. John Hayes	B.Sc.	Env. Science	Completed - 2012
8. Anna Lukina	B.Sc.	Env. Science	Completed - 2012
9. Kerry Robillard	B.A.	Geography	Completed - 2012
10. Emily Duff	B.Sc	Env. Science	Completed - 2013
11. Kate Jackson	B.Sc	Env. Science	Completed - 2013
12. Rachel Young	B.A.	Geography	Completed - 2014

13. Vanessa Naish	B.Sc	Env. Science	Completed - 2014)
14. Robert Weisner	B.Sc.	Biology	Completed - 2015
15. Emily Ham	B.Sc.	Earth Sciences	Completed - 2017
16. Brent Thorne (co-supervisor)	B.Sc.	Geography	Completed - 2017
17. Mackenzie Ceci	B.Sc.	Geography	Completed - 2018
<i>Graduate</i>			
1. Trevor Porter	Ph.D	Geography	Completed - 2012
2. Colin Courtney Mustaphi	Ph.D	Earth Sci.	Completed - 2013
3. Courtney Steele	M.Sc.	Geography	Completed - 2013
4. Phil Muise	M.Sc.	Geography	Completed - 2013
5. Peter deMontigny	M.Sc.	Geography	Completed - 2014
6. Joelle Perrault	M.Sc.	Geography	Completed - 2014
7. Stephanie Delaney	M.Sc.	Geography	Completed - 2015
8. Emma Davis	M.Sc.	Geography	Completed - 2014
9. Sarah Quann	M.Sc.	Geography	Completed - 2014
10. Rebecca Gunter	M.Sc.	Earth Sci.	Completed - 2017
11. Caitlin Garner	M.S.	ESRC	Completed - 2018
12. Tyler Prince	M.S.	ESRC	Completed - 2018
13. Dana Harris	M.S.	ESRC	In progress (part time) (expected completion 2018)
14. Emily Ham	M.Sc.	Earth Sci.	In progress (expected completion 2019)
15. Scott Cocker	M.Sc.	Earth Sci.	In progress (expected completion 2020)
16. Jessica Zugic	M.Sc.	ESRC	In progress (expected completion 2020)
17. Martina Tepacevic	M.Sc.	Earth Sci.	In progress (expected completion 2020)

Post-graduate

1. Jesse Vermaire		Geography	2010-2012
2. Joshua Thienpont		Geography	2013-2015

3. Jean-Phillippe Martin Geography 2016-2018

d) Thesis boards/committees participated on

- | | |
|---|-------------|
| 1. Ramin Deison (MSc, Biology, Ottawa) | 2011 |
| 2. Adam Houben (PhD, Biology, Ottawa) | 2011 |
| 3. Brendan O'Neill (MSc, Geography, Carleton) | 2011 |
| 4. Evan Seed, (PhD, Geography, Carleton) | 2013 |
| 5. David Eikmeyer (MSc, Biology, Ottawa) | 2013 |
| 6. Jonathon Vandewindt (MSc, Geography, Carleton) | 2011 |
| 7. Christopher Czerwinski (MSc, Geography, Carleton) | 2012 |
| 8. Andrea Krueger (MSc, Earth Sciences, Brock) | 2012 |
| 9. Matea Drijepan (MSc, Earth Sciences, Brock) | 2013 |
| 10. Vanessa Stretch (PhD, Geography, U. of Guelph) | 2016 |
| 11. Nicholas Riddick (MSc, Earth Sciences, Brock) | 2016 |
| 12. Shawn Mckenzie (PhD, Geography, McMaster) | 2019 |
| 13. Danny Hughes (MSc, Earth Sciences, Brock) | 2018 |
| 14. Stefan Kruse (PhD, Potsdom, Germany - External examiner) | 2018 |
| 15. Josef Viscsek (MSc, Earth Sciences, Brock) | In progress |
| 16. Amber Hyde (MSc, Earth Sciences, Brock) | In progress |
| 17. Taghi (MSc, Earth Sciences, Brock) | In progress |
| 18. Bryan Mood (PhD, Geography, U. of Victoria - External examiner) | 2019 |

Administrative responsibilities and Committee assignments (Brock contributions are in bold)

a) *Departmental*

<u>Name</u>	<u>Period covered</u>
Appointment committee	2002/03, 2003/04, 2006/07
Graduate committee	2004-06
Organizer Founder's Seminar Series	2006-08
Strategic Planning Committee	2007-08, 2009-10
Undergraduate Programs Supervisor	2009-2012
Tenure and promotion committee	2009-10
Plagiarism committee	2012-13, 13-14, 14-15
Spring Open house	2013

Geography-Earth Science Committee	2012-13, 13-14, 14-15, 15-16, 17-18, 18-19,
Geography Curriculum Committee	2013-14, 14-15, 17-18, 18-19
Organizer of volunteers for CAG Meeting	2013-14
Appeals Committee	2016-17, 17-18
Chair - Dept. of Geography and Tourism Studies	2018-2021
OUF participant	2018
Strategic Planning Committee	2018-19
b) <i>University</i>	
Northern Scientific Training Program Committee (NSTP)	2003-2006
Chair - Northern Scientific Training Program Committee	2006-2012
NSERC, SSHRC, OGS - FASS Vetting Committee	2004
Jeffrey D. MacLean Bursary Selection Committee - FASS	2005
Association of Canadian Universities for Northern Studies (ACUNS) Representative for Carleton University	2006-2012
Internal reviewer of Electrical Engineering program	2009-10
FASS Research Advisory Committee	2011-12
CRC Tier 1 in Northern Research Search Committee	2011-12
Advisory Committee-Dean, Faculty of Social Sciences (ESRC representative)	2017-18
c) <i>National/International</i>	
NSERC Discovery Grant Selection Committee	2012-16
Secretary General, International Geographical Union	2012-16
Commission on Cold Regions Environments	
Councilor - Canadian Association of Geographers	2014-17
Director - Paleoenvironmental Change Specialty Group	2014-16
Association of American Geographers	
Organizing committee for the Canadian Geophysical Union	2017-18
Annual meeting, Niagara Falls in 2018	

Schmidt, Mariek

CURRICULUM VITAE – MARIEK E. SCHMIDT

Dept. of Earth Sciences, Brock University, 1812 Sir Isaac Brock Way, St. Catharines, ON L2S 3A1
(905) 688-5550 X3527, mschmidt2@brocku.ca

EDUCATION

2005 *Ph.D., Geology, Oregon State University, Corvallis, Oregon, USA.*
1999 *B.A., Geology, Colby College, Waterville, Maine, USA*

RECENT PROFESSIONAL WORK EXPERIENCE

2014 - present *Associate Professor, Dept. of Earth Sciences, Brock University*
2013 - present *Special Graduate Faculty, Dept. of Environmental Sciences, University of Guelph*
2012 - present *Adjunct Research Associate, Dept. Earth Sciences, University of Western Ontario*
2009 - 2010 *Post-doctoral Fellow and Instructor, Dept. of Earth Sciences, Brock University*
2005 - 2009 *Post-doctoral Fellow, Dept. Mineral Sci, Nat. Mus. Natural History Smithsonian Inst.*

SELECTED RECENT HONOURS AND AWARDS

2013, 2015, 2017 *NASA Group Achievement Award to the MSL Science and Operations Team*
2015 *Early Researcher Award, Ontario Ministry of Research and Innovation*

SELECTED RESEARCH GRANTS AND SUPPORT

2016 – present *PI, Mars Science Laboratory (MSL) Participating Scientist, CSA, “Resolving the Igneous, Alteration, and Dust Coating Histories of Rocks in Gale Crater”*
2016 – present *PI, NSERC Discovery Grant, “Unraveling the igneous and overprinting alteration histories of volcanic terrains on Earth and Mars”*
2015 – present *PI, Early Researcher Award, Ontario Ministry of Research and Innovation, “Unraveling the Alteration History of Mars by Rover and Terrestrial Analogue Field and Lab Studies on Volcanic Terrains”*
2015 *Co-I, NASA Solar Systems Working (SSW), “Quantifying Depositional Environments on Mars using Askja Volcano, Iceland as a Test-bed,” PI I.U. Peate (Univ. Iowa)*
2014 *Co-Applicant, NSERC Research Tools and Instruments, “X-ray diffraction apparatus for innovative and multidisciplinary research,” PI D. Crandles (Physics, Brock).*

SELECTED RECENT PUBLICATIONS¹

Berger, J.A., Schmidt, M.E. et al. 2017, Zinc and germanium in sedimentary rocks in Gale Crater on Mars indicate hydrothermal enrichment followed by diagenetic fractionation, *J. Geophys. Res.-Planets* 2017JE005290. doi:10.1002/2017JE005290.

Mangold, N., Schmidt, M.E., et al., 2016, Classification scheme for sedimentary and igneous rocks in Gale crater, Mars, *Icarus*, 285, 1-17, doi:10.1016/j.icarus.2016.11.005.

This represents a selection of 52 peer-reviewed journal publications (+110 Conference abstracts).

- Thompson, L.M. Schmidt, M.E., et al., 2016, Potassium-rich sandstones at Gale crater, Mars: the APXS perspective, *J. Geophys. Res.-Planets* 121, 1981-2003, doi:10.1002/2016JE005055.
- Nikitczuk, M.P.C., Schmidt, M.E., & Flemming, R.L., 2016, Hydrothermally altered basaltic tuffs as habitable environments: Implications for Mars. *Geological Soc. Am. Bull.* B31380. 1.
- Berger, J.A., Schmidt, M.E., et al., 2016, A global Mars dust composition refined by the MSL-APXS in Gale Crater. *Geophysical Research Letters* 43(1):67-75, doi:10.1002/2015GL066675.
- Schmidt, M.E. et al., 2016, Megacrystic pyroxene basalts sample deep crustal gabbroic cumulates beneath the Mount Taylor Volcanic Field, New Mexico. *J. Volc. Geotherm. Rese.* 316, 1-11, doi:10.1016/j.jvolgeores.2016.02.020.
- Schmidt, M.E., et al., 2014, Geochemical diversity in first rocks examined by the Curiosity Rover in Gale Crater: Evidence and significance of an alkali and volatile-rich igneous source. *J. Geophys. Res. - Planets* 119, 1-18, doi:10.1002/2013JE004481.
- Wall, K., Rowe, M.C., Ellis, B., Schmidt, M.E., 2014, Determination of Basaltic Eruption Style from XRD analysis with Implications for Mars-Based Research. *Nature Communications* 5, 5090

Turner, Kevin

Kevin W. Turner, PhD

Associate Professor Department of Geography and Tourism Studies Brock University

Phone: 905-688-5550, ext. 5399

Email: kturner2@brocku.ca

Curriculum Vitae

Employment History

Associate Professor. Department of Geography and Tourism Studies, Earth Sciences, Member of Environmental Sustainability Research Centre, Brock University. 2018 – present.

Assistant Professor. Department of Geography and Tourism Studies, Earth Sciences, Member of Environmental Sustainability Research Centre, Brock University. 2013 – 2018.

Teaching Assistant. Wilfrid Laurier University, 2013. GG 258 – Geographical Research Methods: Research design, data collection, sampling and the application of descriptive and univariate inferential statistics in spatial studies.

Research Assistant. Wilfrid Laurier University, 2007 – 2009. In addition to conducting paleolimnological laboratory procedures, I was co-designer of the *Celebrating Canada's North* exhibit at the Waterloo Regional Children's Museum.

GIS Specialist and Survey Manager – Geophysical Applications Ltd., Guelph, ON. 2002 – 2006.

Other Professional Activities and Service

- Co-Founder of The Water and Environmental Laboratory (WEL), Brock University. Est. 2016
- Member of the Environmental Sustainability Research Centre. July 2014 – present.
- Chair of Brock University Northern Studies Committee. August 2014 – present.
- Brock University Academic Safety Committee. July 2016 – present.
- Member of the Board of Directors for the Association of Canadian Universities for Northern Studies

(ACUNS). October 2010 – October 2019.

- Co-chair of Student Organizing Committee for Communities of Change – 9th Annual ACUNS International Student Conference, Whitehorse, YT. January 2009 – October 2009.

International Collaboration

- Affiliate of the NASA Arctic-Boreal Vulnerability Experiment. 2016 – present. Collaboration and access to NASA ABoVE science cloud computing and latest remote sensing data products.

Education

Wilfrid Laurier University 2007 – 2013. PhD in Physical Geography/Hydrology.

Sir Sandford Fleming College 2001 – 2002. Graduate certificate in Geographic Information Systems (Applications Specialist).

Trent University 1996 – 2000. Honours BSc. in Physical Geography and Biology (joint major).

Other Training and Certifications

Unmanned aerial systems flight training. UKKO, Palmerston, Ontario. April 2018.

Canadian Firearms Safety Course. Niagara Firearms Training, Niagara Falls, Ontario. April 2018.

Advanced Wilderness First Aid training. Voyageur Bushcraft, Niagara Falls, Ontario. March 2018.

Awards and Scholarships

2013: Nominated for Medal for Academic Excellence at the PhD level

2011: World Water Day (Cold Regions Research Centre) Poster Award. \$150

2010-2012: W. Garfield Weston Foundation PhD Northern Research Award. \$40,000

2010-2012: Natural Sciences and Engineering Research Council of Canada Postgraduate Scholarship.

\$42,000

2009: Ontario Graduate Scholarship. \$15,000

2007-09: Wilfrid Laurier University Graduate Scholarship. \$10000

2009: Wilfrid Laurier University Graduate Incentive Scholarship. \$5250

2008: Toronto Dominion Meloche Monnex Graduate Scholarship. \$2000

2008: Ontario Graduate Scholarship in Science and Technology. \$15,000

Research Profile

My research program is focused on identifying how changing climate and landscapes impact the hydrology and biogeochemistry of northern water resources at multiple spatial and temporal scales. In particular, I have worked with the Vuntut Gwitchin First Nation since 2007 to understand how changing climate is impacting their traditional territory. I employ the use of water isotope tracers and a suite of water chemistry parameters to track recent spatial variation in hydroecological conditions among lakes and rivers and the relative influence of terrestrial landscape influences. Field measurements of catchment land cover, permafrost and active layer are coupled with many remote sensing data products including unmanned aerial vehicle images to inventory landscape properties including fire, landslides, vegetation, and snow. As an affiliate of the NASA Arctic-Boreal Vulnerability Experiment, I utilize leading-edge remote sensing datasets and supercomputing to evaluate these relations. Paleolimnological analyses of lake sediment provide key insight of lake responses to catchment properties during past

centuries and millennia. Integrating these approaches are providing my research lab with the comprehensive insight necessary to predict future landscape and hydroecological responses to climate change.

Keywords: hydrology, remote sensing, water isotope tracers, water chemistry, geomatics, land cover, permafrost, active layer, unmanned aerial vehicle, paleolimnology, climate change

Research Grants

Awarded

2018: Polar Continental Shelf Program – research logistical support. \$48,895

2017: Canadian Foundation of Innovation JR Evans Leaders Fund - \$290,000

2017: Polar Knowledge Canada (co-applicant) – two years. \$250,000

2017: Polar Continental Shelf Program – research logistical support. \$43,406

2016: NASA – Arctic Boreal Vulnerability Experience – awarded affiliate status

2016: NSERC Discovery Grant Program – five years. \$125,000

2016: NSERC Northern Research Supplement – five years. \$71,900

2016: Government NWT Cumulative Impacts Program (Co-applicant). \$165,000

2016: Polar Continental Shelf Program – research logistical support. \$34,200

2015: Brock University Advancement Fund. \$5,000

2015: Polar Continental Shelf Program – research logistical support. \$30,484

2013: Brock University Council for Research in the Social Sciences (CRISS) research grant. \$1,800

2013: Brock University Start-up grant. \$21,000

2012: Wilfrid Laurier University Faculty of Graduate and Postdoctoral Studies Travel and Research Award. \$1000

2007-10: Northern Scientific Training Program (NSTP) travel research grant. \$11,420

Applied

2019: Polar Knowledge Canada – co-PI (2020-23). \$450,000

Contracts and Contribution Agreements

2019: Vuntut National Park, Parks Canada – Lake Hydrology Monitoring. \$1,245

2018: Vuntut National Park, Parks Canada – Lake Hydrology Monitoring. \$1,530

2017: Environment, Government of Yukon – Contribution agreement. \$20,000

2017: Vuntut National Park, Parks Canada – Lake Hydrology Monitoring. \$1,792

Grants and Scholarships Awarded to Students

2018-19: Josef Viscek – Ontario Graduate Scholarship; Dean of Graduate Studies Entrance and Excellence Scholarships

2015-19: Michelle Pearce (19), Josef Viscek (18), Brent Thorne (17-18), Luke Gray (17), Daniel Hughes (15-16), Tyler Prince (16) – Northern Scientific Training Program research grant

2018: Josef Viscek and Brent Thorne – Top 25 NSERC Science, Action! Video contest

2017: Luke Gray – NSERC USRA

2017: Melina Thogersen - Brock University Match of Minds

2016: Brent Thorne – Brock University Match of Minds

Training of Highly Qualified Personnel

Current:

Callum Harvey (supervisor, GEOG 4F99 undergrad internship, Brock Geography and Tourism Studies). Analysis of carbon and nitrogen in permafrost slump sediment and in downstream water.

Michelle Pearce (supervisor, BSc, Geography and Tourism Studies, Brock University) Identifying impacts of permafrost retrogressive thaw slumps on the Old Crow River network (Yukon) using unmanned aerial systems and water chemical tracers.

Brendan Llew-Williams (co-supervisor, MSc, Earth Science, Brock University) Hydrological analysis of Crawford Lake, Ontario, Canada using water chemistry and isotope tracers.

Joe Viscek (supervisor, MSc, Earth Sciences, Brock University) Hydrological response of lakes to drought and fire near Yellowknife, NT.

Brent Thorne (supervisor, MSc, Geography, Brock University) Coupling field measurements and multiple high-resolution remotely sensed datasets to evaluate vulnerability of permafrost landscape conditions

Past:

2018-19

Dan Marshall (supervisory, GEOG 4F99 undergrad internship, Brock Geography and Tourism Studies) Using cellulose-inferred d18O to evaluate past lake hydrological conditions near Yellowknife, NT.

2017-18

Zachary Harmer (co-supervisor, MS, Sustainability Science and Society, Brock University) Evaluating influence of landscape change on spatial variation in water quality among catchments of the Niagara Peninsula, Ontario, Canada.

Teigan Mallory (supervisor, GEOG 4P95, undergrad Directed Readings, Brock Geography and Tourism Studies) Using cellulose-inferred $\delta^{18}O$ to assess long-term lake hydrological conditions in lakes near Yellowknife, NT, Canada.

Aaron David (supervisor, GEOG 4F99 undergrad internship, Brock Geography and Tourism Studies). Identifying carbon and nitrogen content of sediment from an active permafrost slump.

Melina Thogersen (supervisor, BSc Thesis, Earth Science, Brock University) Spatial variability in lakewater level responses to varying seasonal and inter-annual meteorological conditions in the Peace-Athabasca Delta.

Luke Gray (supervisor, BSc Thesis, Biology, Brock University) Evaluating the utility of unmanned aerial photography for differentiating land cover properties.

2015-17

Tyler Prince (co-supervisor, MS, Sustainability Science and Society) Postglacial reconstruction of fire history from a small lake in southwest Yukon using sedimentary charcoal and pollen.

Daniel Hughes (supervisor, MSc, Earth Sciences, Brock University) Detecting spatial variation in hydrology and carbon export across a lake-rich permafrost landscape: Old Crow Flats, Yukon, Canada.

2016-17

Brent Thorne (supervisor, BSc Thesis, Geography, Brock University) Evaluating shrub vegetation proliferation in Old Crow Flats, YK by integrating dendrochronology and uav survey approaches

2015-16

Ryan Roque (supervisor, GEOG 4F99 undergrad internship, Geography, Brock University).

Development of animated 2015 thaw season lakewater level maps for the Peace-Athabasca Delta, AB

2013-15

Mohammed Razu Ahmed (supervisor, MA, Geography, Brock University) Identifying spatial variation and rate of change in land cover in Old Crow Flats, Yukon Territory, Canada.

2014-15

Zachary Harmer (co-supervisor, GEOG 4F99 undergrad internship, Geography, Brock University) Development of a spatial model of fire impact on lakes in Northwest Territories, Canada.

2013-14

Jeff Pengelly (supervisor, GEOG 4F99 undergrad internship, Geography, Brock University)

Development of an interactive online map of the Brock University campus.

- Graduate student committee member for 13 other students at Brock University. 2013 – present

Peer-reviewed Publications

Prince TJ, MFJ Pisaric, KW Turner. 2018. Postglacial reconstruction of fire history using sedimentary charcoal and pollen from a small lake in southwest Yukon Territory, Canada. *Frontiers in Ecology and Evolution*, section Paleoeology. <https://doi.org/10.3389/fevo.2018.00209>

Giordano BV, KW Turner, FF Hunter. 2018. Geospatial Analysis and Seasonal Distribution of West Nile Virus Vectors (Diptera: Culicidae) in Southern Ontario, Canada. *International Journal of Environmental Research and Public Health*: 15(4), 614, doi:10.3390/ijerph15040614

Balabubramaniam AM, AS Medeiros, KW Turner, RI Hall, BB Wolfe. 2017. Biotic responses to multiple aquatic and terrestrial gradients in shallow subarctic lakes (Old Crow Flats, Yukon Territory, Canada). *Arctic Science*: 3: 277-300, dx.doi.org/10.1139/as-2016-0021

MacDonald LA, BB Wolfe, KW Turner, L Anderson, CD Arp, SJ Birks, F Bouchard, TWD Edwards, N Farquharson, RI Hall, I McDonald, B Narancic, C Ouimet, R Pienitz, J Tondu, H White. 2017. A synthesis of thermokarst lake water balance in high-latitude regions of North America from isotope tracers. *Arctic Science*: 118-149, dx.doi.org/10.1139/as-2016-0019

Tondu JM, KW Turner, JA Wiklund, BB Wolfe, RI Hall, I McDonald. 2017. Limnological evolution of Zelma Lake, a recently drained thermokarst lake in Old Crow Flats (Yukon, Canada). *Arctic Science* 220-236, dx.doi.org/10.1139/as-2016-0012

Bouchard F, LA MacDonald, KW Turner, JR Thienpont, AS Medeiros, BK Biskaborn, J Korosi, RI Hall, R Pienitz, BB Wolfe. 2016. Paleolimnology of thermokarst lakes: a window into permafrost landscape evolution. *Arctic Science*: 91-117, dx.doi.org/10.1139/as-2016-0022

Lantz TC and KW Turner. 2015. Increase in the frequency of catastrophic lake drainage in the Old Crow Flats, Yukon. *Journal of Geophysical Research: Biogeosciences*, 120: 513-524, doi: 10.1002/2014JG002744.

Turner KW, BB Wolfe, TWD Edwards, TC Lantz, RI Hall, G Larocque. 2014. Controls on water balance of shallow thermokarst lakes and their relations with catchment characteristics: a multi-year, landscape-scale assessment based on water isotope tracers and remote sensing in Old Crow Flats, Yukon (Canada). *Global Change Biology* 20 (5): 1585-1603.

Turner KW, TWD Edwards, BB Wolfe. 2014. Characterising runoff generation processes in a lakerich thermokarst landscape (Old Crow Flats, Yukon, Canada) using $\delta^{18}\text{O}$, $\delta^2\text{H}$ and d-excess measurements. *Permafrost and Periglacial Processes* 25: 53-59.

Bouchard F, KW Turner, LA MacDonald, C Deakin, H White, N Farquharson, AS Medeiros, BB Wolfe, RI Hall, R Pienitz, TWD Edwards. 2013. Vulnerability of shallow subarctic lakes to

evaporate and desiccate when snowmelt runoff is low. *Geophysical Research Letters* 40: 6112-6117.

Tondu JM, KW Turner, BB Wolfe, RI Hall, TWD Edwards, I McDonald. 2013. Using water isotope tracers to develop the hydrological component of a long-term aquatic ecosystem monitoring program for a northern lake-rich landscape. *Arctic, Antarctic, and Alpine Research* 45 (4): 594-614.

MacDonald LA, KW Turner, AM Balasubramaniam, BB Wolfe, RI Hall and JN Sweetman. 2012. Tracking hydrological responses of a thermokarst lake in the Old Crow Flats (Yukon Territory, Canada) to recent climate variability using aerial photos and paleolimnological methods. *Hydrological Processes* 26: 117-129.

Turner KW, BB Wolfe and TWD Edwards. 2010. Characterizing the role of hydrological processes on lake water balances in the Old Crow Flats, Yukon Territory, Canada, using water isotope tracers. *Journal of Hydrology* 386: 103-117.

Reports and Non-refereed Contributions

Turner KW. 2019. Modeled hydrological conditions of 14 lakes in Old Crow Flats, Yukon over 12 years. Dataset for Vuntut National Park, Yukon, Canada.

Turner KW. 2018. Hydroecological monitoring 11-year report for lakes in Old Crow Flats, Yukon. Report for Vuntut National Park, Yukon, Canada.

Turner KW. 2017. An evaluation of climate, hydrology, and land cover fluctuations in the Whitefish Wetland Area, Yukon. Report for Water Resources, Environment, Yukon Government. Contribution Agreement worth \$20,000.

Wolfe BB, MM Humphries, MFJ Pisaric, AM Balasubramaniam, CR Burn, L Chan, D Cooley, DG Froese, S Graupe, RI Hall, T Lantz, TJ Porter, P Roy-Leveillee, KW Turner, SD Wesche and M Williams. 2011. Environmental change and traditional use of the Old Crow Flats in northern Canada: An IPY opportunity to meet the challenges of the new northern research paradigm. *Arctic* 64: 127-135.

Wolfe BB and KW Turner. 2008. Near-record precipitation causes rapid drainage of Zelma Lake, Old Crow Flats, northern Yukon Territory. *Meridian Spring/Summer* issue: 7-12.

Reviewing

Research Papers: Permafrost and Periglacial Processes (2020), *Journal of Hydrology* (2019), *Hydrology and Earth Systems Sciences* (2018), *Hydrological Processes* (2015), *Journal of Hydrology* (2015), *Global Change Biology* (2013), *Hydrological Sciences Journal* (2013)

Grant Applications: CFI – John Evans Leaders Fund (2019), NSERC CRC Tier II Proposal (2017), NSERC Strategic Partnership Grant Proposal (2017), Mitacs Accelerate Research Grant Proposal (2016), NSERC Discovery Grant Proposal (2014)

Conference Presentations and Posters

Pisaric, MFJ, KA Moser, KW Turner, M Ceci, C Garner, D Harris, J-P Martin, T Prince, J Viscek. 2019. Using the past to inform the future: A paleoecological perspective of the impacts of drought and fire on lakes and forests. Wild Fire Canada 2019. (November 2019)

Turner KW. 2019. Detecting changes in climate, landscape and impacts on lakes and rivers in Old Crow Flats, Yukon, Canada. NASA Arctic-Boreal Vulnerability Experiment Science Meeting. La Jolla, California. (May 2019)

Thorne WB, KW Turner. 2019. Wildfire disturbance influenced change in Arctic freshwater thermokarst lake hydroecology. NASA Arctic-Boreal Vulnerability Experiment Science Meeting. La Jolla, California. (May 2019)

Viscek JA, KW Turner, MFJ Pisaric, S Kokelj. 2019. Evaluating the hydrology of northern boreal lakes near Yellowknife, Northwest Territories and their response to varying catchment and climatic conditions. 12th Annual Ontario-Quebec Paleolimnological Symposium. University of Waterloo, Waterloo, ON. (May 2019).

Thorne WB, KW Turner. 2019. Using integrated approaches to evaluate relations among catchment and thermokarst lake conditions and responses to fire during 2017 in Old Crow Flats, Yukon. 12th Annual Ontario-Quebec Paleolimnological Symposium. University of Waterloo, Waterloo, ON. (May 2019).

Turner KW, DD Hughes, I McDonald. 2018. Tracking climate-driven landscape changes and associated impacts on lakes and rivers in Old Crow Flats, Yukon, Canada. ArcticNet Annual Science Meeting, Ottawa, ON. (December 2018)

Thorne WB, KW Turner. 2018. Identifying relationships among catchment land cover characteristics, active layer properties and lake hydroecology in Old Crow Flats, Yukon, Canada. ArcticNet Annual Science Meeting, Ottawa, ON. (December 2018)

Viscek JA, KW Turner, MFJ Pisaric.. 2018. Evaluating the hydrology of northern boreal lakes near Yellowknife, Northwest Territories and their response to varying catchment and climatic conditions. 46th Annual Yellowknife Geoscience Forum. Yellowknife, NT. (November 2018).

Moser KA, MFJ Pisaric, KW Turner, M Ceci, C Garner, D Harris, J-P Martin, *T Prince, M Sia, *J

Viscek. 2018. Using the past to inform the future: A paleoecological perspective of the impacts of drought and fire on lakes and forests. 46th Annual Yellowknife Geoscience Forum. Yellowknife, NT.(November 2018).

- Viscek JA, KW Turner. 2018. Evaluating hydrologies of northern boreal lakes near Yellowknife, NT. 11th Annual Ontario-Quebec Paleolimnological Symposium. Brock University, St. Catharines, ON. (May 2018)
- Thorne WB, KW Turner. 2018. Influences of catchment land cover characteristics on hydrological change in lake-rich Arctic permafrost regions. Mapping New Knowledge Conference, Brock University, St. Catharines, ON (April 12)
- Turner KW, B Thorne, D Hughes, MR Ahmed, I McDonald. 2018. Identifying landscape changes and associated impacts on lakes and rivers in Old Crow Flats, Yukon, Canada. (Poster) NASA ABoVE Science Meeting, Seattle, USA.
- Thorne WB, KW Turner. 2018. Identifying relations among active layer properties and land cover types in Old Crow Flats, Yukon, Canada. (Poster) NASA ABoVE Science Meeting, Seattle, USA.
- Thorne WB, KW Turner. 2017. Identifying relationships among active layer properties and vegetation in Old Crow Flats, Yukon (Poster) ArcticNet Annual Science Meeting, Quebec City, QC.
- Moser KA, MFJ Pisaric, KW Turner, M Ceci, C Garner, J-P Martin, J Viscek, T Prince. 2017. Using the past to inform the future: A paleoecological perspective of the impacts of drought and fire on lakes and forests. 45th Annual Yellowknife Geoscience Forum. Yellowknife, NT. (November 2017).
- Viscek JA, KW Turner. 2017. Evaluating hydrologies of northern boreal lakes near Yellowknife, NT (poster). 45th Annual Yellowknife Geoscience Forum. Yellowknife, NT. (November 2017).
- Prince TJ, MFJ Pisaric, KW Turner. 2017. Postglacial reconstruction of fire history from a small lake in southwest Yukon Territory using sedimentary charcoal and pollen. Ontario-Québec Paleolimnology Symposium. St. Catharines, ON.
- Thorne B, KW Turner. 2017. Identifying spatial variation in vegetation characteristics in an Arctic landscape using NDVI and an unmanned aerial vehicle. Mapping New Knowledge Conference, Brock University, St. Catharines, ON. (April 12)
- Harmer ZD, KW Turner, MFJ Pisaric. 2017. Identifying Spatial Patterns of Landscape Changes and its Influence on Water Chemistry in the Northern Niagara Region, Canada (presentation). American Association of Geographers Annual Meeting. Boston, MA. (April 4-8).
- Hughes D, KW Turner. 2017. Detecting spatial variation in hydrology and carbon export across a lake-rich thermokarst landscape (Old Crow Flats, Yukon, Canada). American Association of Geographers. Boston MA.
- Prince TJ, MFJ Pisaric, KW Turner. 2017. Postglacial reconstruction of fire history from a small lake in southwest Yukon using sedimentary charcoal and pollen. American Association of Geographers. Boston MA. Won award for Best Master's Student Presentation from the Biogeography specialty group and the New Records of Paleoenvironmental Change.
- Turner KW, D Hughes, B Thorne, I McDonald, BB Wolfe, RI Hall, JME Tondu, TC Lantz. 2017. Investigating lake and river responses to landscape changes in Old Crow Flats, Yukon, Canada. NASA Arctic-Boreal Monitoring Experiment Annual Science Meeting. Boulder, CO.

Hughes D, KW Turner. 2016. Detecting spatial variation in hydrology and carbon export across Old Crow Flats, Yukon, Canada. ArcticNet Annual Science Meeting. Winnipeg, MB.

Hughes D, Z Harmer, KW Turner. 2016. Using an R-Arc Bridge to effectively analyse spatial variation in hydrologic processes. Esri Canada Education Conference. Toronto, ON.

Hughes D, KW Turner. 2016. Detecting spatial patterns in hydrology and carbon export across the drainage network of a lake-rich permafrost landscape (Old Crow Flats, Yukon, Canada) (poster) Ontario-Québec Paleolimnology Symposium. Kingston, ON.

Prince TJ, MFJ Pisaric, KW Turner. 2016. Postglacial reconstruction of fire history from southwestern Yukon using charcoal records of lake sediment. Ontario-Québec Paleolimnology Symposium. Kingston, ON.

Harmer ZD, KW Turner, Pisaric MFJ. 2016. Investigating land use and climatic effects on small catchment water quality (poster). Ontario Climate Consortium. Guelph, ON. (May 5).

Harmer ZD, KW Turner, Pisaric MFJ. 2016. Identifying spatial patterns in land use and relations to water quality in Niagara Region (presentation). Mapping New Knowledges Conference, Brock University, St. Catharines, ON. (April 7).

Hughes D, KW Turner. 2016. Detecting spatial patterns in hydrology and carbon export across the drainage network of a vast lake-rich permafrost landscape (Old Crow Flats, Yukon, Canada).

Canadian Geophysical Union – Hydrology Section Ontario Student Conference (poster), University of Waterloo, Waterloo, ON. Remmer C, BB Wolfe, RI Hall, KW Turner. 2015. Developing a hydrological monitoring program for the Peace-Athabasca Delta (Alberta, Canada) using water isotope tracers. ArcticNet Annual Science Meeting, Vancouver, BC.

MacDonald L, KW Turner, L Anderson, J Birks, F Bouchard, TWD Edwards, N Farquharson, RI Hall, McDonald, B Narancic, C Ouimet, R Pienitz, J Tondu, H White, B Wolfe. 2015. A synthesis of thermokarst lake water balance in subarctic North America from isotope tracers. ArcticNet Annual Science Meeting, Vancouver, BC.

Harmer ZD, Turner KW, Pisaric MFJ. 2015. Using ArcGIS and Python Programming to Identify Lakes Impacted by Forest Fires (poster). Esri Canada Higher Education Conference. Toronto, ON. (November 30).

Ahmed MR, KW Turner. 2015. Assessing landscape-scale changes in shrub proliferation in Old Crow Flats, Yukon using remote sensing approaches (poster). 11th Annual Association of Canadian Universities for Northern Studies Student Conference, Calgary, AB.

Harmer ZD, Turner KW, Pisaric MFJ. 2015. Using ArcGIS and Python Programming to Identify Lakes Impacted by Forest Fires (poster). Esri Canada User Conference. Toronto, ON. (October 14).

- Peters DL, KW Turner, E Hille, FJ Wrona, SV Kokelj. 2014. Isotope hydrology of Arctic Tundra Lakes in a region impacted by permafrost disturbance (poster). ArcticNet Annual Scientific Meeting, Ottawa, ON.
- Pengelly J, KW Turner. 2014. Designing and Producing an Online Interactive Mapping Application for the Brock University Campus (St. Catharines, Ontario, Canada)
- Turner KW, BB Wolfe, TWD Edwards, RI Hall, TC Lantz. 2014. Characterizing the past and present hydrology of a lake-rich thermokarst landscape (Old Crow Flats, Yukon) and its relations to climate and land-cover. Thermokarst Aquatic Ecosystems Workshop, Quebec, QE.
- Turner KW, BB Wolfe, TWD Edwards. 2013. An isotopic approach for characterizing runoff generation processes in a lake-rich thermokarst landscape (Old Crow Flats, Yukon, Canada). ArcticNet Annual Science Meeting, Halifax, NS.
- Turner KW, TWD Edwards, BB Wolfe. 2012. Assessing lake water outflow from a thermokarst landscape (Old Crow Flats, Yukon) using water isotope tracers and spatial modelling. NIKAN: Association of Canadian Universities for Northern Studies National Student Conference, Val d'Or, QE.
- Turner KW, BB Wolfe, TWD Edwards, TC Lantz, RI Hall and G Larocque. 2012. Identifying Drivers of Hydrological Change in Old Crow Flats, Yukon Territory, Canada. Canadian Association of Geographers Annual Meeting, Congres, Wilfrid Laurier University, Waterloo, ON.
- Turner KW, JE Tondu, N Sidhu, LA MacDonald, S Shaker, BB Wolfe and RI Hall. 2012. Paleolimnological approaches to hydroecological monitoring in shallow Arctic lakes. Ontario-Quebec Paleolimnology Group Graduate Student Conference, University of Western Ontario, London, ON.
- Turner KW, BB Wolfe, TWD Edwards, RI Hall LA MacDonald, TC Lantz and G. Larocque. 2012. Identifying the Hydrological Response of Lakes to Climate Change Across Broad Spatial and Temporal Scales in a Thermokarst Landscape (Old Crow Flats, Canada). International Polar Year 2012: From Knowledge to Action Conference, Montreal, QC.
- Turner KW, BB Wolfe and TWD Edwards. 2011. Investigating the influence of climate change on lakes in the Old Crow Flats, Yukon Territory, Canada. World Water Day, University of Waterloo, Waterloo, ON.
- Turner KW, BB Wolfe and TWD Edwards. 2010. Using water isotope tracers to investigate past and present water balance conditions in the Old Crow Flats, Yukon Territory. American Geophysical Union Fall Meeting, San Francisco, California.
- Turner KW, BB Wolfe and TWD Edwards. 2010. Assessing present and past lakewater balance conditions in the Old Crow Flats, Yukon Territory. Understanding Circumpolar Ecosystems in a

Changing World; Outcomes of the International Polar Year, University of Alberta, Edmonton, AB.

Turner KW, BB Wolfe and TWD Edwards. 2010. Investigating the influence of climate change on lakes in the Old Crow Flats, Yukon Territory, Canada. World Water Day, Wilfrid Laurier University, Waterloo, ON.

Turner KW, BB Wolfe and TWD Edwards. 2009. Using water isotope tracers to investigate spatial and temporal variability in lake water balances in the Old Crow Flats, YT. Association of Canadian Universities for Northern Studies International Student Conference, Whitehorse, YT.

Turner KW, BB Wolfe and TWD Edwards. 2009. Assessing climate and lake water balance interactions over 3 years in the Old Crow Flats, YT, using water isotope tracers. Canadian Geophysical Union - Hydrology Section Ontario Student Conference, York University, Toronto, ON.

Turner KW and BB Wolfe. 2008. Using water isotope tracers to assess hydrological controls on the water balance of lakes across the Old Crow Flats, Yukon Territory. Water, Weather, and Climate: Science Informing Decisions, Canadian Meteorological and Oceanographic Society 2008 Congress, Kelowna, BC.

Turner KW and BB Wolfe. 2008. Past and present hydrology of lakes in the Old Crow Flats, Yukon Territory. Ontario-Quebec Paleolimnology Group Graduate Student Conference, Laval University, Quebec, QE.

Turner KW, BB Wolfe and TWD Edwards. 2008. Characterizing the diversity of lake water balances in the Old Crow Flats, YT, using water isotope tracers. International Arctic Change 2008, Quebec, QE.

Turner KW, BB Wolfe and TWD Edwards. 2008. Documenting the diversity of lake water balance characteristics across the Old Crow Flats, YT, using water isotope tracers. Government of Canada International Polar Year Project (Environmental Change and Traditional Use of the Old Crow Flats in Northern Canada) Researchers Meeting, Carleton University, Ottawa, ON.

Turner KW, BB Wolfe and TWD Edwards. 2008. Characterizing hydrological controls on lakes across the Old Crow Flats, Yukon Territory, using water isotope tracers. 2nd Annual Northern Research Day, Wilfrid Laurier University, Waterloo, ON.

Turner KW and BB Wolfe. 2007. Developing a hydrological framework for paleolimnological reconstructions in the Old Crow Flats, Yukon. Ontario-Quebec Paleolimnology Group Graduate Student Conference, Wilfrid Laurier University, Waterloo, ON.

Turner KW and BB Wolfe. 2007. Characterizing present lake hydrology in the Old Crow Flats, Yukon, using water isotope tracers. Northern Research Day, Wilfrid Laurier University, Waterloo, ON.

Turner KW and BB Wolfe. 2007. Identifying hydrological controls on lakes of the Old Crow Flats, YT, using water isotope tracers. Association of Canadian Universities for Northern Studies Student Conference, Saskatoon, SK.

Turner KW and BB Wolfe. 2007. Assessing hydrological variation in lakes of the Old Crow Flats, YT, using water isotope tracers. Canadian Geophysical Union - Hydrology Section Ontario Student Conference, University of Waterloo, Waterloo, ON.

Turner KW and BB Wolfe. 2006. Past and present hydrology of the Old Crow Flats, Yukon, using water isotope tracers. Canadian Geophysical Union - Hydrology Section Ontario Student Conference, Carleton University, Ottawa, ON.

University Courses Taught

GEOG 3P07 – Remote Sensing, Department of Geography and Tourism Studies, Brock University

GEOG 2P12/3P22 – Quantitative Research Design and Methodology. Department of Geography, Brock University

GEOG/ERSC/IASC 3P05 – Introduction to Geographic Information Systems. Department of Geography, Brock University

GEOG 3P04 – Digital Mapping. Department of Geography, Brock University

GEOG 3P95 – Advanced Geographic Information Systems, Brock University

GEOG 4P95 – Directed Readings in Physical Geography, Brock University

GEOG 5P03 – Quantitative Analysis in Geography, Brock University

GEOG 5V10 – Directed Studies in Identifying Spatio-temporal Patterns in Biogeography, Brock University

SSAS 5P11 (50%) – Water Resource Economics, Management and Governance, Brock University

University Class Guest Lectures

Tondu J, Balasubramaniam A, Turner KW (June 2015) Lake Research Case Study in Yukon [ENVS100, An Introduction to Environmental Sciences I]. Yukon College, Yukon.

Turner KW (November 2014) Introduction to Geomatics [GEOG 1F90]. Brock University, St. Catharines, ON.

Turner KW (October 2012) Panel Discussion on Graduate Studies [GG691 – Seminar in Geography], Wilfrid Laurier University, Waterloo, ON.

Turner KW (September 2012) Exploring the Processes that Drive Change: A Case Study in Northern Hydrology [WLU GG/ES494 - Physical Environments and Climate Change], Wilfrid Laurier University, Waterloo, ON.

Turner KW (March 2011) Investigating the Drivers of Hydrological Variability Throughout the Old Crow Flats, YT, Using Isotope Tracers, Spatial Analysis and Remote Sensing. Geography [WLU

GG481 – Seminar on Cold Regions], Wilfrid Laurier University, Waterloo, ON.

Turner KW. (March 2010) An isotopic tracers approach to assessing spatial and temporal water balance variability in the Old Crow Flats, YT. Geography [WLU GG481 – Seminar on Cold Regions], Wilfrid Laurier University, Waterloo, ON

Turner KW. (March 2009) Physical and biological processes of Antarctica. Geography [WLU Geog101 – Introduction to Physical Geography], Wilfrid Laurier University, Waterloo, ON.

Invited Lectures, Panels, Workshops, and Outreach

Turner KW, J Braemer, A Perrin. 2019. Lake and river science research update for community of Old Crow, Yukon. Old Crow Community Centre, Old Crow, Yukon. (10-June-2019).

Turner KW. 2019. Research activity across Yukon, Canada associated with the NASA Arctic Boreal Vulnerability Experiment. La Jolla, California. (22-May-2019)

Turner KW. 2019. Rolling with the punches of difficult field research. Golden Napkin (banquet) presentation. 12th Annual Ontario-Quebec Paleolimnological Symposium. University of Waterloo, Waterloo, ON. (2-May-2019).

Turner KW. 2019. Taking inventory of climate-driven landscape changes and impacts on lakes and rivers in northern Yukon, Canada. Colloquium and Seminar Series, Department of Geography, York University, Toronto, Ontario (February 1).

Turner KW. 2018. Judge for poster awards. ArcticNet Annual Science Meeting, Ottawa, Ontario. (December 2018).

Turner KW. 2018. Using drones in geography. Grade 9 – 11 students, Saint Francis Secondary School, Brock University, St. Catharines, Ontario (December 4).

Turner KW. 2018. Taking inventory of climate-induced landscape changes and associate impacts on lakes and rivers. Sustainability Science and Society 5P04 (September 19).

Viscek J, WB Thorne, KW Turner. 2018. What controls lakes and rivers in Old Crow Flats? Grade 2-4 class, Chief Zzeh Gittlit School, Old Crow, YK (June 13)

Turner KW, WB Thorne. 2018. Investigating how changing climate is influencing northern lakes and rivers. Grade 7-8 class, Chief Zzeh Gittlit School, Old Crow, YK (June 12).

Turner KW, M Pisaric. 2018. Applications in physical geography at Brock University. Greater Fort Erie Secondary School. St. Catharines, Ontario. (May 15)

Turner KW, WB Thorne, DD Hughes, MR Ahmed, J Viscek. 2018. Identifying climate-induced landscape changes and associated impacts on downstream environments on downstream environments in northern lake-rich landscapes. Department of Biology Graduate Speaker Series, University of Waterloo, Waterloo, Ontario. (16-Feb-2018).

Turner KW, WB Thorne, DD Hughes, MR Ahmed. 2017. Inventorying changing landscape features and identifying associated impacts on downstream environments in an important northern Yukon wetland complex. Department of Biology Graduate Speaker Series, Brock University, St. Catharines, Ontario. (1-Dec-2017).

Turner KW, DD Hughes, WB Thorne, MR Ahmed. 2017. Identifying hydroecological impacts of climate-induced northern landscape changes using integrated field and remotely sensed data. Esri Canada Research and Education Conference. Toronto, Ontario. (October 11)

Turner KW, DD Hughes, WB Thorne, MR Ahmed. 2017. Using integrated field and remote sensing approaches to investigate hydroecological impacts of climate-induced landscape changes in northern Yukon. Transdisciplinary Sustainability Seminar Series, ESRC, Brock University. (September 22)

Turner KW, Thorne WB, Gray LJ, Nagwan C. 2017. Evaluating landscape changes and influences on lakes and rivers in Old Crow Flats, Yukon (June 11). A presentation of key findings to the community of Old Crow, Yukon.

Turner KW. 2017. Using Landsat data to detect changes in lakes and catchments. Ontario-Québec Paleolimnology Symposium, Brock University (May 24). A pre-conference workshop demonstrating R computing and quantitative analysis of remote sensing data.

Turner KW. 2017. Evaluating landscape changes and associated influences on lakes and rivers in Old Crow Flats, Yukon. (April 21). Cold Regions Research Centre, Wilfrid Laurier University. <https://coldregions.ca/2017/04/19/dr-kevin-turner-guest-crrc-lecture-friday-april-21-at-wilfrid-laurieruniversity/>

Turner KW. 2017. Judge for the District School Board of Niagara GIS Competition. Niagara on the Lake, ON (March 1).

Turner KW. 2016. Judge for the District School Board of Niagara GIS Competition. St. Catharines, ON (March 8).

Turner KW. 2016. What are potential water science collaborative research projects in Yukon? Yukon Government Water Forum 2016, Whitehorse, Yukon.

Turner KW, Ahmed MR, D Hughes, R Roque, BB Wolfe, RI Hall. 2015. Detecting spatial and temporal patterns in hydrological conditions across important northern lake-rich landscapes. Esri Canada's GIS in Education and Research Conference, Toronto, ON. Invited.

Hall RI, BB Wolfe, J Blais, G Dixon, C Remmer, E Mehler, J Thienpont, KW Turner and A Farwell. 2015. A monitoring framework to assess changes in hydroecological conditions and sources, distribution and toxicity of contaminants in lakes of the Peace-Athabasca Delta. Project update delivered to Wood Buffalo National Park staff, Fort Chipewyan.

Platakis D, J Finlay, T Alonzi, A-L Schmucker, KW Turner, C Beard, J Tong. 2014. Day of Geography. Presentation for Sir Winston Churchill Secondary School, St. Catharines, ON.

Ogden A, J Provencher, KW Turner, L Sowdluapik-Lloyd, JS Blais, M Fortier, C Hawkins, A

Applejohn. 2013. Panel Discussion: Is Canada able to meet its needs for research and innovation on northern issues, given that it does not have graduate programs situated in the three Canadian territories? Canadian Science Policy Conference, Toronto, ON. <http://www.cspc2013.ca/p20-canada-able-meet-its-needs-research-and-innovation-northern-issues-given-it-does-not-have>

Turner KW. 2010. Investigating Past and Present Lake Conditions Throughout the Old Crow Flats (Yukon Territory), as Part of a Community-Driven Multidisciplinary IPY Project. Association of Canadian Universities for Northern Studies (ACUNS) Annual General Meeting, Ottawa, Ontario (22 October).

Turner KW. 2010. Investigating Relationships Between Climate and Water in a Wetland of International Significance - The Old Crow Flats, Yukon Territory, Canada. Rotary Club Stratford, Ontario (9 September).

Turner KW, A Balasubramaniam, BB Wolfe and RI Hall. 2010. Investigating the present hydroecological conditions of the Old Crow Flats, YT. Poster prepared for the community of Old Crow, YT (February 2010).

Turner KW, BB Wolfe, TWD Edwards and RI Hall. 2010. Three years of studying the lakes throughout the Old Crow Flats. IPY Annual General Meeting, Community Hall, Old Crow, YT (February 2010).

Turner KW. 2009. Atitq's Antarctic adventure - accounts of a travelling teddy bear. Grade 3 Class, King Lear Public School, Stratford, ON (May 2009).

Turner KW. 2009. Reflecting on the University Antarctic Expedition - from studying physical and biological processes to exploration and environmental stewardship. Paul Martin Centre, Wilfrid Laurier University, Waterloo, ON (March 2009).

Turner KW. (March 2009) Ocean, ice, wilderness, and exploration - accounts from the Students on Ice University Antarctic Expedition. Cold Regions Research Centre's Dr. Ken Hewitt Symposium, Wilfrid Laurier University, Waterloo, ON (March 2009).

Turner KW and BB Wolfe. 2009. Hydrology of the Old Crow Flats: Report on the 2008 field season. IPY Annual General Meeting, Chief Zzeh Gittlit School, Old Crow, YT (January 2009).

Turner KW, AM Balasubramaniam and BB Wolfe. 2009. Workshop on "Lakes of the Old Crow Flats". Our Changing Homelands, Our Changing Lives Youth Conference, Chief Zzeh Gittlit School, Old Crow, YT (January 2009).

Turner KW, B Wolfe, T Edwards and R Hall. 2009. Lakes of the Old Crow Flats: What controls the water balance of lakes throughout the Old Crow Flats? In Environmental Change and Traditional Use

of the Old Crow Flats in Northern Canada. Progress report for the community of Old Crow, YT (January 2009).

Turner KW. 2008. Geography of the Old Crow Flats, YT. Probus Club of Exeter, Ontario (19 December).

Turner KW. 2008. Our world and living sustainably within it. Keynote Address for Bridgeport's Earth Day Assembly, Bridgeport Public School, Kitchener, ON (May 2008).

Turner KW. 2008. Geography of the Old Crow Flats, YT. Probus Club of Waterloo, Ontario (16 October).

Turner KW and BB Wolfe. 2008. Studying the lakes of the Old Crow Flats. IPY Annual General Meeting, Community Hall, Old Crow, YT (February 2008).

Turner KW. 2007. The hot and icy land: adventures on the volcanoes of Iceland. Grade 4 Class, Crestview Public School, Kitchener, ON (December 2007).

Turner KW, Wolfe BB, Balasubramaniam AB. (September 2007) Lakes of the Old Crow Flats, YT. Guest Lecture at Yukon College, Whitehorse, YT.

Research Publicity

- Interview with Permafrost Young Researchers Network. Published 9 November 2019. https://pyrn.arcticportal.org/images/docs/Reports/PYRNQuestionnaire_Editorial_Formatted_Final.pdf
- Interview with GoGeomatics: Associate Professor Kevin Turner from Brock University's Department of Geography and Tourism Studies Talks. 22 November 2018. <https://gogeomatics.ca/interview-associate-professor-kevin-turner-from-brock-universitysdepartment-of-geography-and-tourism-studies-talks/>
- Student research highlighted in national competition. The Brock News (13 February 2018). <https://brocku.ca/brock-news/2018/02/student-research-highlighted-in-national-competition/>
- Brock celebrates the 'science of where' on GIS Day. The Brock News (16 November 2017). <https://brocku.ca/brock-news/2017/11/brock-celebrates-the-science-of-where-on-gis-day/>
- Brock Media Clips. The Brock News (17 August 2017). <https://brocku.ca/brock-news/2017/08/brockmedia-clips-for-thursday-aug-17/>
- Researchers tackling allergies and climate change receive CFI funding. The Brock News (15 August 2017). <https://brocku.ca/brock-news/2017/08/researchers-tackling-allergies-and-climate-changereceive-cfi-funding/>
- Brock researchers receive \$2.4 million in funds from federal science granting agency NSERC. The Brock News (28 June 2016). <https://brocku.ca/brock-news/2016/06/brock-researchers-receive-2-4-million-in-funds-from-federal-science-granting-agency-nserc/>

- Interview during the Larry Fedoruk Show News Talk 610 CKTB Radio. Discussed aspects of research in Old Crow Flats including tracking carbon mobility in permafrost and using drones (June 2016).
- Weakening permafrost yields prehistoric remains: Brock University hydrologist. The Brock News (15 June 2016). <https://brocku.ca/brock-news/2016/06/weakening-permafrost-yields-prehistoricremains-brock-university-hydrologist/>
- *Laurier researcher recognized for wetlands study*. The Kitchener Record.
<http://www.therecord.com/news/local/article/586831--laurier-researcher-recognized-for-wetlandsstudy> (30 August 2011).
- *Hydroecology of lakes in the Old Crow Flats, northern Yukon Territory*. Polar Continental Shelf Program Science Report 2009-2010 (August 2011).
- *Hungry Bull, Yukon Territory*. Winning photograph in the “Canada in Black and White” contest in Canadian Geographic Magazine (January 2010). Re-published in the Canadian Geographic Collectors Edition, “Best Wildlife Pictures 2011”.
- *Cold comes with pole-to-pole research*. The Beacon Herald (Stratford, ON).
<http://www.stratfordbeaconherald.com/ArticleDisplay.aspx?archive=true&e=1432919> (March 2009).
- Discussion on the drivers of the drainage of Zelma Lake, Old Crow Flats, YT, during the General Assembly, Old Crow, YT (22 September 2007).
- *Zelma Lake – Old Crow Flats*. CBC Radio World Report (4 October 2007).
- *Yukon’s Zelma Lake draining at rapid rate*. CBC North.
<http://www.cbc.ca/news/canada/north/story/2007/08/07/yk-zelma.html> (7 August 2007).
- *The Drainage of Zelma Lake, Old Crow Flats, YT*. CBC North Radio interview with Sandi Coleman (6 August 2007).

APPENDIX F - Library Letter of Support



James A. Gibson Library

Ian Gordon, Liaison Librarian

Martin Chandler, Geospatial/GIS Services Librarian

Niagara Region
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St. Catharines, ON
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June 19, 2019

Dr. Frank Fueten
Professor and Chair, Department of Earth Sciences
Brock University

RE: Brock Library support for the proposed BA in Earth and Planetary Science program

Dear Frank:

I appreciate this opportunity to comment on the proposed BA in Earth and Planetary Science program.

The Library can support this new program with existing resources and welcomes the opportunity to work directly with faculty to identify, acquire, and provide additional resources in addition to providing instruction.

The Map, Data & GIS Library (MDGL) has access to collections of geospatial and map data to support research and teaching needs. Facilitating access and licensing data sets pertaining to planetary geology for Scholars GeoPortal, Open Data Resources, including NASA's open data can be evaluated and completed, on an as-needed basis. The MDGL offers instruction in finding data and using software, as requested by the professor, and will work with faculty and students in pursuing new methods of analysis in Planetary Science.

The Brock University Library has a solid collection of databases, books and journals in areas related to the proposed program. The Library currently acquires resources in support of varied undergraduate and graduate Earth Sciences' courses and individual faculty subject areas of specialization and interest. These areas include, but are not limited to planetology, volcanology, tectonics, mineralogy, terrestrial geomorphology, geomorphic processes, and geological landforms.

The library regularly acquires digital copies of streaming videos, provides access to OERs, textbooks, handbooks, theses, dissertations, society and major publisher's publications in these defined areas. The library acquires these resources using existing funds based on profiles and feedback from faculty, staff and most certainly - Earth Sciences' students.

The library supports Earth Sciences research and teaching through subscriptions and linked access to the following important scholarly resources. These resources are highlighted on the Library's Earth Sciences Research [Guide](#) and the [Map, Data & GIS Library](#) web site.

- SuperSearch (Brock Library)
- Scholars Portal E-journals
- Web of Science
- ArXiv.org e-Print Archive

- Brock Digital Repository (MSc, MEd & PhD theses)
- ProQuest Dissertations & Theses Global
- Google Scholar
- Kanopy (streaming video)
- GeoRef
- Lyell Collection (Geological Society of London publications)
- GeoScienceWorld
- GeologyOntario (OGS), GEOSCAN (GSC), NASA, Lunar & Planetary Institute, USGS publications
- Lynda.com

Cambridge Planetary Science book series @

<https://www.cambridge.org/core/series/cambridge-planetary-science/AA01E75E5BFE3E289FBB19AF10619224>

Rossi, A. P. & Gasselt, S. van (2018). Planetary geology. Cham, Switzerland: Springer/Praxis @

<https://www.springer.com/gp/book/9783319651774>

Smellie, J. L., & Edwards, B. R. (2016). Glaciovolcanism on Earth and Mars: Products, processes, and palaeoenvironmental significance. Cambridge University Press @

<https://www.cambridge.org/core/books/glaciovolcanism-on-earth-and-mars/OA7FBF219E8CC6BF46FC2D9D4E179119>

USGS. (2019). Planetary Geologic Mapping—Program Status and Future Needs. (Open-File Report 2019-1012) @

<https://pubs.usgs.gov/of/2019/1012/ofr20191012.pdf>

Copeland, P. (2012). Communicating rocks: Writing, speaking, and thinking about geology. Pearson @

<https://www.pearson.com/us/higher-education/program/Copeland-Communicating-Rocks-Writing-Speaking-and-Thinking-About-Geology/PGM218090.html>

Aiotta, M. (2018). Mastering academic writing in the sciences: A step-by-step guide. CRC @

<https://www.crcpress.com/Mastering-Academic-Writing-in-the-Sciences-A-Step-by-Step-Guide/Aiotta/p/book/9781498701471>

Greene, A. E. (2013) Writing science in plain English. University of Chicago Press @

<https://press.uchicago.edu/ucp/books/book/chicago/W/bo15288825.html>

Patience, G. S., Boffito, D. C., & Patience, P. A. (2015). Communicate science papers, presentations, and posters effectively. Academic Press @

<https://www.sciencedirect.com/book/9780128015001/communicate-science-papers-presentations-and-posters-effectively>

Two librarians, Martin Chandler and Ian Gordon are familiar and available to provide teaching, research consultation and instruction. Successfully integrating instruction into the program's curriculum will be essential for new students attempting to navigate the Library's virtual resources and services.

In closing, the Library is well positioned with existing collections and services to support this new program. We look forward to collaborating with faculty and staff to ensure our online resources, services and instruction provide optimal support for your students in this new and interesting program of study.

Sincerely,
Ian Gordon
Martin Chandler

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1.0: Unit Background

1.1: Introduction and Background

Introduce the program being proposed; clearly articulate the program goals and objectives; describe the development process.

Psychology has a long history in both the natural and social sciences. Currently, the Bachelor of Arts (B.A.) in Psychology does not distinguish between these separate disciplines. As such, the proposed Bachelor of Science (B.Sc.) in Psychology will allow students with an interest in a career in natural sciences to distinguish themselves from psychology majors with a focus in social sciences. This program would further increase the degree options for our current Psychology students, allowing them to decide between a B.A. and a B.Sc. Importantly, a B.Sc. degree in Psychology would likely attract a new group of incoming students with a stronger background in math and science. Finally, the B.Sc. would promote retention of current students as it would provide an alternate degree path for students in the Neuroscience program at Brock who are struggling or who wish to pursue a degree with more of a focus on psychological science.

The Department of Psychology has three main goals that will be accomplished by creating a B.Sc. in Psychology Program. The **first goal** is to provide flexibility for students by offering tailored programs that are well aligned with their career plans. This is critical as students often come to university without a solid understanding of the discipline of psychology and their interests evolve as they take 1st and 2nd year courses that introduce them to several streams of the discipline. By providing both a B.A. and B.Sc., we can better meet the evolving interests and career choices of our students, allowing them to pursue a degree that is tailored to their interests. The **second goal** is to aid in recruitment as there is significant incoming student demand for a B.Sc. We know from the Ontario Universities Fair (OUF) and Brock University Open Houses in November and April that some students have had strong training in the natural sciences in high school and that their interests lie in this area. Many of them distinguish between a BA and B.Sc., seeing the latter as better aligned with their goals. Having a B.Sc. would thus allow us to attract these students who have a greater interest in the natural sciences coming out of high school, and who want to pursue careers in these fields. A **third and final goal** is to aid in retention; the B.Sc. would provide an alternative to students studying Neuroscience and Biology whose wish to take a macroscopic versus microscopic approach to the study of human behaviour. A broader goal of the program is to provide students a broad background in Psychological Science with a focus on courses that emphasize the biological underpinnings of human behaviour to prepare them for entry into careers or further education with an emphasis on natural or clinical sciences. Thus, the B.Sc. in Psychology will offer greater choice and flexibility to students in terms of their training in Psychology.

The proposed B.Sc. programs (B.Sc. with major, B.Sc. Honours, and their respective co-op options) share several requirements with the B.A. programs in Psychology (e.g., Research Methods, History of Psychology and the Thesis Seminar course in the Honours Research Stream). Care has been taken to ensure it aligns well with other B.Sc. programs at Brock University. For example, students in- first year will take courses from Math, Biology, and Chemistry to ensure a strong natural science background the Honours Thesis stream will receive two full credits for their thesis (Honours Thesis; Literature Research and Seminar) and, as in other B.Sc. programs, will have a committee comprising two faculty members (supervisor + 1) and have a thesis defence. In addition, the current B.A. program has a co-op option, affording students the opportunity to acquire extensive experiential learning as a part of their degree; a co-op option for the B.Sc. program will ensure similar opportunities for those students.

The development of this B.Sc. program was spurred by nearly constant questions, at OUF and the Brock Open Houses each year, about whether Brock's Psychology department offers a B.Sc. at OUF and the Brock Open Houses each year. Many other Ontario Universities offer a B.Sc. in Psychology (in fact, Brock is in the minority only offering a B.A. in Psychology) and many students and their parents see the B.Sc. in Psychology to be more desirable than a B.A. Thus, one driving factor in the development of this B.Sc. program was student demand. A second factor in its development was the increasing employer demand for students with training in the natural sciences. A third and final factor in the development of the B.Sc. is to increase student retention as the B.Sc. program would provide a natural alternative to students in the Neuroscience program who desire a more

macroscopic focus with greater breadth in various domains of Psychology. Thus, we believe the B.Sc. program in Psychology would not only give our current students additional degree options but also attract a new group of students who are more inclined towards the natural sciences and have a strong background in biology or other natural sciences. Finally, it is worth noting that the B.Sc. in Psychology would attract more women to the sciences and would thus encourage women to engage with the STEM field and earn B.Sc. degrees. In 2019, 76% (572 of 748) of Psychology students at Brock University identified as female showing that the majority of our students are women. The BSc in Psychology program would likely also attract women thus increasing the number of women pursuing a BSc degree at Brock University and increasing female engagement with STEM.

1.2: Consistency with the University's Mission and Academic Plan (IQAP 3.5.1)

Provide:

- 1. A description of how the program is consistent with the mission, aims, objectives and existing strengths of the University;*
- 2. An explanation of how the proposed program fits with the University's current program offerings and a demonstration of the University's capacity to deliver the proposed program;*
- 3. Evidence that the proposal is consistent with the government's strategic directions (e.g., enrolment caps); and*
- 4. Additional or re-allocated resources that will be required for the proposed program. A more detailed description of the resource requirements for the proposed program will be presented in Section 5.*

Aims, Objectives, and Existing Strengths of the University

Brock University's mission, as elucidated in its strategic plan (*Niagara Roots-Global Reach, Brock University Institutional Strategic Plan 2018-2025*; approved by Senate and the Board of Directors) is defined below:

“Brock flourishes through the scholarly, creative and professional achievements of our students, faculty and staff. Although we share a common purpose, we recognize and honour knowledge pursued through diverse perspectives and approaches. Our academic mission is to nurture and support our students and faculty in the discovery of knowledge through exemplary scholarship, teaching and service.

We provide undergraduate, graduate and professional education of the highest quality. Our graduate programs enhance Brock's growing reputation for excellence in teaching, research, creativity and innovation. We provide a transformative experience for our students inside and outside the classroom by helping to develop their full potential as educated and engaged citizens in local and global communities. Brock graduates go out into the world as leaders, with a track record of entering fulfilling careers across all disciplines.

Brock University works to enhance the economic, social, cultural and intellectual lives of the communities around us — Niagara, Ontario, Canada and beyond — and to demonstrate the vital ways in which we contribute to the health, well-being and betterment of society in the 21st century.”

Brock's vision is described as:

“Brock University is a dynamic, comprehensive university that makes a positive difference in the lives of individuals in our Brock community, the Niagara Region, Canada and the world through leadership, innovation and excellence in learning, teaching, research, scholarship and creativity across disciplines.”

The proposed B.Sc. program in Psychology is entirely consistent with the mission, aims, and existing strengths of the University. By offering a B.Sc. in Psychology we would be offering more diversity in perspectives on Psychology and we would be better positioned to nurture and support students who are more interested in the natural science aspects of Psychology. The B.Sc. program will also help to produce engaged citizens who will be

able to fulfill a clear need in careers in the natural sciences. The current Psychology program at Brock is consistently ranked highly among Psychology departments across Canada. We have an extremely strong group of faculty members who publish actively and win teaching awards. Adding a B.Sc. program to our Psychology program will only strengthen its reputation and appeal to incoming students.

Fit with Current Program Offerings and University Capacity to Deliver the Program

The B.Sc. fits well with the University's current program offerings. It does not duplicate any existing program as it is distinct from the BA in Psychology as well as the Neuroscience program (which has a much stronger emphasis on Biology and Neuroscience and a microscopic level of analysis). Importantly, because the current B.Sc. does not require any new faculty or new courses, the Psychology department has the capacity to mount this program with minimal change to our budget or current course offerings and with no change required to our faculty complement.

Consistency with Government's Strategic Directions

The Ontario Ministry of Education has two main goals: (1) "Equipping all people with the skills and competencies that they need, focusing on those who face barriers to success or who need support to keep up with the demands of a changing economy" and (2) "meeting labour market demands for the highly skilled, innovative and diversified, technology-intensive sectors of the future economy."

This proposal is consistent with the Government's strategic direction. Our B.Sc. program in Psychology will directly address the government's twin goals of giving students the skills and competencies needed to keep up with the changing economy and meeting labour market demand for people who are highly skilled and with training in the natural sciences. For example, the 2016 Census by Statistics Canada showed that STEM (Science, Technology, Engineering, and Math) majors are in demand with STEM job growth at 4.6% compared to the overall job market growth of 1.8%. Further, our ~~Department~~ department has had great success in training undergraduate students who find employment. In our last program review in 2014, 89% of our graduates were employed and 11% indicated they were not currently employed due to being enrolled in further education.

Additional or Re-Allocated Resources

The B.Sc. program would require very few additional resources from the University. Given that no new faculty would be required, no resources would be needed in terms of faculty salaries or space.

The only additional resource in terms of staff would be a part-time academic advisor who would be needed to advise students pursuing the B.Sc. degree (with major or Honours degree) in Psychology. To be clear, in addition to the 1.5 advising/administrator staff we have currently, we will need another 0.5 has been allocated by the Dean, which we need to maintain, for a total of 1.5 academic advising and 0.5 administrator positions.

In terms of teaching, the program will rely on existing courses in Psychology and a few from Biology, Chemistry, and Mathematics. Further, for required courses, only one additional seminar will be needed (20 students per year; because we expect 20 new students in the B.Sc. ~~in the~~ program and the other 20 to come from the B.A. in PSYC or NEUR programs and thus would not represent an increase in course demand) and that the cost of these additional seminars will be offset by new tuition revenue from students enrolling in the B.Sc. program or transferring from other programs. For courses that allow students to choose from a number of options, it is likely that, at most, one additional seminar will be needed.

1.3: Alignment with the Strategic Mandate Agreement

Provide a description of how the proposed program is consistent with the program areas of strength or growth included in the current SMA.

The proposed B.Sc. fits with the strategic plan in many ways:

a) Brock University's SMA (2017-20) states that one aim "is to contribute to the betterment and social, cultural and economic development of the Niagara Region". It is noted in the SMA that "Niagara currently has one of the lowest household incomes in Canada, one of the lowest university attainments in the province and has been in a

prolonged phase of economic transformation.” One stated aspiration to encourage local students to strive to attain a postsecondary education. ***Providing a B.Sc. in Psychology at Brock would ensure that students from the Niagara Region who elect to complete their studies locally would have an option that is available at nearly every other university in the province.***

b) SMA-2 also aspires to improve retention rates in each year through a coordinated and targeted campaign across the Brock community focusing on interventions that address academic, financial, psychological, social and demographic barriers to student success. Although relatively small, the Centre for Neuroscience at Brock University is an innovative, transdisciplinary program. Each year, about 40% of first-year students exit the program, in large part because they are not successful in the required chemistry and physics courses. Currently, the majority of these students migrate to the Faculty of Applied Health Sciences, where they are able to earn a B.Sc. in many different programs (e.g., B.Sc. Medical Sciences; Biomedical Sciences; Kinesiology, depending on student interest). ***Providing a B.Sc. in Psychology at Brock would provide such students with another option, one more suitable for students exiting the Neuroscience-Neuropsychology stream. This option will increase retention rates.***

c) In the SMA-2, Brock emphasizes transdisciplinarity and indicates Health & Well-being throughout the Lifespan as an area of strength and as an area of expansion. Psychology is central to these goals and the proposed B.Sc. program would enable students to capitalize on these strengths. First, Psychology is a large program. In 2017-18 FCE enrollment was 3,335; we offered 29.0 sections with an average class size of 115. Second, Psychology is integral to the Lifespan Development Centre and to research directly related to health and well-being across the lifespan (e.g., the impact of stress during adolescence on the development of brain and behaviour; cognitive neuroscience of aging; the effect of sleep on cognitive and brain function; developmental changes in memory and attention). ***The B.Sc. will ensure students have a depth of understanding directly related to Health & Well-being with an emphasis on perception, cognition, and neural/biological mechanisms.***

d) SMA-2 also emphasizes experiential learning and states that as “*a component of their degree programs, graduate and undergraduate students have the opportunity to engage in basic and applied research as valuable members of a research team, which may or may not be associated with the transdisciplinary (TD) hubs. They are able to interact with principal investigators and contributors from across multiple disciplines.*” *The lab-based nature of courses in Psychology, the co-op option available in both our B.A. and proposed B.Sc. programs, and the opportunity to complete an Honours Thesis provide excellent experiential learning opportunities.* Many faculty members in Psychology have NSERC funding, providing an opportunity to support summer USRA students (an extra-curricular learning opportunity). Many faculty members support multiple volunteer/paid undergraduate Research Assistants. Faculty members in Psychology are well-funded and publish at a rate well above the mean for Brock faculty (.79/faculty member); they are in an excellent position to provide training to both undergraduate and graduate students. ***Although these opportunities are available in the B.A. program, many students would prefer to earn a B.Sc. given their career/education goals and earning a B.Sc. will reflect that the student has emphasized the natural science sub-field of psychology and has completed first-year Biology, Chemistry, and Math courses.***

e) An area of focus in Brock’s SMA-2 is the “*need to address the demand for health, economic, social and cultural innovations that contribute to well-being*”. “*Academic programs such as ... Psychology [and] Neuroscience...are building the highly skilled workforce needed to address the physical and social determinants of health.*” According to CHMA, by age 40 about 50% of the population will have, or have had, a mental illness; it is critical that students understand the neural mechanisms underlying depression, anxiety, schizophrenia etc. ***A B.Sc. in Psychology will provide students with an understanding of the brain from a psychological, macroscopic perspective, consistent with the institutional aspiration (SMA-2) to contribute to the “health and well-being of its citizens”.***

f) SMA-2 includes goals of maintaining/increasing tri-council funding, number of published papers, and number of citations (impact). Psychology is already a leader in each of these areas at Brock. *A B.Sc. will attract undergraduate students to Brock with different strengths than those specifically attracted by the B.A. (e.g., with a stronger background in Math & Science).* That background is especially well suited to teaching and research in perception, cognition, and neuroscience—current strengths in our department that directly address issues related to health and well-being. Successful students will feed our M.A. and Ph.D. programs in Psychology, growing those programs and increasing the ability of faculty members in the Behavioural Cognitive Neuroscience and Lifespan Development streams to attract students to their labs—increasing publication rates and success in granting competitions. (Note. At the present time we do not have an M.Sc. program; that might be something we pursue in the future.)

f) The B.Sc. in Psychology was listed as a potential new program for development in SMA-2.

1.4: Appropriateness of Degree Nomenclature (IQAP 3.5.1)

Indicate the specific degree to be awarded upon completion of the program, e.g. BA, B.Sc. (honours). Indicate the program name to be included with the degree, e.g. BA (Honours) in Psychology.

Specific degrees to be awarded upon completion are: (1) B.Sc. (Honours) in Psychology (with or without co-op) and (2) B.Sc. (with Major) in Psychology (with or without co-op).

2.0: Degree Level Expectations and Learning Outcomes

This section provides information on the degree level expectations (DLEs) and learning outcomes of the proposed program.

Brock DLEs and Faculty DLEs (where available) are included in Table 2.1. Both the overall program and the individual courses are assessed against these DLEs in terms of learning outcomes. The curricular content, admission requirements, mode of delivery, bases of evaluation of student performance, commitment of resources and overall quality of any academic program and its component courses are all related to its learning outcomes.

Proponents are advised that a curriculum map that links course learning outcomes to articulated program learning outcomes mapped to the DLEs shall be included in the PPB. As part of this process, proponents must also document and demonstrate the methods by which the performance level of students, based on the learning outcomes, will be assessed by the program.

Under the following headings, the proponents will provide a description of the program's learning outcomes and their consistency with Brock's and the Faculty's mission and degree level expectations [IQAP 3.5.1]. This will include an explanation of the ways in which the program assesses the extent to which students have achieved those outcomes.

2.1: Course Learning Outcomes (IQAP 3.5.1)

Course learning outcomes, which support the program learning outcomes, are reported in copies of Table A.1 for each course in the proposed program. Completed copies of Table A.1 are to be included in Appendix A. Provide comments on the range, variety and rationale of the course learning outcomes. Course learning outcomes will be summarized to the program level, with the latter reported in Table 2.1 in the next section.

See Table A.1 to see course learning outcomes for each course in the program (Appendix A), and Table 2.1 for mapping of course outcomes onto program degree level expectations.

2.2: Program Learning Outcomes (IQAP 3.5.1)

Table 2.1 presents the program learning outcomes linked to the Brock and Faculty DLEs. Address the clarity and appropriateness of the program requirements and associated learning outcomes in meeting the University's undergraduate DLEs.

The program learning outcomes for the B.Sc. in Psychology are in alignment with UDLEs and Faculty level learning outcomes. Tables 2.1a and 2.1b outline the program learning outcomes for the B.Sc. (with major) and B.Sc. (honours) that are the focus of this application. Our B.Sc. in Psychology Learning Outcomes have been adapted from the American Psychological Association learning outcomes and addresses each of the UDLEs and Faculty of Social Sciences DLEs.

Depth/Breadth

To meet the breadth requirements, first and second year students will be introduced to various theories and concepts related to psychological science, with a particular focus on the biological basis of behaviour ~~to meet the breadth requirement~~. In upper year courses (3rd and 4th year), students will take more focused courses in their area of interest to meet the depth requirement.

Knowledge of Methodologies

B.Sc. students will learn about a variety of theoretical approaches and research methodologies used in studying the biological underpinnings of human behaviour. A particular focus will be placed on quantitative methodologies and analytical techniques. For example, students will learn about methodologies such as EEG/ERP, fMRI, fNIRS, neuropsychological studies, as well as behavioural experimental approaches. In second year, all students will take Statistics and Research Design in the Behavioural Sciences (PSYC 2F23), which will provide a broad background in research design and statistics. This course is followed by Psychological Research (PSYC 3F40) or Critical Thinking in Psychology (PSYC 3P30) in their third year, which will allow for a more advanced understanding of research methodologies. In their ~~third and fourth year~~third- and fourth-year courses, students will also gain a more in depth understanding of specific research methodologies and approaches that characterize more specialized fields of psychological science. Many of the required courses at the ~~second year~~second-year level and elective courses at the third year levels also have a laboratory component (e.g., PSYC 2P20: Cognition, PSYC 2P36 & 2P37: Brain and Behaviour I and II; PSYC 3P05: Visual Perception from Eye to Brain, PSYC 3P65: Brain and Language, PSYC 3P87: Behavioural Neuroscience). The lab components offer students a unique opportunity to explore cutting edge research methodologies employed in the field of psychological science. Students in the Honours stream will gain a further in depth understanding of methodologies by conducting an empirical thesis in their 4th year of study.

Application of Knowledge

Students will apply knowledge gained from lecture and readings in seminar and laboratory activities throughout their degree and will be expected to apply this knowledge in their research and reflection papers, assignments, examinations, and experiential learning course components. Students who pursue the Honours degree option will have the opportunity to apply their theoretical and research knowledge to develop a specific research question and research study in their 4th year of study. They will need to apply their research design and statistical knowledge to design and analyze the data that they collect during the course of their thesis project. The co-op option in both the B.Sc. with Major and Honours B.Sc. will provide students with a further opportunity to apply the knowledge they have gained in their courses in a real-world setting.

Communication Skills

Courses at all levels (from 1st to 4th year) will evaluate the ability of students to communicate, both in writing (research papers, laboratory reports, assignments, reflective papers, honours thesis), and orally (presentations, seminar discussions, poster presentations). Students will be well-prepared to communicate with individuals in workplace settings by the end of their degrees and will have the skills to adapt their communication bases on the audience's level of understanding.

Awareness of Limits of Knowledge

In particular, research methods courses (PSYC 2F23; PSYC 3F40; PSYC 3P30) will highlight caution in overstating one's knowledge and in interpreting research findings. Many other 3rd and 4th year PSYC courses include coverage of research methods and the limits of student's knowledge and uncertainty and how this influences interpretation of research findings. Courses related to career development, such as PSYC 2P01 and PSYC 4P07, will also help students to identify gaps in their knowledge and skills, and enable them to plan their professional development accordingly.

Autonomy and Professional Capacity

Like all students, our B.Sc. students will be expected to show initiative, responsibility, and professionalism in their conduct in all course components. This will be enhanced by the 4th year thesis opportunity in the Honours thesis stream as well as laboratory and other experiential components of courses. Through course work, students will learn about research ethics and to apply that knowledge in the design and data collection phases of their thesis project. Throughout the degrees, students will work in groups for projects, presentations, and in a laboratory setting which will develop teamwork and problem-solving skills. Throughout their degree, the importance of academic integrity will be discussed and reinforced especially surrounding writing research papers.

2.3: Assessment of Teaching and Learning (IQAP 3.5.6)

Table 2.2 presents the program learning outcomes mapped to the modes of delivery and the methods of assessment for the proposed program.

a) With reference to Table 2.1 - 2.2, document the appropriateness of the proposed methods of assessment of the student achievement of the intended program learning outcomes and degree level expectations.

Include a numbered list of all assessment methods employed in the program(s). [IQAP 3.5.6].

Courses in the B.Sc. in Psychology program will use a number of different assessment tools to evaluate student learning. Methods of assessment will vary depending on the course and instructor, but broadly we expect a combination of the following methods of assessment:

- Test or Quiz
- Midterm or Exam
- Seminar Participation
- Seminar Presentation
- Essay or Research Paper
- Laboratory Reports
- Laboratory performance
- Media Critique Papers
- Poster presentations
- Assignments
- Projects
- Presentations
- Peer evaluation
- Thesis or Independent Research Paper

b) Outline the plan for documenting and demonstrating the level of performance of students, and the consistency of the plan with the University's statement of its degree level expectations.

We plan to document and demonstrate the level of performance of our students based on student success metrics:

Student Success Metrics

1. Number of students earning scholarships and awards (internal and external)
2. Number of students on the Deans Honour List (placed on the list if they have an average of 80% in the last 5 credits completed)
3. Number of students continuing onto graduate school or professional programs
4. Number of students receiving the Brock Returning Scholars Award (awarded to continuing full-time undergraduate students who have attained a minimum of 80% in 4 or more credits in the previous fall/winter sessions)
5. Number of students who gain employment in relevant sector following graduation
6. Retention levels throughout the 4-year programs
7. Steady enrolment trends would also be an indicator of the popularity and success of the program

Student Satisfaction Metrics

Student satisfaction will be assessed through course evaluations (conducted at the end of PSYC courses), and through survey information from Brock's Office of Institutional Analysis, including the National Survey on Student Engagement.

2.4: Program Curriculum Map (IQAP 3.5.1)

Table 2.3 presents a curriculum map that links the program learning outcomes with the methods of assessment employed and the degree of implementation for each course in the program. Based on the curriculum map provide an analysis of and describe plans to address duplication, gaps and areas for improvement in the program.

The basic structure of the B.Sc. in Psychology program was designed to incrementally build on students' knowledge and skills over the course of four years. As such, the learning outcomes reflect increasing sophistication over the course of the degree, beginning with introduction of concepts and theories (to increased breadth of knowledge in psychology), and ending with advanced knowledge/mastery of specific topics and research methodologies. The methods of assessment are diverse, including tests (multiple choice, short answer, long answer), assignments, Lab/seminar participation, laboratory reports, oral presentations, oral poster presentations, research essays, and others. Using a variety of assessment methods will allow us to measure learning outcomes in a broad and comprehensive manner, and will allow us to understand the full scope of student's learning.

Directions for including the Curriculum Map:

- 1) Download the curriculum map file (Table 2.3 - Curriculum Map) available [here](#).
- 2) Follow the instructions on the first tab in the file and complete the table for the program being proposed.
- 3) Once completed, save and print the file as a PDF document.
- 4) Insert the PDF file as the final pages in the Program Proposal Brief.

2.5: Modes of Delivery (IQAP 3.5.5)

Discuss the formats (lecture, seminar, independent research, projects, etc.) by which the program will be delivered and the appropriateness of the proposed delivery mode(s) in meeting the program's intended learning outcomes and Undergraduate Degree Level Expectations (UDLEs). The Proponents will discuss the methods of delivery (face to face, online, blended, independent study, etc.) to be employed in delivering the program content and the rationale for the various delivery methods to be used.

Modes of delivery include lectures, small group discussions and learning (in seminars and laboratory sections), research project courses such as the Honours thesis course, and experiential learning (laboratories and experiential components of PSYC courses). Most courses will be offered face to face, but some courses will be blended (PSYC 4P07: Psychology Students' Transition to Work) and some will be independent study (e.g., PSYC 4P10: Advanced Directed Studies). Each method employed to deliver program content has been selected to accomplish learning goals and program learning objectives. Modes of delivery will be adapted as needed when public health conditions make online course delivery necessary.

Table 2.1: Bachelor of Science in Psychology (with Major) Degree - Mapping Program Outcomes to the Undergraduate Degree Level Expectations Program:

<p>Brock University UDLEs A graduate of Brock University will be able to demonstrate:</p>	<p>Faculty specific UDLEs A graduate of the Faculty of Social Sciences will be able to demonstrate:</p>	<p>Program Outcomes aligned with UDLEs At the end of this program, the successful student will be able to demonstrate:</p>
<p>1. Depth and Breadth of Knowledge</p> <ul style="list-style-type: none"> a) developed knowledge and critical understanding of key concepts b) developed understanding of many major fields c) developed ability to gather and interpret information and compare merits of alternate views d) detailed knowledge and experience in an area of the discipline e) developed critical thinking and analytical skills f) apply learning from outside discipline 	<ul style="list-style-type: none"> a) General knowledge and understanding of many key concepts, methodologies, theoretical approaches and assumptions in the Social Sciences b) Broad understanding of some of the major fields in a discipline, including, where appropriate, from an interdisciplinary perspective, and how the fields may intersect with fields in related Social Sciences c) Ability to gather, review, evaluate and interpret information relevant to one or more of the major areas of the Social Sciences d) Some detailed knowledge in an area or areas of the Social Sciences e) Critical thinking and analytical skills f) Ability to apply learning from one or more areas outside the major discipline 	<ul style="list-style-type: none"> 1a. The ability to describe concepts, principles, and overarching themes in psychology, especially the biological bases of behaviour 1b. The ability to develop a working knowledge of psychology’s content domains, especially those concerning the biological bases of psychological functioning 1c. The ability to explain complex behavior by integrating concepts developed from different content domains 1d. The ability to interpret, design, and conduct basic psychological research 1e. The ability to apply knowledge of research skills, including physiological methodologies, to be an informed consumer of research or critic regarding unsupported claims about behaviour and its biological bases 1f. The ability to use scientific reasoning to interpret psychological phenomena at a biological and behavioural level 1g. Psychological information literacy, including the ability to develop a comprehensive strategy for locating and using relevant scholarship (e.g., databases, credible journals) to address psychological questions, and a developed understanding of the characteristics and relative value of different information sources (e.g.,

Table 2.1: Bachelor of Science in Psychology (with Major) Degree - Mapping Program Outcomes to the Undergraduate Degree Level Expectations Program:

<p>Brock University UDLEs A graduate of Brock University will be able to demonstrate:</p>	<p>Faculty specific UDLEs A graduate of the Faculty of Social Sciences will be able to demonstrate:</p>	<p>Program Outcomes aligned with UDLEs At the end of this program, the successful student will be able to demonstrate:</p>
		<p>primary vs. secondary, peer reviewed vs. nonreviewed, empirical vs. nonempirical)</p> <p>1h. Developed critical thinking and analytical skills</p> <p>1i. The ability to compare and contrast the nature of psychology with other disciplines (e.g., biology, economics, political science), including identifying the potential contribution of psychology to interdisciplinary collaboration</p> <p>1j. The ability to understand the evolutionary origins of the brain and behaviour</p>
<p>2. Knowledge of Methodologies Apply methods of inquiry to:</p> <ul style="list-style-type: none"> a) evaluate different approaches b) use these methods to devise and sustain arguments or solve problems c) comment on current research or advanced scholarship 	<p>An understanding of methods of enquiry or creative activity, or both, in their primary area of study that enables the student to:</p> <ul style="list-style-type: none"> a) evaluate the appropriateness of different approaches to solving problems using well established ideas and techniques; and b) devise and sustain arguments or solve problems using these methods. 	<p>2a. The ability to evaluate the effectiveness of selected problem-solving strategies</p> <p>2b. The ability to read and summarize complex ideas accurately from psychological sources and research</p> <p>2c. The ability to interpret complex statistical findings and graphs, and to explain these findings in common language.</p>
<p>3. Application of Knowledge Review, present and critically evaluate information in order to:</p> <ul style="list-style-type: none"> a) develop lines of argument b) make sound judgments c) apply underlying concepts, principles d) use this knowledge in the creative process 	<p>The ability to review, present and critically evaluate qualitative and quantitative information to:</p> <ul style="list-style-type: none"> a) develop lines of argument; 	<p>3a. The ability to apply psychological concepts, theories, and research findings as these relate to everyday life</p> <p>3b. The ability to engage in innovative and integrative thinking and problem solving</p>

Table 2.1: Bachelor of Science in Psychology (with Major) Degree - Mapping Program Outcomes to the Undergraduate Degree Level Expectations Program:

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Faculty specific UDLEs <i>A graduate of the Faculty of Social Sciences will be able to demonstrate:</i>	Program Outcomes aligned with UDLEs <i>At the end of this program, the successful student will be able to demonstrate:</i>
<p>Use techniques to:</p> <ul style="list-style-type: none"> a) critically evaluate b) propose solutions c) frame appropriate questions d) solve a problem or create new work e) make critical use of scholarly sources 	<ul style="list-style-type: none"> b) make sound judgments in accordance with the major theories, concepts and methods of the subject(s) of study; c) apply underlying concepts, principles, and techniques of analysis, both within and outside the major discipline; d) where appropriate use this knowledge in the creative process; and <p>The ability to use a range of established techniques to:</p> <ul style="list-style-type: none"> a) initiate and undertake critical evaluation of arguments, assumptions, abstract concepts and information; b) propose solutions; c) frame appropriate questions for the purpose of solving a problem; d) solve a problem or create a new work; and e) to make critical use of scholarly reviews and primary sources. 	<p>3c. The ability to critically evaluate points of view, decisions or information sources</p> <p>3d. The ability to apply problem-solving skills</p> <p>3e. The ability to synthesize ideas, information or experiences into new understandings or methods</p>
<p>4. Communication skills Communicate information, arguments and analyses accurately and reliably, orally and in writing to a range of audiences.</p>	<p>The ability to communicate accurately and reliably, orally and in writing to a range of audiences.</p>	<p>4a. The ability to write effectively for different purposes</p> <p>4b. The ability to exhibit effective presentation skills for different purposes</p>
<p>5. Awareness of Limits of Knowledge</p>	<p>An understanding of the limits to their own knowledge and how this might influence their analyses and interpretations.</p>	<p>5a. Recognition of the limits of their knowledge and ability, and how this might influence analyses and interpretations</p>

Table 2.1: Bachelor of Science in Psychology (with Major) Degree - Mapping Program Outcomes to the Undergraduate Degree Level Expectations Program:

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Faculty specific UDLEs <i>A graduate of the Faculty of Social Sciences will be able to demonstrate:</i>	Program Outcomes aligned with UDLEs <i>At the end of this program, the successful student will be able to demonstrate:</i>
<p>Understand limits to own knowledge, appreciate uncertainty, and how this might influence their analyses and interpretations.</p>		<p>5b. The ability to accurately self-assess performance quality by melding external standards and expectations with their own performance criteria</p> <p>5c. The ability to pursue and respond appropriately to feedback from educators, mentors, supervisors, and experts to improve performance</p> <p>5d. The ability to attend to and monitor the quality of their own thinking (i.e., make adaptations using metacognitive strategies).</p>
<p>6. Autonomy and Professional Capacity Qualities and transferrable skills for further use:</p> <ul style="list-style-type: none"> a) exercise of initiative, personal responsibility and accountability b) working effectively with others c) decision-making in complex contexts d) ability to manage learning within and outside discipline e) behaviour consistent with academic integrity and social responsibility. 	<p>Qualities and transferable skills necessary for further study, employment, community involvement and other activities requiring:</p> <ul style="list-style-type: none"> a) the exercise of personal responsibility and decision-making; b) working effectively with others; c) the ability to identify and address their own learning needs in changing circumstances and to select an appropriate program of further study; <p>and</p> <ul style="list-style-type: none"> d) behaviour consistent with academic integrity and social responsibility. 	<p>6a. Enhanced teamwork capacity</p> <p>6b. The ability to generate, apply, and evaluate potential solutions to problems that develop when working with teams</p> <p>6c. The ability to interact effectively with others</p> <p>6d. The ability to build and enhance interpersonal relationships</p> <p>6e. The ability to apply psychological content and skills to career goals</p>

Table 2.1: Bachelor of Science in Psychology (with Major) Degree - Mapping Program Outcomes to the Undergraduate Degree Level Expectations Program:

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Faculty specific UDLEs <i>A graduate of the Faculty of Social Sciences will be able to demonstrate:</i>	Program Outcomes aligned with UDLEs <i>At the end of this program, the successful student will be able to demonstrate:</i>
		<p>6f. The ability to develop meaningful professional direction for life after graduation</p> <p>6g. The ability to evaluate the characteristics of potential work settings or graduate school programs to optimize career direction and satisfaction</p> <p>6h. The ability to develop strategies to enhance resilience and maintain skills in response to rapid social change and related changes in the job market.</p> <p>6i. The ability to apply ethical standards to evaluate psychological science and practice</p> <p>6j. The ability to adopt values that build community at local, national, and global levels</p>
<p>7. Other Include any program outcomes that may not be covered by the 6 DLES listed above</p>		

Table 2.1: Honours Bachelor of Science in Psychology Degree – Mapping Program Outcomes to the Undergraduate Degree Level Expectations Program:

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Faculty specific UDLEs <i>A graduate of the Faculty of Social Sciences will be able to demonstrate:</i>	Program Outcomes aligned with UDLEs <i>At the end of this program, the successful student will be able to demonstrate:</i>
<p>1. Depth and Breadth of Knowledge</p> <ul style="list-style-type: none"> a) developed knowledge and critical understanding of key concepts b) developed understanding of many major fields c) developed ability to gather and interpret information and compare merits of alternate views d) detailed knowledge and experience in an area of the discipline e) developed critical thinking and analytical skills f) apply learning from outside discipline 	<ul style="list-style-type: none"> a) Developed knowledge and critical understanding of the key concepts, methodologies, current advances, theoretical approaches and assumptions in the Social Sciences, as well as in a specialized area within the Social Sciences b) Developed understanding of many of the major fields in a discipline, including, where appropriate, from an interdisciplinary perspective, and how the fields may intersect with fields in related Social Sciences c) Developed ability to: <ul style="list-style-type: none"> i) gather, review, evaluate and interpret information; and ii) compare the merits of alternate hypotheses or creative options, relevant to one or more of the major areas in the Social Sciences d) Developed, detailed knowledge of and experience in research in an area or areas of the Social Sciences e) Developed critical thinking and analytical skills f) Ability to apply learning from one or more areas outside the major discipline 	<ul style="list-style-type: none"> 1a. The ability to describe concepts, principles, and overarching themes in psychology, especially the biological bases of behaviour 1b. The ability to develop a working knowledge of psychology’s content domains, especially those concerning the biological bases of psychological functioning 1c. The ability to explain complex behavior by integrating concepts developed from different content domains 1d. The ability to interpret, design, and conduct basic psychological research 1e. The ability to apply knowledge of research skills, including physiological methodologies, to be an informed consumer of research or critic regarding unsupported claims about behaviour and its biological bases 1f. The ability to use scientific reasoning to interpret psychological phenomena at a biological and behavioural level 1g. Psychological information literacy, including the ability to develop a comprehensive strategy for locating and using relevant scholarship (e.g., databases, credible journals) to address psychological questions, and a developed understanding of the characteristics and relative value of different information sources (e.g.,

Table 2.1: Honours Bachelor of Science in Psychology Degree – Mapping Program Outcomes to the Undergraduate Degree Level Expectations Program:

<p>Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i></p>	<p>Faculty specific UDLEs <i>A graduate of the Faculty of Social Sciences will be able to demonstrate:</i></p>	<p>Program Outcomes aligned with UDLEs <i>At the end of this program, the successful student will be able to demonstrate:</i></p>
		<p>primary vs. secondary, peer reviewed vs. nonreviewed, empirical vs. nonempirical)</p> <p>1h. Developed critical thinking and analytical skills</p> <p>1i. The ability to compare and contrast the nature of psychology with other disciplines (e.g., biology, chemistry, economics, neuroscience, political science), including identifying the potential contribution of psychology to interdisciplinary collaboration</p> <p>1j. The ability to understand the evolutionary origins of the brain and behaviour</p>
<p>2. Knowledge of Methodologies Apply methods of inquiry to:</p> <ul style="list-style-type: none"> a) evaluate different approaches b) use these methods to devise and sustain arguments or solve problems c) comment on current research or advanced scholarship 	<p>An understanding of methods of enquiry or creative activity, or both, in their primary area of study that enables the student to:</p> <ul style="list-style-type: none"> a) evaluate the appropriateness of different approaches to solving problems using well established ideas and techniques; and b) devise and sustain arguments or solve problems using these methods c) describe and comment upon particular aspects of current research or equivalent advanced scholarship. 	<p>2a. The ability to evaluate the effectiveness of selected problem-solving strategies</p> <p>2b. The ability to collect, analyze, interpret, and report data using appropriate statistical strategies to address different types of research questions and hypotheses</p> <p>2c. The ability to read and summarize complex ideas accurately from psychological sources and research</p> <p>2d. The ability to interpret complex statistical findings and graphs, and to explain these findings in common language.</p>

Table 2.1: Honours Bachelor of Science in Psychology Degree – Mapping Program Outcomes to the Undergraduate Degree Level Expectations Program:

<p>Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i></p>	<p>Faculty specific UDLEs <i>A graduate of the Faculty of Social Sciences will be able to demonstrate:</i></p>	<p>Program Outcomes aligned with UDLEs <i>At the end of this program, the successful student will be able to demonstrate:</i></p>
<p>3. Application of Knowledge Review, present and critically evaluate information in order to:</p> <ul style="list-style-type: none"> a) develop lines of argument b) make sound judgments c) apply underlying concepts, principles d) use this knowledge in the creative process <p>Use techniques to:</p> <ul style="list-style-type: none"> e) critically evaluate f) propose solutions g) frame appropriate questions h) solve a problem or create new work i) make critical use of scholarly sources 	<p>The ability to review, present and critically evaluate qualitative and quantitative information to:</p> <ul style="list-style-type: none"> a) develop lines of argument; b) make sound judgments in accordance with the major theories, concepts and methods of the subject(s) of study; c) apply underlying concepts, principles, and techniques of analysis, both within and outside the major discipline; d) where appropriate use this knowledge in the creative process; and <p>The ability to use a range of established techniques to:</p> <ul style="list-style-type: none"> a) initiate and undertake critical evaluation of arguments, assumptions, abstract concepts and information; b) propose solutions; c) frame appropriate questions for the purpose of solving a problem; d) solve a problem or create a new work; and e) to make critical use of scholarly reviews and primary sources. 	<p>3a. The ability to apply psychological concepts, theories, and research findings as these relate to everyday life, especially those concerning the biological bases of psychological functioning</p> <p>3b. The ability to articulate how psychological and neuroscientific principles can be used to explain social issues, address pressing societal needs, and inform public policy</p> <p>3c. The ability to evaluate how the mind, brain, and body interact to influence psychological and physical health</p> <p>3d. The ability to propose and justify appropriate psychology- and neuroscience-based interventions in applied settings (e.g., clinical, school, community, or industrial settings)</p> <p>3e. The ability to explain how psychological constructs and their biological underpinnings can be used to understand and resolve interpersonal and intercultural conflicts</p> <p>3f. The ability to engage in innovative and integrative thinking and problem solving</p> <p>3g. The ability to critically evaluate points of view, decisions or information sources</p>

Table 2.1: Honours Bachelor of Science in Psychology Degree – Mapping Program Outcomes to the Undergraduate Degree Level Expectations Program:

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Faculty specific UDLEs <i>A graduate of the Faculty of Social Sciences will be able to demonstrate:</i>	Program Outcomes aligned with UDLEs <i>At the end of this program, the successful student will be able to demonstrate:</i>
		3h. The ability to apply problem-solving skills 3i. The ability to synthesize ideas, information or experiences into new understandings or methods
4. Communication skills Communicate information, arguments and analyses accurately and reliably, orally and in writing to a range of audiences.	The ability to communicate accurately and reliably, orally and in writing to a range of audiences.	4a. The ability to write effectively for different purposes 4b. The ability to exhibit effective presentation skills for different purposes
5. Awareness of Limits of Knowledge Understand limits to own knowledge, appreciate uncertainty, and how this might influence their analyses and interpretations.	An understanding of the limits to their own knowledge and ability, and an appreciation of the uncertainty, ambiguity and limits to knowledge and how this might influence analyses and interpretations.	5a. Recognition of the limits of their knowledge and ability, and how this might influence analyses and interpretations 5b. The ability to accurately self-assess performance quality by melding external standards and expectations with their own performance criteria 5c. The ability to pursue and respond appropriately to feedback from educators, mentors, supervisors, and experts to improve performance 5d. The ability to attend to and monitor the quality of their own thinking (i.e., make adaptations using metacognitive strategies).
6. Autonomy and Professional Capacity Qualities and transferrable skills for further use: f) exercise of initiative, personal responsibility and accountability g) working effectively with others h) decision-making in complex contexts	Qualities and transferable skills necessary for further study, employment, community involvement and other activities requiring:	6a. Enhanced teamwork capacity

Table 2.1: Honours Bachelor of Science in Psychology Degree – Mapping Program Outcomes to the Undergraduate Degree Level Expectations Program:

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Faculty specific UDLEs <i>A graduate of the Faculty of Social Sciences will be able to demonstrate:</i>	Program Outcomes aligned with UDLEs <i>At the end of this program, the successful student will be able to demonstrate:</i>
<ul style="list-style-type: none"> i) ability to manage learning within and outside discipline j) behaviour consistent with academic integrity and social responsibility. 	<ul style="list-style-type: none"> a) the exercise of initiative, personal responsibility and accountability in both personal and group contexts; b) working effectively with others; c) decision-making in complex contexts; d) the ability to manage their own learning in changing circumstances, both within and outside the discipline and to select an appropriate major program of further study; and e) behavior consistent with academic integrity and social responsibility. 	<ul style="list-style-type: none"> 6b. The ability to generate, apply, and evaluate potential solutions to problems that develop when working with teams 6c. The ability to interact effectively with others 6d. The ability to build and enhance interpersonal relationships 6e. The ability to apply psychological content and skills to career goals 6f. The ability to develop meaningful professional direction for life after graduation 6g. The ability to evaluate the characteristics of potential work settings or graduate school programs to optimize career direction and satisfaction 6h. The ability to develop strategies to enhance resilience and maintain skills in response to rapid social change and related changes in the job market. 6i. The ability to apply ethical standards to evaluate psychological science and practice 6j. The ability to adopt values that build community at local, national, and global levels

Table 2.1: Honours Bachelor of Science in Psychology Degree – Mapping Program Outcomes to the Undergraduate Degree Level Expectations Program:

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Faculty specific UDLEs <i>A graduate of the Faculty of Social Sciences will be able to demonstrate:</i>	Program Outcomes aligned with UDLEs <i>At the end of this program, the successful student will be able to demonstrate:</i>
7. Other Include any program outcomes that may not be covered by the 6 DLES listed above		7a. An ability to conduct independent, original research in the field of psychology with a focus on the biological underpinnings of psychological phenomena

Table 2.2 –Bachelor of Science in Psychology (with Major) Degree, Mapping Program Learning Outcomes to Modes of Delivery and Methods of Assessment Program:

* Superscripts indicate the program UDLE associated with each mode of delivery

** Superscripts indicate the mode of delivery associated with each assessment method

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Program UDLEs/Learning Outcomes <i>At the end of this program, the successful student will:</i>	Modes of Delivery*	Assessment of Method** <i>Students can demonstrate their knowledge/are assessed through the following methods:</i>
<p>1. Depth and Breadth of Knowledge</p> <p>a) developed knowledge and critical understanding of key concepts</p> <p>b) developed understanding of many major fields</p> <p>c) developed ability to gather and interpret information</p> <p>d) detailed knowledge and experience in an area of the discipline</p> <p>e) developed critical thinking and analytical skills</p> <p>f) apply learning from outside discipline</p>	<p>1a. The ability to describe concepts, principles, and overarching themes in psychology, especially the biological bases of behaviour</p> <p>1b. The ability to develop a working knowledge of psychology’s content domains, especially those concerning the biological bases of psychological functioning</p> <p>1c. The ability to explain complex behavior by integrating concepts developed from different content domains</p> <p>1d. The ability to interpret, design, and conduct basic psychological research</p> <p>1e. The ability to apply knowledge of research skills, including physiological methodologies, to be an informed consumer of research or critic regarding unsupported claims about behaviour and its biological bases</p> <p>1f. The ability to use scientific reasoning to interpret psychological</p>	<p>i. Lectures^{a, b, c, d, e, f, h, i, j}</p> <p>ii. Laboratories^{a, b, c, d, e, f, h, i, j}</p> <p>iii. Seminars^{a, b, c, d, e, f, h, i, j}</p> <p>iv. Tutorials^{a, b, c, d, e, f, h, i, j}</p> <p>v. Individual Meetings with Faculty^{a, b, c, d, e, f, h, i, j}</p>	<ul style="list-style-type: none"> • Test or Quiz^{i, ii, iii, iv} • Midterm or Exam^{i, ii, iii, iv} • Seminar Participationⁱⁱⁱ • Seminar Presentationⁱⁱⁱ • Essay or Term Paper^{i, ii, iii, iv} • Laboratory Reportsⁱⁱ • Laboratory performanceⁱⁱ • Media Critique Papers^{i,iii} • Poster presentations^{i,ii,iii,iv} • Assignments^{i,ii,iii} • Projects^{i,ii,iii,iv} • Presentations^{i,ii,iii,iv, v} • Peer evaluation^{i,ii,iii} • Independent Research Paper^v

Table 2.2 –Bachelor of Science in Psychology (with Major) Degree, Mapping Program Learning Outcomes to Modes of Delivery and Methods of Assessment Program:

* Superscripts indicate the program UDLE associated with each mode of delivery

** Superscripts indicate the mode of delivery associated with each assessment method

<p>Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i></p>	<p>Program UDLEs/Learning Outcomes <i>At the end of this program, the successful student will:</i></p>	<p>Modes of Delivery*</p>	<p>Assessment of Method** <i>Students can demonstrate their knowledge/are assessed through the following methods:</i></p>
	<p>phenomena at a biological and behavioural level</p> <p>1g. Psychological information literacy, including the ability to develop a comprehensive strategy for locating and using relevant scholarship (e.g., databases, credible journals) to address psychological questions, and a developed understanding of the characteristics and relative value of different information sources (e.g., primary vs. secondary, peer reviewed vs. nonreviewed, empirical vs. nonempirical)</p> <p>1h. Developed critical thinking and analytical skills</p> <p>1i. The ability to compare and contrast the nature of psychology with other disciplines (e.g., biology, economics, political science), including identifying the potential contribution of psychology to interdisciplinary collaboration</p>		

Table 2.2 –Bachelor of Science in Psychology (with Major) Degree, Mapping Program Learning Outcomes to Modes of Delivery and Methods of Assessment Program:

* Superscripts indicate the program UDLE associated with each mode of delivery

** Superscripts indicate the mode of delivery associated with each assessment method

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Program UDLEs/Learning Outcomes <i>At the end of this program, the successful student will:</i>	Modes of Delivery*	Assessment of Method** <i>Students can demonstrate their knowledge/are assessed through the following methods:</i>
	1j. The ability to understand the evolutionary origins of the brain and behaviour		
2. Knowledge of Methodologies Apply methods of inquiry to: a) evaluate different approaches b) use these methods to devise and sustain arguments or solve problems c) comment on current research or advanced scholarship	2a. The ability to evaluate the effectiveness of selected problem-solving strategies 2b. The ability to read and summarize complex ideas accurately from psychological sources and research 2c. The ability to interpret complex statistical findings and graphs, and to explain these findings in common language.	i. Lectures ^a ii. Laboratories ^{a,b,c} iii. Seminars ^{a,b,c} iv. Tutorials ^{b,c} v. Individual Meetings with Faculty ^{b,c}	<ul style="list-style-type: none"> • Test or Quiz ^{i, ii, iii, iv} • Midterm or Exam ^{i, ii, iii, iv} • Seminar Participation ⁱⁱⁱ • Seminar Presentation ⁱⁱⁱ • Essay or Term Paper ^{i, ii, iii, iv} • Laboratory Reports ⁱⁱ • Laboratory performance ⁱⁱ • Media Critique Papers ^{i,iii} • Poster presentations ^{i,ii,iii,iv} • Assignments ^{i,ii,iii} • Projects ^{i,ii,iii,iv} • Presentations ^{i,ii,iii,iv} • Peer evaluation ^{i,ii,iii} • Independent Research Paper ^v
3. Application of Knowledge Review, present and interpret information in order to: a) develop lines of argument b) make sound judgements c) apply underlying concepts, principles d) use the knowledge in the creative process	3a. The ability to apply psychological concepts, theories, and research findings as these relate to everyday life 3b. The ability to engage in innovative and integrative thinking and problem solving	i. Lectures ^{a,b,c,d,e} ii. Laboratories ^{a,b,c,d,e} iii. Seminars ^{a,b,c,d,e} iv. Tutorials ^{a,b,c,d,e} v. Individual Meetings with Faculty ^{a,b,c,d,e}	<ul style="list-style-type: none"> • Test or Quiz ^{i, ii, iii, iv} • Midterm or Exam ^{i, ii, iii, iv} • Seminar Participation ⁱⁱⁱ • Seminar Presentation ⁱⁱⁱ • Essay or Term Paper ^{i, ii, iii, iv} • Laboratory Reports ⁱⁱ • Laboratory performance ⁱⁱ • Media Critique Papers ^{i,iii} • Poster presentations ^{i,ii,iii,iv} • Assignments ^{i,ii,iii}

Table 2.2 –Bachelor of Science in Psychology (with Major) Degree, Mapping Program Learning Outcomes to Modes of Delivery and Methods of Assessment Program:

* Superscripts indicate the program UDLE associated with each mode of delivery

** Superscripts indicate the mode of delivery associated with each assessment method

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Program UDLEs/Learning Outcomes <i>At the end of this program, the successful student will:</i>	Modes of Delivery*	Assessment of Method** <i>Students can demonstrate their knowledge/are assessed through the following methods:</i>
Use techniques to: a) critically evaluate b) propose solutions c) frame appropriate questions d) solve a problem or create new work e) make critical use of scholarly sources	3c. The ability to critically evaluate points of view, decisions or information sources 3d. The ability to apply problem-solving skills 3e. The ability to synthesize ideas, information or experiences into new understandings or methods		<ul style="list-style-type: none"> • Projects ^{i,ii,iii,iv} • Presentations ^{i,ii,iii,iv} • Peer evaluation ^{i,ii,iii} Independent Research Paper ^v
4. Communication skills Communicate accurately and reliably, orally and in writing to a range of audiences.	4a. The ability to write effectively for different purposes 4b. The ability to exhibit effective presentation skills for different purposes	i. Lectures ^b ii. Laboratories ^{a,b} iii. Seminars ^{a,b} iv. Tutorials ^{a,b} v. Individual Meetings with Faculty ^b	<ul style="list-style-type: none"> • Test or Quiz ^{i, ii, iii, iv} • Midterm or Exam ^{i, ii, iii, iv} • Seminar Participation ⁱⁱⁱ • Seminar Presentation ⁱⁱⁱ • Essay or Term Paper ^{i, ii, iii, iv} • Laboratory Reports ⁱⁱ • Laboratory performance ⁱⁱ • Media Critique Papers ^{i,iii} • Poster presentations ^{i,ii,iii,iv} • Assignments ^{i,ii,iii} • Projects ^{i,ii,iii,iv} • Presentations ^{i,ii,iii,iv} • Peer evaluation ^{i,ii,iii} Independent Research Paper ^v
5. Awareness of Limits of Knowledge	5a. Recognition of the limits of their knowledge and ability, and how this	i. Lectures ^{a, b,c,d} ii. Laboratories ^{a, b,c,d}	<ul style="list-style-type: none"> • Test or Quiz ^{i, ii, iii, iv} • Midterm or Exam ^{i, ii, iii, iv}

Table 2.2 –Bachelor of Science in Psychology (with Major) Degree, Mapping Program Learning Outcomes to Modes of Delivery and Methods of Assessment Program:

* Superscripts indicate the program UDLE associated with each mode of delivery

** Superscripts indicate the mode of delivery associated with each assessment method

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Program UDLEs/Learning Outcomes <i>At the end of this program, the successful student will:</i>	Modes of Delivery*	Assessment of Method** <i>Students can demonstrate their knowledge/are assessed through the following methods:</i>
<p>Understand limits to own knowledge and how this might influence their analyses and interpretations.</p>	<p>might influence analyses and interpretations</p> <p>5b. The ability to accurately self-assess performance quality by melding external standards and expectations with their own performance criteria</p> <p>5c. The ability to pursue and respond appropriately to feedback from educators, mentors, supervisors, and experts to improve performance</p> <p>5d. The ability to attend to and monitor the quality of their own thinking (i.e., make adaptations using metacognitive strategies).</p>	<p>iii. Seminars ^{a, b,c,d}</p> <p>iv. Tutorials ^{a, b,c,d}</p> <p>v. Individual Meetings with Faculty ^{a, b,c,d}</p>	<ul style="list-style-type: none"> • Seminar Participation ⁱⁱⁱ • Seminar Presentation ⁱⁱⁱ • Essay or Term Paper ^{i, ii, iii, iv} • Laboratory Reports ⁱⁱ • Laboratory performance ⁱⁱ • Media Critique Papers ^{i,iii} • Poster presentations ^{i,ii,iii,iv} • Assignments ^{i,ii,iii} • Projects ^{i,ii,iii,iv} • Presentations ^{i,ii,iii,iv} • Peer evaluation ^{i,ii,iii} • Independent Research Paper ^v
<p>6. Autonomy and Professional Capacity Qualities and transferrable skills for further use:</p> <p>a) exercise of initiative, personal responsibility and accountability</p> <p>b) working effectively with others</p> <p>c) decision-making in complex contexts</p> <p>d) ability to manage learning within and outside discipline</p>	<p>6a. Enhanced teamwork capacity</p> <p>6b. The ability to generate, apply, and evaluate potential solutions to problems that develop when working with teams</p>	<p>i. Lectures ^{a,b,c,d,e,f,g,h,i, j}</p> <p>ii. Laboratories ^{a,b,c,d,e,f,g,h,i, j}</p> <p>iii. Seminars ^{a,b,c,d,e,f,g,h,i, j}</p> <p>iv. Tutorials ^{a,b,c,d,e,f,g,h,i, j}</p> <p>v. Individual Meetings with Faculty ^{c,d, e,f,g,h,i, j}</p>	<ul style="list-style-type: none"> • Test or Quiz ^{i, ii, iii, iv} • Midterm or Exam ^{i, ii, iii, iv} • Seminar Participation ⁱⁱⁱ • Seminar Presentation ⁱⁱⁱ • Essay or Term Paper ^{i, ii, iii, iv} • Laboratory Reports ⁱⁱ • Laboratory performance ⁱⁱ • Media Critique Papers ^{i,iii} • Poster presentations ^{i,ii,iii,iv}

Table 2.2 –Bachelor of Science in Psychology (with Major) Degree, Mapping Program Learning Outcomes to Modes of Delivery and Methods of Assessment Program:

* Superscripts indicate the program UDLE associated with each mode of delivery

** Superscripts indicate the mode of delivery associated with each assessment method

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Program UDLEs/Learning Outcomes <i>At the end of this program, the successful student will:</i>	Modes of Delivery*	Assessment of Method** <i>Students can demonstrate their knowledge/are assessed through the following methods:</i>
e) behaviour consistent with academic integrity and social responsibility	6c. The ability to interact effectively with others 6d. The ability to build and enhance interpersonal relationships 6e. The ability to apply psychological content and skills to career goals 6f. The ability to develop meaningful professional direction for life after graduation 6g. The ability to evaluate the characteristics of potential work settings or graduate school programs to optimize career direction and satisfaction 6h. The ability to develop strategies to enhance resilience and maintain skills in response to rapid social change and related changes in the job market.		<ul style="list-style-type: none"> • Assignments ^{i,ii,iii} • Projects ^{i,ii,iii,iv} • Presentations ^{i,ii,iii,iv} • Peer evaluation ^{i,ii,iii} Independent Research Paper ^v

Table 2.2 –Bachelor of Science in Psychology (with Major) Degree, Mapping Program Learning Outcomes to Modes of Delivery and Methods of Assessment Program:

* Superscripts indicate the program UDLE associated with each mode of delivery

** Superscripts indicate the mode of delivery associated with each assessment method

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Program UDLEs/Learning Outcomes <i>At the end of this program, the successful student will:</i>	Modes of Delivery*	Assessment of Method** <i>Students can demonstrate their knowledge/are assessed through the following methods:</i>
	6i. The ability to apply ethical standards to evaluate psychological science and practice 6j. The ability to adopt values that build community at local, national, and global levels		

Table 2.2 – Honours Bachelor of Science in Psychology Degree, Mapping Program Learning Outcomes to Modes of Delivery and Methods of Assessment Program:

* Superscripts indicate the program UDLE associated with each mode of delivery

** Superscripts indicate the mode of delivery associated with each assessment method

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Program UDLEs/Learning Outcomes <i>At the end of this program, the successful student will:</i>	Modes of Delivery*	Assessment of Method** <i>Students can demonstrate their knowledge/are assessed through the following methods:</i>
1. Depth and Breadth of Knowledge g) developed knowledge and critical understanding of key concepts	1a. The ability to describe concepts, principles, and overarching themes in	i. Lectures ^{a,b,c,d,e,f,g,h,i,j} ii. Laboratories ^{a,b,c,d,e,f,g,h,i,j} iii. Seminars ^{a,b,c,d,e,f,g,h,i,j}	<ul style="list-style-type: none"> • Test or Quiz ^{i, ii, iii, iv} • Midterm or Exam ^{i, ii, iii, iv}

Program Proposal Brief for B.Sc. in Psychology (Vol I)

Table 2.2 – Honours Bachelor of Science in Psychology Degree, Mapping Program Learning Outcomes to Modes of Delivery and Methods of Assessment

Program:

* Superscripts indicate the program UDLE associated with each mode of delivery

** Superscripts indicate the mode of delivery associated with each assessment method

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Program UDLEs/Learning Outcomes <i>At the end of this program, the successful student will:</i>	Modes of Delivery*	Assessment of Method** <i>Students can demonstrate their knowledge/are assessed through the following methods:</i>
<p>h) developed understanding of many major fields</p> <p>i) developed ability to gather and interpret information</p> <p>j) detailed knowledge and experience in an area of the discipline</p> <p>k) developed critical thinking and analytical skills</p> <p>l) apply learning from outside discipline</p>	<p>psychology, especially the biological bases of behaviour</p> <p>1b. The ability to develop a working knowledge of psychology’s content domains, especially those concerning the biological bases of psychological functioning</p> <p>1c. The ability to explain complex behavior by integrating concepts developed from different content domains</p> <p>1d. The ability to interpret, design, and conduct basic psychological research</p> <p>1e. The ability to apply knowledge of research skills, including physiological methodologies, to be an informed consumer of research or critic regarding unsupported claims about behaviour and its biological bases</p>	<p>iv. Tutorials^{a,b,c,d,e,f,g,h,i,j}</p> <p>v. Independent Research Project & Thesis^{d, f, h}</p>	<ul style="list-style-type: none"> • Seminar Participationⁱⁱⁱ • Seminar Presentationⁱⁱⁱ • Essay or Term Paper^{i, ii, iii, iv} • Laboratory Reportsⁱⁱ • Laboratory performanceⁱⁱ • Media Critique Papers^{i,iii} • Poster presentations^{i,ii,iii,iv} • Assignments^{i,ii,iii} • Projects^{i,ii,iii,iv} • Presentations^{i,ii,iii,iv} • Peer evaluation^{i,ii,iii} • Independent Research Paper^v • Empirical or Library Thesis Paper^{i,v}

Table 2.2 – Honours Bachelor of Science in Psychology Degree, Mapping Program Learning Outcomes to Modes of Delivery and Methods of Assessment

Program:

* Superscripts indicate the program UDLE associated with each mode of delivery

** Superscripts indicate the mode of delivery associated with each assessment method

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Program UDLEs/Learning Outcomes <i>At the end of this program, the successful student will:</i>	Modes of Delivery*	Assessment of Method** <i>Students can demonstrate their knowledge/are assessed through the following methods:</i>
	<p>1f. The ability to use scientific reasoning to interpret psychological phenomena at a biological and behavioural level</p> <p>1g. Psychological information literacy, including the ability to develop a comprehensive strategy for locating and using relevant scholarship (e.g., databases, credible journals) to address psychological questions, and a developed understanding of the characteristics and relative value of different information sources (e.g., primary vs. secondary, peer reviewed vs. nonreviewed, empirical vs. nonempirical)</p> <p>1h. Developed critical thinking and analytical skills</p> <p>1i. The ability to compare and contrast the nature of psychology with other disciplines (e.g., biology, chemistry, economics, neuroscience, political science), including identifying the</p>		

Table 2.2 – Honours Bachelor of Science in Psychology Degree, Mapping Program Learning Outcomes to Modes of Delivery and Methods of Assessment

Program:

* Superscripts indicate the program UDLE associated with each mode of delivery

** Superscripts indicate the mode of delivery associated with each assessment method

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Program UDLEs/Learning Outcomes <i>At the end of this program, the successful student will:</i>	Modes of Delivery*	Assessment of Method** <i>Students can demonstrate their knowledge/are assessed through the following methods:</i>
	<p>potential contribution of psychology to interdisciplinary collaboration</p> <p>1j. The ability to understand the evolutionary origins of the brain and behaviour</p>		
<p>2. Knowledge of Methodologies Apply methods of inquiry to:</p> <p>d) evaluate different approaches</p> <p>e) use these methods to devise and sustain arguments or solve problems</p> <p>f) comment on current research or advanced scholarship</p>	<p>2a. The ability to evaluate the effectiveness of selected problem-solving strategies</p> <p>2b. The ability to collect, analyze, interpret, and report data using appropriate statistical strategies to address different types of research questions and hypotheses</p> <p>2c. The ability to read and summarize complex ideas accurately from psychological sources and research</p> <p>2d. The ability to interpret complex statistical findings and graphs, and to explain these findings in common language.</p>	<p>i. Lectures^{a, c, d}</p> <p>ii. Laboratories^{a, c, d}</p> <p>iii. Seminars^{a, c, d}</p> <p>iv. Tutorials^{a, c, d}</p> <p>v. Independent Research Project & Thesis^b</p>	<ul style="list-style-type: none"> • Test or Quiz^{i, ii, iii, iv} • Midterm or Exam^{i, ii, iii, iv} • Seminar Participationⁱⁱⁱ • Seminar Presentationⁱⁱⁱ • Essay or Term Paper^{i, ii, iii, iv} • Laboratory Reportsⁱⁱ • Laboratory performanceⁱⁱ • Media Critique Papers^{i, iii} • Poster presentations^{i, ii, iii, iv} • Assignments^{i, ii, iii} • Projects^{i, ii, iii, iv} • Presentations^{i, ii, iii, iv} • Peer evaluation^{i, ii, iii} • Independent Research Paper^v • Empirical or Library Thesis Paper^{i, v}

Table 2.2 – Honours Bachelor of Science in Psychology Degree, Mapping Program Learning Outcomes to Modes of Delivery and Methods of Assessment

Program:

* Superscripts indicate the program UDLE associated with each mode of delivery

** Superscripts indicate the mode of delivery associated with each assessment method

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Program UDLEs/Learning Outcomes <i>At the end of this program, the successful student will:</i>	Modes of Delivery*	Assessment of Method** <i>Students can demonstrate their knowledge/are assessed through the following methods:</i>
<p>3. Application of Knowledge Review, present and interpret information in order to:</p> <ul style="list-style-type: none"> e) develop lines of argument f) make sound judgements g) apply underlying concepts, principles h) use the knowledge in the creative process <p>Use techniques to:</p> <ul style="list-style-type: none"> f) critically evaluate g) propose solutions h) frame appropriate questions i) solve a problem or create new work j) make critical use of scholarly sources 	<p>3a. The ability to apply psychological concepts, theories, and research findings as these relate to everyday life, especially those concerning the biological bases of psychological functioning</p> <p>3b. The ability to articulate how psychological and neuroscientific principles can be used to explain social issues, address pressing societal needs, and inform public policy</p> <p>3c. The ability to evaluate how the mind, brain, and body interact to influence psychological and physical health</p> <p>3d. The ability to propose and justify appropriate psychology- and neuroscience-based interventions in applied settings (e.g., clinical, school, community, or industrial settings)</p> <p>3e. The ability to explain how psychological constructs and their biological underpinnings can be used to</p>	<ul style="list-style-type: none"> i. Lectures^{a,b,c,d,e,f,g,h,i} ii. Laboratories^{a,b,c,d,e,f,g,h,i} iii. Seminars^{a,b,c,d,e,f,g,h,i} iv. Tutorials^{a,b,c,d,e,f,g,h,i} v. Independent Research Project & Thesis^{a, b, f,g,h,i} 	<ul style="list-style-type: none"> • Test or Quiz^{i, ii, iii, iv} • Midterm or Exam^{i, ii, iii, iv} • Seminar Participationⁱⁱⁱ • Seminar Presentationⁱⁱⁱ • Essay or Term Paper^{i, ii, iii, iv} • Laboratory Reportsⁱⁱ • Laboratory performanceⁱⁱ • Media Critique Papers^{i,iii} • Poster presentations^{i,ii,iii,iv} • Assignments^{i,ii,iii} • Projects^{i,ii,iii,iv} • Presentations^{i,ii,iii,iv} • Peer evaluation^{i,ii,iii} • Independent Research Paper^v • Empirical or Library Thesis Paper^{i,v}

Table 2.2 – Honours Bachelor of Science in Psychology Degree, Mapping Program Learning Outcomes to Modes of Delivery and Methods of Assessment

Program:

* Superscripts indicate the program UDLE associated with each mode of delivery

** Superscripts indicate the mode of delivery associated with each assessment method

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Program UDLEs/Learning Outcomes <i>At the end of this program, the successful student will:</i>	Modes of Delivery*	Assessment of Method** <i>Students can demonstrate their knowledge/are assessed through the following methods:</i>
	understand and resolve interpersonal and intercultural conflicts 3f. The ability to engage in innovative and integrative thinking and problem solving 3g. The ability to critically evaluate points of view, decisions or information sources 3h. The ability to apply problem-solving skills 3i. The ability to synthesize ideas, information or experiences into new understandings or methods		
4. Communication skills Communicate accurately and reliably, orally and in writing to a range of audiences.	4a. The ability to write effectively for different purposes 4b. The ability to exhibit effective presentation skills for different purposes	i. Lectures ^b ii. Laboratories ^{a,b} iii. Seminars ^{a,b} iv. Tutorials ^b v. Independent Research Project & Thesis ^{a,b}	<ul style="list-style-type: none"> • Test or Quiz^{i, ii, iii, iv} • Midterm or Exam^{i, ii, iii, iv} • Seminar Participationⁱⁱⁱ • Seminar Presentationⁱⁱⁱ • Essay or Term Paper^{i, ii, iii, iv} • Laboratory Reportsⁱⁱ • Laboratory performanceⁱⁱ • Media Critique Papers^{i,iii}

Table 2.2 – Honours Bachelor of Science in Psychology Degree, Mapping Program Learning Outcomes to Modes of Delivery and Methods of Assessment

Program:

* Superscripts indicate the program UDLE associated with each mode of delivery

** Superscripts indicate the mode of delivery associated with each assessment method

Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Program UDLEs/Learning Outcomes <i>At the end of this program, the successful student will:</i>	Modes of Delivery*	Assessment of Method** <i>Students can demonstrate their knowledge/are assessed through the following methods:</i>
			<ul style="list-style-type: none"> • Poster presentations ^{i,ii,iii,iv} • Assignments ^{i,ii,iii} • Projects ^{i,ii,iii,iv} • Presentations ^{i,ii,iii,iv} • Peer evaluation ^{i,ii,iii} • Independent Research Paper ^v • Empirical or Library Thesis Paper ^{i,v}
<p>5. Awareness of Limits of Knowledge Understand limits to own knowledge and how this might influence their analyses and interpretations.</p>	<p>5a. Recognition of the limits of their knowledge and ability, and how this might influence analyses and interpretations</p> <p>5b. The ability to accurately self-assess performance quality by melding external standards and expectations with their own performance criteria</p> <p>5c. The ability to pursue and respond appropriately to feedback from educators, mentors, supervisors, and experts to improve performance</p> <p>5d. The ability to attend to and monitor the quality of their own thinking (i.e.,</p>	<p>i. Lectures ^{a,b,c,d}</p> <p>ii. Laboratories ^{a,b,c,d}</p> <p>iii. Seminars ^{a,b,c,d}</p> <p>iv. Tutorials ^{a,b,c,d}</p> <p>v. Independent Research Project & Thesis ^{a,b,c,d}</p>	<ul style="list-style-type: none"> • Test or Quiz ^{i, ii, iii, iv} • Midterm or Exam ^{i, ii, iii, iv} • Seminar Participation ⁱⁱⁱ • Seminar Presentation ⁱⁱⁱ • Essay or Term Paper ^{i, ii, iii, iv} • Laboratory Reports ⁱⁱ • Laboratory performance ⁱⁱ • Media Critique Papers ^{i,iii} • Poster presentations ^{i,ii,iii,iv} • Assignments ^{i,ii,iii} • Projects ^{i,ii,iii,iv} • Presentations ^{i,ii,iii,iv} • Peer evaluation ^{i,ii,iii} • Independent Research Paper ^v • Empirical or Library Thesis Paper ^{i,v}

Table 2.2 – Honours Bachelor of Science in Psychology Degree, Mapping Program Learning Outcomes to Modes of Delivery and Methods of Assessment

Program:

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Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Program UDLEs/Learning Outcomes <i>At the end of this program, the successful student will:</i>	Modes of Delivery*	Assessment of Method** <i>Students can demonstrate their knowledge/are assessed through the following methods:</i>
	make adaptations using metacognitive strategies).		
6. Autonomy and Professional Capacity Qualities and transferrable skills for further use: f) exercise of initiative, personal responsibility and accountability g) working effectively with others h) decision-making in complex contexts i) ability to manage learning within and outside discipline j) behaviour consistent with academic integrity and social responsibility	6a. Enhanced teamwork capacity 6b. The ability to generate, apply, and evaluate potential solutions to problems that develop when working with teams 6c. The ability to interact effectively with others 6d. The ability to build and enhance interpersonal relationships 6e. The ability to apply psychological content and skills to career goals 6f. The ability to develop meaningful professional direction for life after graduation 6g. The ability to evaluate the characteristics of potential work settings	i. Lectures ^{a,b,c,d,e,f,g,i,j} ii. Laboratories ^{a,b,c,d,e,f,g,i,j} iii. Seminars ^{a,b,c,d,e,f,g,i,j} iv. Tutorials ^{a,b,c,d,e,f,g,i,j} v. Independent Research Project & Thesis ^{b,c,d,e,f,g,i,j}	<ul style="list-style-type: none"> • Test or Quiz^{i, ii, iii, iv} • Midterm or Exam^{i, ii, iii, iv} • Seminar Participationⁱⁱⁱ • Seminar Presentationⁱⁱⁱ • Essay or Term Paper^{i, ii, iii, iv} • Laboratory Reportsⁱⁱ • Laboratory performanceⁱⁱ • Media Critique Papers^{i,iii} • Poster presentations^{i,ii,iii,iv} • Assignments^{i,ii,iii} • Projects^{i,ii,iii,iv} • Presentations^{i,ii,iii,iv} • Peer evaluation^{i,ii,iii} • Independent Research Paper^v • Empirical or Library Thesis Paper^{i,v}

Table 2.2 – Honours Bachelor of Science in Psychology Degree, Mapping Program Learning Outcomes to Modes of Delivery and Methods of Assessment

Program:

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Brock University UDLEs <i>A graduate of Brock University will be able to demonstrate:</i>	Program UDLEs/Learning Outcomes <i>At the end of this program, the successful student will:</i>	Modes of Delivery*	Assessment of Method** <i>Students can demonstrate their knowledge/are assessed through the following methods:</i>
	<p>or graduate school programs to optimize career direction and satisfaction</p> <p>6h. The ability to develop strategies to enhance resilience and maintain skills in response to rapid social change and related changes in the job market.</p> <p>6i. The ability to apply ethical standards to evaluate psychological science and practice</p> <p>6j. The ability to adopt values that build community at local, national, and global levels</p>		
<p>7. Other Include any program outcomes that may not be covered by the 6 DLES listed above</p>	<p>7a. An ability to conduct independent, original research in the field of psychology with a focus on the biological underpinnings of psychological phenomena</p>	<p>i. Individual meetings with thesis advisor ^a</p> <p>ii. Experience in Research Laboratory ^a</p> <p>iii. Independent Research Project & Thesis ^a</p> <p>iv. Independent reading ^a</p>	<ul style="list-style-type: none"> • Empirical or Library Thesis Paper ^{i,ii,iii,iv}

3.0: The Program

3.1: Program Structure, Curriculum and Governance (IQAP 3.5.3)

3.1.1: Program Structure

Describe the program structure and include a breakdown of courses on a year-by-year or semester-by-semester basis. Explain how the proposed structure achieves the program learning outcomes and degree level expectations. In describing the structure, the Proponent will address the total number of credits or courses necessary for completion.

Our proposed B.Sc. with Major and Honours B.Sc. in Psychology will follow a similar trajectory to our current B.A. in Psychology but also other B.Sc. programs at Brock University. In contrast to our current B.A. in Psychology, the B.Sc. in Psychology will require first year Biology, Chemistry and Math courses and will require Psychology courses that emphasize the biological bases of behaviour focusing on cognitive psychology, cognitive and behavioural neuroscience, and lifespan courses that include aspects of cognition and neuroscience in their consideration of development. Further, students will be required to take more Biology and Science courses in Years 2, 3, and 4 of their degree program.

Below is an outline of the year-by-year requirements for both the Honours and Major program. Both structures achieve the program learning outcomes and degree level expectations by introducing psychological and biological knowledge in first year and building upon this knowledge in upper years (please see Curriculum Maps), allowing students to gain breadth in psychology courses that emphasize the biological underpinnings of behaviour. Students will initially be introduced to the skills and abilities outlined in our program learning outcomes and degree level expectations in first and second year, then these abilities will be reinforced in 3rd year courses, and then mastered in 4th year courses. Students in the Honours program will also have the opportunity to additionally conduct an independent research project as part of their Honours thesis. Both the B.Sc. with Major and Honours B.Sc. in Psychology require 20 credits. The Honours B.Sc. includes 14-16 required credits (12-11 required PSYC courses) and 6-4 elective credits and the B.Sc. with Major in Psychology requires 12.5 required credits (11-5-10 required PSYC courses) and 7-5-6 elective credits.

Honours B.Sc. in Psychology

Prerequisite Requirements

English (Eng4U)

Two of: Biology (SBI4U), ~~or~~ Chemistry (SCH4U), ~~or~~ Physics (SPH4U) -#

~~Mathematics of Data Management (MDM4U) or Advanced Functions (MHF4U) or Calculus and Vectors (MCV4U) -#~~

Note: Calculus and Vectors is recommended

Not required of students entering the B.A. program.

Year 1

- PSYC 1F90

- BIO 1P91, BIO 1P92#

-CHEM 1P91, CHEM 1P92#

- MATH 1P97#

- 1.0 humanities context credit

- 0-1.5 elective credits (CHEM 1P91, 1P92 recommended to increase possibility of other science courses taken later as electives**)

Not required in B.A. program; ## Not recommended in B.A. program

Year 2

- PSYC 2F23
- PSYC 2P36, 2P37^{##}
- 1.0 credit from among PSYC 2P12, 2P20, PSYC 2P49[#]
- .5 credit from PSYC 2P15, 2P25, PSYC 2P30, PSYC 2P45
- PSYC 2P01
- 0.5 credit from BIOL 2P02, 2P03, 2P05
- 0.5-1.0 elective credit (PHYS 2P02 recommended)

[#] in B.A. program students are required to take .5 credits from this set of 5 courses

Year 3

- PSYC 3P39
- PSYC 3F40 ~~or PSYC 3P30~~^{*#}
- 1.5 credit from 2.0 of PSYC 3P05, 3P06, 3P18, 3P19, 3P34, 3P37, 3P38, 3P45, 3P46, 3P51, 3P59, 3P60, 3P65, 3P67, 3P68, 3P72, 3P75, 3P87
- 0.5 credit from BIOL 2P02, 2P03, 2P05, 2P92, 2P97, 3P03, 3P60, 3P64, PHYS 1P21/1P91, PHYS 2P02, COSC 1P02, BIOL 2P92, BIOL 2P97^{##}
- 1.5-1.5 elective credits

^{*} Students, who elect to take PSYC 3F40, complete 1 elective credit.

[#] Students in Honours B.A. program are required to take 3F40

^{##} Available, but not required, in B.A. program

Year 4**

Thesis option

- PSYC ~~4P93~~~~FXX~~ (Honours Thesis Seminar)
- PSYC ~~4FXX~~~~4F91~~ (Literature ResearchEmpirical Research Thesis)~~and Seminar~~)
- PSYC 4P92
- 1.0 credit from PSYC 3P05, 3P06, 3P18, 3P19, 3P34, 3P37, 3P38, 3P45, 3P46, 3P51, 3P59, 3P60, 3P65, 3P67, 3P68, 3P72, 3P75, 3P87, 4P20, 4P22, 4P26, 4P34, 4P49, 4P55, 4P56, 4P57, 4P58, 4P60, 4P63
- 0.5 credits from: BIOL BIOL 2P02, 2P03, 2P05, 2P92, 2P97, 3P03, 3P03, BIOL 3P60, BIOL 3P64, PHYS 1P21/1P91, PHYS 2P02, COSC 1P02[#]
- 1.5 elective credit

[#] Available, but not required, in B.A. program

Library Research Option[#]

- PSYC 4FXX (Library Research)
- PSYC 4P93 (Honours Research Seminar)
- PSYC 4P92
- 1.0 credit from PSYC 3P05, 3P06, 3P18, 3P19, 3P34, 3P37, 3P38, 3P45, 3P46, 3P51, 3P59, 3P60, 3P65, 3P67, 3P68, 3P72, 3P75, 3P87, 4P20, 4P22, 4P26, 4P34, 4P49, 4P55, 4P56, 4P57, 4P58, 4P60, 4P63
- 0.5 credits from BIOL 2P02, 2P03, 2P05, 2P92, 2P97, 3P03, 3P60, 3P64, PHYS 1P21/1P91, PHYS 2P02, COSC 1P02[#]
- 1.0 credits from PSYC 3P05, 3P06, 3P18, 3P19, 3P34, 3P37, 3P38, 3P45, 3P46, 3P51, 3P59, 3P60, 3P65, 3P67, 3P68, 3P72, 3P75, 3P87, 4P22, 4P34, 4P49, 4P55, PSYC 4P56, 4P60, BIOL 3P03, BIOL 3P60, BIOL 3P64

~~-1.0 credit from any PSYC numbered above 390~~

- 1.5 elective credit

#Not ~~available~~-required in B.A. program

Honours B.Sc. in Psychology with Co-op

Year 1

- PSYC 1F90

- BIO 1P91, BIO 1P92[#]

~~-CHEM 1P91, CHEM 1P92[#]~~

-MATH 1P97[#]

- 1.0 humanities context credit

~~- 0.5 elective credits (Chem 1P91, 1P92 recommended to increase possibility of other science courses taken later as electives**)~~

Not required in B.A. program; ## Not recommended in B.A. program

Year 2

- PSYC 0N90

- PSYC 2F23

-PSYC 2P36, 2P37[#]

- 1.0 credit from among PSYC 2P12, 2P20, PSYC 2P49[#]

- .5 credit from PSYC 2P15, 2P25, PSYC 2P30, PSYC 2P45

- PSYC 2P01

~~-0.5 credit from BIOL 2P02, 2P03, 2P05~~

~~- 0.5 elective credit~~

~~-1.0 elective credit (PHYS 2P02 recommended)~~

in B.A. program students are required to take .5 credits from this set of 5 courses

Spring/Summer Session:

- PSYC 0N01 and 2C01

Year 3

- PSYC 3P39

- PSYC 3F40 ~~or PSYC 3P30[#]~~

~~- 1.5 credit from PSYC 3P05, 3P06, 3P18, 3P19, 3P34, 3P37, 3P38, 3P45, 3P46, 3P51, 3P59, 3P60, 3P65, 3P67, 3P68, 3P72, 3P75, 3P87~~

~~-0.5 credits from BIOL 2P02, 2P03, 2P05, 2P92, 2P97, 3P03, 3P60, 3P64, PHYS 1P21/1P91, PHYS 2P02, COSC 1P02^{##}~~

~~-2.0 of PSYC 3P05, 3P06, 3P18, 3P19, 3P34, 3P37, 3P38, 3P45, 3P46, 3P51, 3P59, 3P60, 3P65, 3P67, 3P68, 3P72, 3P75, 3P87, BIOL 2P92, BIOL 2P97^{###}~~

- 1.5 elective credits

* Students, who elect to take PSYC 3F40, complete 1 elective credit.

~~# Students in Honours B.A. program are required to take 3F40~~

Available, but not required, in B.A. program

Spring/Summer Session:

- PSYC 0N02 and 2C02

Year 4**

Thesis option

- PSYC 4P93 (Honours Thesis Seminar)

- PSYC 4F91 (Empirical Research Thesis)

- PSYC 4P92

- 1.0 credit from PSYC 3P05, 3P06, 3P18, 3P19, 3P34, 3P37, 3P38, 3P45, 3P46, 3P51, 3P59, 3P60, 3P65, 3P67, 3P68, 3P72, 3P75, 3P87, 4P20, 4P22, 4P26, 4P34, 4P49, 4P55, 4P56, 4P57, 4P58, 4P60, 4P63

- 0.5 credits from BIOL 2P02, 2P03, 2P05, 2P92, 2P97, 3P03, 3P60, 3P64, PHYS 1P21/1P91, PHYS 2P02, COSC 1P02#

- 1.5 elective credit – PSYC 4FXX (Honours Thesis)

- PSYC 4FXX (Literature Research and Seminar)

- PSYC 4P92

- 1.0 credit from PSYC 3P05, 3P06, 3P18, 3P19, 3P34, 3P37, 3P38, 3P45, 3P46, 3P51, 3P59, 3P60, 3P65, 3P67, 3P68, 3P72, 3P75, 3P87, 4P22, 4P34, 4P49, 4P55, PSYC 4P56, 4P60, 4P63, BIOL 3P03, BIOL 3P60, BIOL 3P64#

- 1.5 elective credit

Available, but not required, in B.A. program

Library Research Option#

- PSYC 4Fxx 4FXX (Library Research)

- PSYC 4P93 (Honours Thesis Seminar)

- PSYC 4P92

- 1.0 credit from PSYC 3P05, 3P06, 3P18, 3P19, 3P34, 3P37, 3P38, 3P45, 3P46, 3P51, 3P59, 3P60, 3P65, 3P67, 3P68, 3P72, 3P75, 3P87, 4P22, 4P34, 4P49, 4P55, 4P56, 4P60, 4P63

- 0.5 credits from BIOL 2P02, 2P03, 2P05, 2P92, 2P97, 3P03, 3P60, 3P64, PHYS 1P21/1P91, PHYS 2P02, COSC

1P02# 1.0 credits from PSYC 3P05, 3P06, 3P18, 3P19, 3P34, 3P37, 3P38, 3P45, 3P46, 3P51, 3P59, 3P60, 3P65, 3P67, 3P68, 3P72, 3P75, 3P87, 4P22, 4P34, 4P49, 4P55, PSYC 4P56, 4P60, BIOL 3P03, BIOL 3P60, BIOL 3P64

- 1.0 credit from any PSYC numbered above 390

- 1.5 elective credit

Not available in B.A. program

Spring/Summer Session:

- PSYC 0N03 and 2C03

B.Sc. with Major in Psychology Program

Year 1

- PSYC 1F90

- BIO 1P91, BIO 1P92#

-CHEM 1P91, CHEM 1P92#

-MATH 1P97#

- 1.0 humanities credit

- 0.5 elective credits (~~CHEM 1P91, 1P92 recommended to increase possibility of other science courses taken later as electives~~)^{##}

Not required in B.A. program; ~~## Not recommended in B.A. program [TM1]~~

Year 2

- PSYC 2F23

- PSYC 2P36, 2P37#

- 1.0 credit from among PSYC 2P12, 2P20, PSYC 2P49#

- .5 credit from PSYC 2P15, 2P25, PSYC 2P30, PSYC 2P45

- PSYC 2P01

-0.5 credit from BIOL 2P02, 2P03, 2P05

- 0.5 elective credit

~~-1.0 elective credit (PHYS 2P02 recommended)~~

in B.A. program students are required to take .5 credits from this set of 5 courses

Year 3

- PSYC 3P30 or 3F40

~~- 1.5 credit from PSYC 3P05, 3P06, 3P18, 3P19, 3P34, 3P37, 3P38, 3P45, 3P46, 3P51, 3P59, 3P60, 3P65, 3P67, 3P68, 3P72, 3P75, 3P87~~

-0.5 credits from BIOL 2P02, 2P03, 2P05, 2P92, 2P97, 3P03, 3P60, 3P64, PHYS 1P21/1P91, PHYS 2P02, COSC 1P02^{##}

~~1.5 of PSYC 3P05, 3P06, 3P18, 3P19, 3P34, 3P37, 3P38, 3P45, 3P46, 3P51, 3P59, 3P60, 3P65, 3P67, 3P68, 3P72, 3P75, 3P87[#]~~

~~-1 from PSYC credits numbered 300-399 and/or from BIOL 2P92[#], BIO 2P97[#]~~

~~-2.0 elective credits~~

Available, but not required, in B.A. program

Year 4

~~- 1.0 credit from PSYC 4P20, 4P22, 4P26, 4P34, 4P49, 4P55, 4P56, 4P57, 4P58, 4P60, 4P63-~~

~~- 1.0 credit from PSYC 3P05, 3P06, 3P18, 3P19, 3P34, 3P37, 3P38, 3P45, 3P46, 3P51, 3P59, 3P60, 3P65, 3P67, 3P68, 3P72, 3P75, 3P87, 4P22, 4P34, 4P49, 4P55, 4P56, 4P60, 4P63~~

-0.5 credits from BIOL 2P02, 2P03, 2P05, 2P92, 2P97, 3P03, 3P60, 3P64, PHYS 1P21/1P91, PHYS 2P02, COSC 1P02[#]

~~2.0 credits from PSYC 3P05, 3P06, 3P18, 3P19, 3P34, 3P37, 3P38, 3P45, 3P46, 3P51, 3P59, 3P60, 3P65, 3P67, 3P68, 3P72, 3P75, 3P87, 4P22, 4P34, 4P49, 4P55, PSYC 4P56, 4P60, 4P63, BIOL 3P03, BIOL 3P60, BIOL 3P64[#]~~

~~-1.0 credits from any PSYC above 390~~

- PSYC 4P07 (Transition to Work)

- 1.5 2.0 elective credits

Available, but not required, in B.A. program

Of the total number of elective credits, students must choose 8.0 credits (including first- year Context credit) from disciplines outside of Psychology.

** In 20 credit Honours degree programs a maximum of eight credits may be numbered 1(alpha)00 to 1(alpha)99; at least three credits must be numbered 2(alpha)90 or above; at least three credits must be numbered 3(alpha)90 or above; and the remaining credits must be numbered 2(alpha)00 or above.

In the 20 credit B.Sc. with Major degree program a maximum of eight credits may be numbered 1(alpha)00 to 1(alpha)99; at least four credits must be numbered 2(alpha)90 or above; at least two credits must be numbered 3(alpha)90 or above; and the remaining credits must be numbered 2(alpha)00 or above.

In some circumstances, in order to meet university degree and program requirements, more than 15 or 20 credits may be taken.

B.Sc. with Major in Psychology Program with Co-op

Year 1

- PSYC 1F90

-BIO 1P91, BIO 1P92[#]

~~-CHEM 1P91, CHEM 1P92[#]~~

-MATH 1P97[#]

- 1.0 humanities credit

- ~~0.5~~ elective credits (~~Chem 1P91, 1P92 recommended to increase possibility of other science courses taken later as electives~~)^{###}

[#] Not required in B.A. program; ^{###} Not recommended in B.A. program

Year 2

- PSYC 0N90

- PSYC 2F23

- PSYC 2P36, 2P37[#]

-1.0 credit from among PSYC 2P12, 2P20, PSYC 2P49[#]

- .5 credit from PSYC 2P15, 2P25, PSYC 2P30, PSYC 2P45

- PSYC 2P01

~~--0.5 credit from BIOL 2P02, 2P03, 2P05~~

~~- 0.5 elective credit~~

~~-1.0 elective credit (PHYS 2P02 recommended)~~

[#] in B.A. program students are required to take .5 credits from this set of 5 courses

Spring/Summer Session:

- PSYC 0N01 and 2C01

Year 3

- PSYC 3P30 or 3F40

~~-1.5 credit from PSYC 3P05, 3P06, 3P18, 3P19, 3P34, 3P37, 3P38, 3P45, 3P46, 3P51, 3P59, 3P60, 3P65, 3P67, 3P68, 3P72, 3P75, 3P87~~

-0.5 credits from BIOL 2P02, 2P03, 2P05, 2P92, 2P97, 3P03, 3P60, 3P64, PHYS 1P21/1P91, PHYS 2P02, COSC 1P02##

~~-1.5 of PSYC 3P05, 3P06, 3P18, 3P19, 3P34, 3P37, 3P38, 3P45, 3P46, 3P51, 3P59, 3P60, 3P65, 3P67, 3P68, 3P72, 3P75, 3P87##~~

~~-1.0 from PSYC credits numbered 300–399 and/or from BIOL 2P92#, BIO 2P97#~~

- 2.0 elective credits

Available, but not required, in B.A. program

Spring/Summer Session:

- PSYC 0N02 and 2C02

Year 4

- 1.0 credit from PSYC 4P20, 4P22, 4P26, 4P34, 4P49, 4P55, 4P56, 4P57, 4P58, 4P60, 4P63

-1.0 credit from PSYC 3P05, 3P06, 3P18, 3P19, 3P34, 3P37, 3P38, 3P45, 3P46, 3P51, 3P59, 3P60, 3P65, 3P67, 3P68, 3P72, 3P75, 3P87, 4P22, 4P34, 4P49, 4P55, 4P56, 4P60, 4P63

-0.5 credits from BIOL 2P02, 2P03, 2P05, 2P92, 2P97, 3P03, 3P60, 3P64, PHYS 1P21/1P91, PHYS 2P02, COSC 1P02##

- PSYC 4P07 (Transition to Work)

- 2.0 elective credits ~~-2.0 credits from PSYC 3P05, 3P06, 3P18, 3P19, 3P34, 3P37, 3P38, 3P45, 3P46, 3P51, 3P59, 3P60, 3P65, 3P67, 3P68, 3P72, 3P75, 3P87, 4P22, 4P34, 4P49, 4P55, PSYC 4P56, 4P60, 4P63, BIOL 3P03, BIOL 3P60, BIOL 3P64##~~

~~-1.0 credits from any PSYC above 390~~

~~-PSYC 4P07 (Transition to Work)~~

~~-1.5 elective credits~~

Spring/Summer Session:

- PSYC 0N03 and 2C03

Available, but not required, in B.A. program

Of the total number of elective credits, students must choose 8.0 credits (including first- year Context credit) from disciplines outside of Psychology.

** In 20 credit Honours degree programs a maximum of eight credits may be numbered 1(*alpha*)00 to 1(*alpha*)99; at least three credits must be numbered 2(*alpha*)90 or above; at least three credits must be numbered 3(*alpha*)90 or above; and the remaining credits must be numbered 2(*alpha*)00 or above.

In the 20 credit B.Sc. with Major degree program a maximum of eight credits may be numbered 1(*alpha*)00 to 1(*alpha*)99; at least four credits must be numbered 2(*alpha*)90 or above; at least two credits must be numbered 3(*alpha*)90 or above; and the remaining credits must be numbered 2(*alpha*)00 or above.

In some circumstances, in order to meet university degree and program requirements, more than 15 or 20 credits may be taken.

3.1.2: Courses and Curriculum

Define the program length and provide a clear rationale that addresses the ability of students to complete the program requirements within the proposed time period. Clearly indicate required or core and elective courses for the program. Describe the contribution of any capstone experience to the program and the connection to the learning outcomes.

The B.Sc. (with major) and B.Sc. (Honours) in Psychology (with and without Co-op) programs are both four years in length.

The table below summarizes the number of required and elective credits required for graduation. **Please note that the number of Major (PSYC) required credits does not exceed 12 credits for either program. The high number of required credits reflect the additional MATH, CHEM, and BIOL requirements that the B.Sc. requires in first year.**

Degree	Type	Year 1	Year 2	Year 3	Year 4	Total
B.Sc.(hons)	Required	32.5	4	3.5	3.5	143.5
	Elective	12.5	1	1.5	1.5	56.5
B.Sc. (with major)	Required	32.5	4	3	3.5	13.5
	Elective	12.5	1	2	21.5	6.57

Normally, an undergraduate program has a maximum of 12 major credits, with a minimum of 8 electives. Our B.Sc. with Major program will have ~~11.5~~10 major credits and our Honours B.Sc. will require ~~12~~11 major credits in line with this guideline. Students will have a great deal of flexibility with regard to having multiple areas of choice from among courses. Students should be able to complete either degree in the 4-year timeframe.

There are two capstone courses offered depending on whether the student is in the B.Sc. with Major or B.Sc. Honours program. B.Sc. with Major students will take PSYC 4P07 (Psychology Students' Transition to Work) which is a capstone course that prepares students for the transition from student to working professional. This capstone experience complements and extends the knowledge and career exploration they did in PSYC 2P01: Roadmap to Careers in Psychology. B.Sc. Honours students will have the thesis or library research option as well as taking a capstone course, PSYC 4P92: History of Psychology, ~~and PSYC 4P93: Honours Thesis Seminar, a course designed to support them through the process of their thesis research.~~ This course is a capstone experience in that it brings together knowledge from all areas of psychology in order to understand the emergence of different theories, modes of thoughts, and major figures in the field. ~~Honours Research students will also take PSYC 4P93: Honours Thesis Seminar, a course designed to support them through the process of their thesis research.~~

Table 3.1: Summary of course information for Program in B.Sc. (with Major) in Psychology

Course No.	Course Name	Core or Elective	Contact hrs/wk	Delivery Mode
PSYC 1F90	Foundations of Psychology	C	3	LEC/SEM
BIOL 1P91	Introduction to Biology I	C	3 LEC weekly;	LEC/LAB

			3 LAB alternate weeks	
BIOL 1P92	Introduction to Biology II	C	3 LEC weekly; 3 LAB alternate weeks	LEC/LAB
<u>CHEM 1P91</u>	<u>Chemical Principles and Properties I</u>	<u>C</u>	<u>3 LEC weekly;</u> <u>1.5 hour</u> <u>TUTORIAL</u> <u>every other</u> <u>week; 5 3-hour</u> <u>labs per term</u>	<u>LEC/TUTORIAL</u>
<u>CHEM 1P92</u>	<u>Chemical Principles and Properties II</u>	<u>C</u>	<u>3 LEC weekly;</u> <u>1.5 hour</u> <u>TUTORIAL</u> <u>every other</u> <u>week; 5 3-hour</u> <u>labs per term</u>	<u>LEC/TUTORIAL</u>
MATH 1P97	Calculus with Applications	C	4	LEC
PSYC 2P01	Roadmap to Careers in Psychology	C	3	SEM/Online activities
PSYC 2F23	Statistics and Research Design in the Behavioural Sciences	C	4	LEC/TUTORIAL
PSYC 2P36	Brain and Behaviour I	C	6	LEC/LAB
PSYC 2P37	Brain and Behaviour II	C	6	LEC/LAB
PSYC 2P12	Lifespan Development	C	3	LEC
PSYC 2P20	Cognition	C	3	LEC/LAB
PSYC 2P49	Perception	C	3	LEC/SEM
PSYC 2P15	Abnormal Psychology	C	3	LEC/SEM
PSYC 2P25	Personality and Individual Differences	C	3	LEC/SEM
PSYC 2P30	Fundamentals of Social Psychology	C	3	LEC
PHYS 2P02	Introduction to Medical Physics	E	4	LEC/TUTORIAL
PSYC 3F01	Facilitating Communication and Critical Thinking in Groups	E	9	LEC/SEM/Group - based facilitation
PSYC 3P30	Critical Thinking in Psychology	C	3	LEC/SEM
PSYC 3P05	Visual Perception from Eye to Brain	C	3	LEC/LAB
PSYC 3P06	Introduction to Cognitive Neuroscience	C	3	LEC/SEM
PSYC 3P11	Theories of Development and Socialization	E	3	LEC/SEM
PSYC 3P18	Adolescent Development	C	3	LEC/SEM
PSYC 3P19	Psychology of Aging	C	3	LEC/SEM

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PSYC 3P20	Human Memory	C	3	LEC/SEM
PSYC 3P21	Persuasion and Propaganda	E	3	LEC/SEM
PSYC 3P22	Social Cognition	E	3	LEC/SEM
PSYC 3P23	Psychology of Parenting	E	3	LEC/SEM
PSYC 3P24	Classic Theories of Personality	E	3	LEC/SEM
PSYC 3P26	Puberty and Adolescence	C	3	LEC/SEM
PSYC 3P31	Applied Social Psychology	E	3	LEC/SEM
PSYC 3P32	The Development of Deception	E	3	LEC/SEM
PSYC 3P33	Psychology of Intergroup Behaviour	E	3	LEC/SEM
PSYC 3P34	Psychology of Human Sexuality	C	3	LEC/SEM
PSYC 3P36	Conflict, Contradictions and Development	E	3	LEC/SEM
PSYC 3P37	Human Evolutionary Psychology	C	3	LEC/SEM
PSYC 3P38	Motivation and Emotion	C	3	LEC/SEM
PSYC 3P43	Psychology of Film	E	3	LEC/SEM
PSYC 3P45	Comparative Psychology I	C	3	LEC/SEM
PSYC 3P46	Psychology of Food and Eating	C	3	LEC/SEM
PSYC 3P48	Directed Studies I	E	variable	Pro-seminar
PSYC 3P49	Empirical Directed Studies	E	variable	Pro-seminar
PSYC 3P50	Human Learning	E	3	LEC/SEM
PSYC 3P51	Health Psychology	C	3	LEC/SEM
PSYC 3P53	Forensic Psychology	E	3	LEC/SEM
PSYC 3P59	Introduction to Human Neuropsychology	C	4	LEC/SEM
PSYC 3P60	Children's Thinking	C	3	LEC/SEM
PSYC 3P61	Child Language Acquisition: Early Stages	E	3	LEC/SEM
PSYC 3P64	Music Cognition	E	3	LEC
PSYC 3P65	Brain and Language	C	3	LEC/LAB

PSYC 3P67	Bases of Neuropsychopharmacology	C	3	LEC/SEM
PSYC 3P68	Sleep and Wakefulness	C	3	LEC/SEM
PSYC 3P72	Drugs and Behaviour	C	3	LEC/SEM
PSYC 3P74	Children and Youth in the Digital Age	E	3	LEC/SEM
PSYC 3P75	Stress	C	3	LEC/SEM
PSYC 3P77	Social Development	E	3	LEC/SEM
PSYC 3P80	Psychology of Interpersonal Behaviour	E	3	LEC/SEM
PSYC 3P84	Psychological Trauma	E	3	LEC/SEM
PSYC 3P87	Behavioural Neuroscience	C	2 LEC weekly; 3 Lab, alternating weeks	LEC/LAB
PSYC 3P92	Environmental Psychology	E	3	LEC/SEM
PSYC 3Q91	Second Language Acquisition and Learning	E	3	LEC/SEM
PSYC 3Q98	The Psychology of Screens (Television and Beyond)	E	3	LEC/SEM
PSYC 3V85-3V89	Special Topics in Psychology	E	variable	variable
BIOL 2P02	Introduction to Molecular Biology	E	3 LEC weekly; minimum four 3 hour labs	LEC/LAB
BIOL 2P03	Cell Biology	E	3 LEC weekly; minimum four 3 hour labs	LEC/LAB
BIOL 2P05	Evolution	E	3 LEC weekly; tutorial 1 hour per week	LEC/TUTORIAL
BIOL 2P92	Principles of Zoology	C	6	LEC/LAB
BIOL 2P97	Human Physiology	C	3 LEC weekly; 3 LAB alternate weeks	LEC/LAB
PSYC 4F05	Independent Empirical Research	E	variable	Project Course
PSYC 4P07	Psychology Students' Transition to Work	C	3	LEC/Online Activities
PSYC 4P10	Advanced Directed Studies I	E	variable	Project Course
PSYC 4P11	Empirical Advanced Directed Studies	E	Variable	Project Course
PSYC 4P15	Close Relationships	E	3	LEC/SEM
PSYC 4P18	Organizational Psychology	E	3	LEC/SEM

PSYC 4P20	Applied Cognitive Psychology	E	3	SEMINAR
PSYC 4P22	Advanced Seminar in Human Memory	C	3	LEC/SEM
PSYC 4P25	Psychological Measurement and Personality Research	E	3	LEC/SEM
<u>PSYC 4P26</u>	<u>Children's Memory Development</u>	<u>C</u>	<u>3</u>	<u>SEM</u>
PSYC 4P27	Developmental Psychopathology	E	3 (plus experiential component)	LEC/SEM
PSYC 4P28	Person Perception	E	3	SEMINAR
PSYC 4P30	Positive Psychology	E	3	LEC/SEM
PSYC 4P34	Psychobiology of Human Sexuality	C	3	LEC/SEM
PSYC 4P35	Development During Infancy	E	3	SEMINAR
PSYC 4P44	Psychology of Social Justice	E	3	LEC/SEM
PSYC 4P49	Human Emotion	C	3	LEC/SEM
PSYC 4P50	Psychosocial Problems in Adolescence and Emerging Adulthood	E	3	LEC/SEM
PSYC 4P55	Neural Mechanisms, Hormones and Behaviour	C	3	LEC/SEM
PSYC 4P56	Maturation and Development	C	3	LEC/SEM
<u>PSYC 4P57</u>	<u>Developmental Origins of Health and Disease</u>	<u>C</u>	<u>3</u>	<u>SEM</u>
<u>PSYC 4P58</u>	<u>Neuroplasticity and Behaviour in Adulthood and Aging</u>	<u>C</u>	<u>3</u>	<u>SEM</u>
PSYC 4P60	Psychology of Bilingualism	C	3	LEC/SEM
PSYC 4P63	Human Psychophysiology	C	3	LEC/SEM
PSYC 4P69	Professional Topics in Psychology	E	3	LEC/SEM
PSYC 4P71	Psychology of Prejudice and Discrimination	E	3	LEC/SEM
PSYC 4P72	Psychology of Violent Predators	E	3	LEC/SEM
PSYC 4P77	Introduction to the Profession of Clinical Psychology	E	3	LEC
PSYC 4P79	Introduction to Counselling and Psychotherapy	E	3	LEC/SEM

PSYC 4V85-4V89	Special Topics in Psychology	E	Variable	Variable
BIOL 3P03	Paleontology and Paleobiology	C	5	LEC/LAB
BIOL 3P60	Animal Behaviour	C	6	LEC/LAB
BIOL 3P64	Introductory Insect Biology	C	6 (plus fieldwork)	LEC/LAB
<u>PHYS 1P21</u>	<u>Introductory Physics I</u>	<u>E</u>	<u>4 LEC per week</u>	<u>LEC</u>
<u>PHYS 1P91</u>	<u>Introductory Physics I with Laboratory</u>	<u>E</u>	<u>4 LEC per week; 3 hour LAB every other week</u>	<u>LEC/LAB</u>
<u>PHYS 2P02</u>	<u>Introduction to Medical Physics</u>	<u>E</u>	<u>3 LEC weekly; 1 hour tutorial per week</u>	<u>LEC/TUTORIAL</u>
<u>COSC 1P02</u>	<u>Introduction to Computer Science</u>	<u>E</u>	<u>2 LEC per week; 2 LAB per week; 1 tutorial per week</u>	<u>LEC/LAB/TUTORIAL</u>
<i>PSYC 0N90</i>	<i>Co-op Professional Preparation</i>	<i>C</i>	<i>1.5</i>	<i>Lecture, Presentations, Site Visit</i>
<i>PSYC 0N01</i>	<i>Work Placement I</i>	<i>C</i>	<i>4 months full time</i>	<i>Placement</i>
<i>PSYC 2C01</i>	<i>Co-op Reflective Learning and Integration I</i>	<i>C</i>	<i>variable</i>	<i>Project Course</i>
<i>PSYC 0N02</i>	<i>Work Placement II</i>	<i>C</i>	<i>4 months full time</i>	<i>Placement</i>
<i>PSYC 2C02</i>	<i>Co-op Reflective and Integration II</i>	<i>C</i>	<i>variable</i>	<i>Project Course</i>
<i>PSYC 0N03</i>	<i>Work Placement III</i>	<i>C</i>	<i>4 months full time</i>	<i>Placement</i>
<i>PSYC 2C03</i>	<i>Co-op Reflective and Integration III</i>	<i>C</i>	<i>variable</i>	<i>Project Course</i>

Note. Courses in bold and italics are required for the Co-op option.

Table 3.1: Summary of course information for Program in B.Sc. (Honours) in Psychology

Course No.	Course Name	Core or Elective	Contact hrs/wk	Delivery Mode
PSYC 1F90	Foundations of Psychology	C	3	LEC/SEM
BIOL 1P91	Introduction to Biology I	C	3 LEC weekly; 3 LAB alternate weeks	LEC/LAB
BIOL 1P92	Introduction to Biology II	C	3 LEC weekly; 3 LAB alternate weeks	LEC/LAB
<u>CHEM 1P91</u>	<u>Chemical Principles and Properties I</u>	<u>C</u>	<u>3 LEC weekly; 1.5 hour TUTORIAL every other week; 5 3-hour labs per term</u>	<u>LEC/TUTORIAL</u>
<u>CHEM 1P92</u>	<u>Chemical Principles and Properties II</u>	<u>C</u>	<u>3 LEC weekly; 1.5 hour TUTORIAL every other week; 5 3-hour labs per term</u>	<u>LEC/TUTORIAL</u>
MATH 1P97	Calculus with Applications	C	4	LEC
PSYC 2P01	Roadmap to Careers in Psychology	C	3	SEM/Online activities
PSYC 2F23	Statistics and Research Design in the Behavioural Sciences	C	4	LEC/TUTORIAL
PSYC 2P36	Brain and Behaviour I	C	6	LEC/LAB
PSYC 2P37	Brain and Behaviour II	C	6	LEC/LAB
PSYC 2P12	Lifespan Development	C	3	LEC
PSYC 2P20	Cognition	C	3	LEC/LAB
PSYC 2P49	Perception	C	3	LEC/SEM
PSYC 2P15	Abnormal Psychology	C	3	LEC/SEM
PSYC 2P25	Personality and Individual Differences	C	3	LEC/SEM
PSYC 2P30	Fundamentals of Social Psychology	C	3	LEC
PHYS 2P02	Introduction to Medical Physics	E	4	LEC/TUTORIAL
PSYC 3F01	Facilitating Communication and Critical Thinking in Groups	E	9	LEC/SEM/Group - based facilitation
PSYC 3F40	Psychological Research	C	3	LEC
PSYC 3P05	Visual Perception from Eye to Brain	C	3	LEC/LAB
PSYC 3P06	Introduction to Cognitive Neuroscience	C	3	LEC/SEM

PSYC 3P11	Theories of Development and Socialization	E	3	LEC/SEM
PSYC 3P18	Adolescent Development	C	3	LEC/SEM
PSYC 3P19	Psychology of Aging	C	3	LEC/SEM
PSYC 3P20	Human Memory	C	3	LEC/SEM
PSYC 3P21	Persuasion and Propaganda	E	3	LEC/SEM
PSYC 3P22	Social Cognition	E	3	LEC/SEM
PSYC 3P23	Psychology of Parenting	E	3	LEC/SEM
PSYC 3P24	Classic Theories of Personality	E	3	LEC/SEM
PSYC 3P26	Puberty and Adolescence	C	3	LEC/SEM
PSYC 3P31	Applied Social Psychology	E	3	LEC/SEM
PSYC 3P32	The Development of Deception	E	3	LEC/SEM
PSYC 3P33	Psychology of Intergroup Behaviour	E	3	LEC/SEM
PSYC 3P34	Psychology of Human Sexuality	C	3	LEC/SEM
PSYC 3P36	Conflict, Contradictions and Development	E	3	LEC/SEM
PSYC 3P37	Human Evolutionary Psychology	C	3	LEC/SEM
PSYC 3P38	Motivation and Emotion	C	3	LEC/SEM
PSYC 3P39	Computer Data Analysis	C	3	LEC/LAB
PSYC 3P43	Psychology of Film	E	3	LEC/SEM
PSYC 3P45	Comparative Psychology I	C	3	LEC/SEM
PSYC 3P46	Psychology of Food and Eating	C	3	LEC/SEM
PSYC 3P48	Directed Studies I	E	variable	Pro-seminar
PSYC 3P49	Empirical Directed Studies	E	variable	Pro-seminar
PSYC 3P50	Human Learning	E	3	LEC/SEM
PSYC 3P51	Health Psychology	C	3	LEC/SEM
PSYC 3P53	Forensic Psychology	E	3	LEC/SEM
PSYC 3P59	Introduction to Human Neuropsychology	C	4	LEC/SEM
PSYC 3P60	Children's Thinking	C	3	LEC/SEM

PSYC 3P61	Child Language Acquisition: Early Stages	E	3	LEC/SEM
PSYC 3P64	Music Cognition	E	3	LEC
PSYC 3P65	Brain and Language	C	3	LEC/LAB
PSYC 3P67	Bases of Neuropsychopharmacology	C	3	LEC/SEM
PSYC 3P68	Sleep and Wakefulness	C	3	LEC/SEM
PSYC 3P72	Drugs and Behaviour	C	3	LEC/SEM
PSYC 3P74	Children and Youth in the Digital Age	E	3	LEC/SEM
PSYC 3P75	Stress	C	3	LEC/SEM
PSYC 3P77	Social Development	E	3	LEC/SEM
PSYC 3P80	Psychology of Interpersonal Behaviour	E	3	LEC/SEM
PSYC 3P84	Psychological Trauma	E	3	LEC/SEM
PSYC 3P87	Behavioural Neuroscience	C	2 LEC weekly; 3 Lab, alternating weeks	LEC/LAB
PSYC 3P92	Environmental Psychology	E	3	LEC/SEM
PSYC 3Q91	Second Language Acquisition and Learning	E	3	LEC/SEM
PSYC 3Q98	The Psychology of Screens (Television and Beyond)	E	3	LEC/SEM
PSYC 3V85-3V89	Special Topics in Psychology	E	variable	variable
BIOL 2P02	Introduction to Molecular Biology	E	3 LEC weekly; minimum four 3 hour labs	LEC/LAB
BIOL 2P03	Cell Biology	E	3 LEC weekly; minimum four 3 hour labs	LEC/LAB
BIOL 2P05	Evolution	E	3 LEC weekly; tutorial 1 hour per week	LEC/TUTORIAL
BIOL 2P92	Principles of Zoology	C	6	LEC/LAB
BIOL 2P97	Human Physiology	C	3 LEC weekly; 3 LAB alternate weeks	LEC/LAB
PSYC 4Fxx 4F91	Empirical Research Honours ThesisThesis	C	variable	Project Course

PSYC <u>4Fxx4FXX</u>	Literature Research and Seminar	C	variable	Project Course
PSYC <u>4Fxx4FXX</u>	Library Research	C	Variable	Project Course
PSYC 4P10	Advanced Directed Studies I	E	variable	Project Course
PSYC 4P11	Empirical Advanced Directed Studies	E	Variable	Project Course
PSYC 4P15	Close Relationships	E	3	LEC/SEM
PSYC 4P18	Organizational Psychology	E	3	LEC/SEM
PSYC 4P20	Applied Cognitive Psychology	E	3	SEMINAR
PSYC 4P22	Advanced Seminar in Human Memory	C	3	LEC/SEM
PSYC 4P25	Psychological Measurement and Personality Research	E	3	LEC/SEM
<u>PSYC 4P26</u>	<u>Children's Memory Development</u>	<u>C</u>	<u>3</u>	<u>SEM</u>
PSYC 4P27	Developmental Psychopathology	E	3 (plus experiential component)	LEC/SEM
PSYC 4P28	Person Perception	E	3	SEMINAR
PSYC 4P30	Positive Psychology	E	3	LEC/SEM
PSYC 4P34	Psychobiology of Human Sexuality	C	3	LEC/SEM
PSYC 4P35	Development During Infancy	E	3	SEMINAR
PSYC 4P44	Psychology of Social Justice	E	3	LEC/SEM
PSYC 4P49	Human Emotion	C	3	LEC/SEM
PSYC 4P50	Psychosocial Problems in Adolescence and Emerging Adulthood	E	3	LEC/SEM
PSYC 4P55	Neural Mechanisms, Hormones and Behaviour	C	3	LEC/SEM
PSYC 4P56	Maturation and Development	C	3	LEC/SEM
<u>PSYC 4P57</u>	<u>Developmental Origins of Health and Disease</u>	<u>C</u>	<u>3</u>	<u>SEM</u>
<u>PSYC 4P58</u>	<u>Neuroplasticity and Behaviour in Adulthood and Aging</u>	<u>C</u>	<u>3</u>	<u>SEM</u>
PSYC 4P60	Psychology of Bilingualism	C	3	LEC/SEM
PSYC 4P63	Human Psychophysiology	C	3	LEC/SEM
PSYC 4P69	Professional Topics in Psychology	E	3	LEC/SEM

PSYC 4P71	Psychology of Prejudice and Discrimination	E	3	LEC/SEM
PSYC 4P72	Psychology of Violent Predators	E	3	LEC/SEM
PSYC 4P77	Introduction to the Profession of Clinical Psychology	E	3	LEC
PSYC 4P79	Introduction to Counselling and Psychotherapy	E	3	LEC/SEM
PSYC 4P92	History of Psychology	C	3	LEC/SEM
<u>PSYC 4P93</u>	<u>Honours Thesis Seminar</u>	<u>C</u>	<u>3 hours every other week across D1</u>	<u>SEM</u>
PSYC 4V85-4V89	Special Topics in Psychology	E	Variable	Variable
BIOL 3P03	Paleontology and Paleobiology	C	5	LEC/LAB
BIOL 3P60	Animal Behaviour	C	6	LEC/LAB
BIOL 3P64	Introductory Insect Biology	C	6 (plus fieldwork)	LEC/LAB
<u>PHYS 1P21</u>	<u>Introductory Physics I</u>	<u>E</u>	<u>4 LEC per week</u>	<u>LEC</u>
<u>PHYS 1P91</u>	<u>Introductory Physics I with Laboratory</u>	<u>E</u>	<u>4 LEC per week; 3 hour LAB every other week</u>	<u>LEC/LAB</u>
<u>PHYS 2P02</u>	<u>Introduction to Medical Physics</u>	<u>E</u>	<u>3 LEC weekly; 1 hour tutorial per week</u>	<u>LEC/TUTORIAL</u>
<u>COSC 1P02</u>	<u>Introduction to Computer Science</u>	<u>E</u>	<u>2 LEC per week; 2 LAB per week; 1 tutorial per week</u>	<u>LEC/LAB/TUTORIAL</u>
<i>PSYC 0N90</i>	<i>Co-op Professional Preparation</i>	<i>C</i>	<i>1.5</i>	<i>Lecture, Presentations, Site Visit</i>
<i>PSYC 0N01</i>	<i>Work Placement I</i>	<i>C</i>	<i>4 months full time</i>	<i>Placement</i>
<i>PSYC 2C01</i>	<i>Co-op Reflective Learning and Integration I</i>	<i>C</i>	<i>variable</i>	<i>Project Course</i>
<i>PSYC 0N02</i>	<i>Work Placement II</i>	<i>C</i>	<i>4 months full time</i>	<i>Placement</i>
<i>PSYC 2C02</i>	<i>Co-op Reflective and Integration II</i>	<i>C</i>	<i>variable</i>	<i>Project Course</i>
<i>PSYC 0N03</i>	<i>Work Placement III</i>	<i>C</i>	<i>4 months full time</i>	<i>Placement</i>
<i>PSYC 2C03</i>	<i>Co-op Reflective and Integration III</i>	<i>C</i>	<i>variable</i>	<i>Project Course</i>

Note. Courses in bold and italics are required for the Co-op option.

3.1.3: Program Options

Include possible options available for program completion, e.g. full time vs part time, course based, MRP, dissertation, practicum, fast track, research requirements, etc.

Students will be able to pursue a B.Sc. in Psychology as either full-time or part-time students. Given that we allow students to choose many of their courses from a list of possibilities, students will have flexibility and the ability to let their interests inform their choices. The Honours B.Sc. students will have flexibility in choosing between the research thesis and library thesis option, which further ~~increasing~~ increase flexibility and choice.

Students not initially enrolled in the B.Sc., but who have met the ~~first-year~~ first-year course requirements (PSYC 1F90, BIO 1P91, BIO 1P92, CHEM 1P91, CHEM 1P92, MATH 1P97, one humanities course, and ~~one and a half~~ elective credits), will be able to enter the program in second year as long as space is available.

3.1.4: Progression Requirements

Provide a description be the progression requirements for continuation in the program.

B.Sc. (with major) program requires that students maintain a major average of 60%, which is consistent with other programs in the university and our current B.A. (with major) in Psychology. Continuing in the **B.Sc. (Honours)** in second year requires that students maintain a major average of 70%. Students with an 80% major average at the end of third year will have the additional option of completing an honours thesis (see Year 4) consistent with the Psychology Department's standards for completing an Honours thesis in our B.A. program.

3.1.5: Governance

Describe the governance model to be established for oversight and monitoring of the program from an administrative and academic perspective. Document both University and program specific regulations. Examples or copies of related documents are to be included in Appendix C.

The program governance will follow the requirements of Article 16A of the Collective Agreement between Brock University and the Brock University Faculty Association. The B.Sc. Program will be governed by the Psychology Department, and housed within the Faculty of Social Sciences. All program decisions, voting procedures, etc. will follow the current Department of Psychology's current procedures (see Appendix C).

3.2: Program Content

3.2.1: Current State of the Discipline (IQAP 3.5.4)

Describe how the proposed curriculum of the program is positioned relative to the current state of the discipline or area of study.

Over the past 20 years, there have been important advances in the study of the biological basis of behaviour, including discoveries in epigenetics (how the environment interacts with and changes the expression of genes), neuroscience, and how other biological systems interact with the brain (e.g., gut biome and the brain). There have been several advances in methodologies in Psychology as well, including advances in brain imaging, EEG, and physiological techniques. The current program will expose students to a broad range of topics within Psychology and educate them about recent research findings and techniques employed in the field.

3.2.2: Uniqueness of Innovations of the Program (IQAP 3.5.4)

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Identify and describe any unique curriculum, innovations or creative components that contribute to the program and the achievement of its learning outcomes.

All students in the B.Sc. (with Major) will take two career preparation courses as part of their degree. In second year, students will take PSYC 2P01: Roadmap to Careers in Psychology and then in fourth year they will take PSYC 4P07: Psychology Students' Transition to Work. Both courses promote students' career development and give them the skills necessary to further explore career interests and make a successful transition from student to working professional. Further, the B.Sc. is unique from the B.A. with its focus on courses that address the underlying biological basis of human (and animal) behaviour. Our B.Sc. requires first year bBiology, cChemistry, and calculus, ~~neither~~ none of which are required for our B.A. in Psychology program. Our B.Sc. will be distinct from the B.Sc. in NEUR (Neuropsychology stream) due to a greater focus on statistics and research design in 2nd and 3rd year as well as an overall focus on the macroscopic psychological perspectives (such as cognitive mechanisms of the mind) rather than cellular or molecular perspectives (such as cellular mechanism of brain function). Finally, students in the B.Sc. in Psychology will be able to take a greater number of courses in Psychology more broadly, including courses with a social/personality or clinical psychology focus which there is less room for in the NEUR program in the Neuropsychology stream.

3.2.3: Experiential Learning (IQAP 3.5.11)

If the proposed program will contain an experiential learning component provide a description of the component, including:

- a) Requirements, credits, length;
- b) Integration/relation of this experience within the program of study;
- c) Who is responsible for arranging the experiential learning component;
- d) What placement opportunities exist for students; and,
- e) Where experiential education is a program requirement, provide evidence that all students can be accommodated.

The B.Sc. program contains several experiential learning components within existing courses. In second year, all B.Sc. (both Major and Honours degree) students will take PSYC 2P01: Roadmap to Careers in Psychology (half year course taken for a full year in the 2nd year of their degree). As part of this course, all students complete a 40-hour volunteer placement and then reflect on their experience in a reflection paper. Students are responsible for finding their own volunteer placement and all students can be accommodated.

The Honours B.Sc. students who opt to complete an empirical thesis in their 4th year by definition will be engaging in experiential learning as they design, collect data, and write up their final thesis paper. Students will gain important research and lab skills (e.g., knowledge of methodology, knowledge of research ethics, research design, data collecting, data entry, data coding, and analyzing results), not to mention the transferable skills gained in oral and written communication, organization, time management, and teamwork.

Many of the required courses offer experiential components within a particular course. For example, hands-on lab sections offer experiential education (PSYC 2P20, 2P36, 2P37, 3P05, 3P39, 3P65, 3P87, and ~~most~~ all BIOL and CHEM courses) and currently several elective courses require students to complete an experiential component.

Finally, both the B.Sc. with Major and Honours B.Sc. in Psychology will offer a Co-op option so that students can gain experience in their work placements.

4.0: Admissions and Enrollments

4.1: Admission Requirements (IQAP 3.5.2)

Clearly define the admission requirements for the proposed program. Proponents will address the appropriateness of the program's admission requirements for the learning outcomes established for completion of the program. Describe pathways to entry and how applications will be adjudicated.

Admission requirements are:

A minimum average of 70%

High School Requirements:

-English (ENG4U)

-Two of: Biology (SBI4U), ~~Chemistry (SCH4U), ~~Physics (SPH4U)~~~~

-Mathematics of Data Management (MDM4U) or Advanced Functions (MHF4U) or Calculus and Vectors (MCV4U)

Note: Calculus and Vectors is recommended

These admission requirements are in line with those of other Ontario universities with a B.Sc. in Psychology program. Given the B.Sc. in Psychology's emphasis on natural science, particularly in the area of biology, and statistics and lab-based courses, incoming students should have a strong background in science and math. This background in math and science will prepare them well for Biology, Chemistry, and Calculus courses in the first year of the B.Sc. program.

4.2: Alternative or Additional Requirements

Describe any alternative or additional requirements for admission into a graduate, second-entry or undergraduate program, such as minimum grade point average, additional language requirements or portfolios. Describe how the program will assess and recognize prior work or learning experience (if applicable).

Not applicable.

4.3: Enrollment Projections

The Department/Centre, in consultation with Institutional Analysis and Planning and the relevant Dean(s), is to provide the projected annual intake and enrollments for the program, including the desired level of steady state enrollment and how many years will be required to reach steady state levels.

Table 4.1: Projected Intake and Enrollments for Undergraduate Program in B.Sc. in Psychology

PROJECTED INTAKE AND ENROLLMENTS Undergraduate Programs					
YEAR	FULL-TIME		PART-TIME		TOTAL ENROLMENT
	Intake	Enrollments	Intake	Enrollments	
2017/18	A-B	C-D	E-F	G-H	
2020/21					
2021/22					
2022/23	40	40			40
2023/24	40	80			80
2024/25	40	120			120
2025/26	40	160			160

Commentary: Intake will be limited to 40 students so that existing required courses in Psychology, Biology, [Chemistry](#), and Mathematics would be able to simply add 1 seminar section (of 20 students). Note that we anticipate attracting 20 new students to Brock with the B.Sc. in Psychology program, but that we expect an additional 20 students in our program to come from our current pool of B.A. in Psychology students. Thus, we expect an increase of only 1 seminar section in our required courses due to the fact that about half of the B.Sc. will be coming from the B.A. program. With student interest and demand, this intake could be increased depending on departmental resources after consultation with affected departments.

5.0: Resources

In the following sections the Proponents will address the planned utilization of *existing* and *new* resources in support of the proposed program. Specifically the proponents are to address the human (faculty and staff), physical (office, teaching and research space), financial, library, technology (ITS and CPI), Co-op and experiential learning, etc., resources required.

Where new or additional resources are required to deliver the proposed program, the Proponents will document the results of consultation with the appropriate University office/unit, (e.g. the relevant Dean(s), Library, ITS, etc.) in the appropriate section(s) below, including any institutional commitments to provide these new resources.

5.1: Resources for All Programs (IQAP 3.5.9)

5.1.1: Existing Resources

In the context of the proposed program indicate the planned utilization of any existing human, physical, fiscal and all other existing resources in the delivery of the program.

No new courses and no new faculty members are required, though it will be critical to replace faculty members in Psychology—especially in the Behavioural Cognitive Neuroscience stream—as they retire. We have recently hired two new faculty members in the Behavioural Cognitive Neuroscience stream- a CRC in Epigenetics (Duarte-Guterman) and a faculty member in Biological Psychology (Raineki). Both positions will contribute significantly to teaching in the B.Sc. program.

In conjunction with two other recent new programs (B.A. in Forensic Psychology, ~~Anti-Social Behaviour~~, and ~~Crime Criminal Justice~~,; Honours Comprehensive stream in Psychology), **the B.Sc. will require an additional 0.5 FTE of student advising, as it will increase the complexity of the programs offered within the Psychology program.** The current full-time advisor/administrator and our part-time advisor are already over-extended. With this additional 0.5 FTE of advising, already allocated by the Dean, this will bring a total of 2.0 advising/administrator support to both the BA and BSc programs in Psychology.

Currently we have two people-staff providing academic advising for approximately 800 Psychology Majors and minors in our B.A. program (not to mention many inquiries from prospective students). One is a full-time employee who is also responsible for administrative tasks in the department (the administrator) and the other a part-time employee dedicated to advising (the advisor). The advisor has in fact been working full time hours for

several months to meet student demands for advising and to offset workload of the administrator. Together they handle an average of 45.5 student enquiries daily (Administrator: 14, Advisor 31.5).

Advising appointments are 30 minutes in length and often require email follow-up (we replaced ~~15-minute~~ 15-minute appointments with ~~30-minute~~ 30-minute appointments in 2018 when PSYC added a new Honours Comprehensive program option). The increase of nuanced and complex advising not only stems from multiple degree and program pathways but also because our advisors are responsible for advising students who are international, mature, at-risk, in crises, concussed, and managing disability statuses. In keeping with Brock's ranking as #1 in mental health service and care for students, advisors conduct intakes from an inclusive and trauma-integrated framework to ensure each students' well-being as well as academic success.

Academic advising requests tend to peak at the same time as other administrative tasks making it impossible for one person to manage the workload. For example, student contact increases significantly just prior to registration in July - late September which is an extremely busy time for the Administrator (who manages registration including overrides, tracking enrolment, and seminar openings in the summer as well as UPC, scheduling, and the timetable in the fall). Having two employees conducting advising at this time ensures that students will receive the information they need promptly and allows the administrator to concentrate on registration processes on a technical level to ensure students can access the courses they need to progress/graduate.

To some extent the B.Sc. will be populated by students otherwise enrolled in the B.A. program, however, we anticipate attracting new students to Brock University and the nuances of the B.Sc. Major and Honours degree requirements necessitate another 0.5 FTE advisor in order for the program to be viable.

Our Introductory Psychology course (PSYC 1F90) currently has 1368 students of which about 225 are majors. We could accommodate more majors by reducing non-majors in the course or increasing the number of sections (currently one) held in D. Howes Theatre. If all sections of 1F90 were held in D. Howes we could increase the size of that class to 1485. No other course is at room capacity. Increasing lecture sizes will not require a new course instructor, but would require additional seminars/labs (e.g., teaching assistants). Importantly, we would likely need an additional section of PSYC 4P93: Honours Thesis Seminar to ensure that BSc students in the Honours stream get the same support through their thesis as the BA students. Currently, we typically offer 2 sections of PSYC 4P93 and anticipate this needing to be increased to 3 sections.

It is worth noting that Psychology will still require ~~its~~ all of our existing staff positions, including our IT position to run the B.Sc. program effectively.

5.1.2: Faculty Complement

Provide evidence of the participation of a sufficient number of faculty/instructors who are competent to teach and/or supervise in the program. When describing the faculty complement include the contributions of full time faculty, sessional instructors, adjunct appointments, professional/clinicians, etc. to the proposed program. Requests for any new faculty positions and the general area of expertise required for the program should be clearly identified along with the rationale for the positions reported.

Tables 5.1, 5.2 and 5.3 providing data on the existing faculty resources to be utilized in support of the proposed program. **The CVs of all faculty contributing to the program will be included as Appendix E.**

a) Instructor Qualifications and Teaching Assignments within the Unit

Complete Table 5.1. Comment on the instructor qualifications and teaching assignments.

The vast majority of the courses in the proposed program are taught consistently by tenured or tenure-track faculty members. From time to time, due to sabbaticals, leaves, or service-related teaching releases, sessional instructors

may step in to teach a course. Teaching evaluations are consistently high and generally exceed 4 out of 5 for the overall instructor rating, suggesting high quality teaching and high levels of student satisfaction with instruction.

b) Contributions by Instructors to Other Units

Complete Table 5.2. Comment on the contribution of instructors in the program(s) to other units.

Not applicable.

c) Contributions by Instructors from Other Units

Complete Table 5.3. Comment on the contribution of instructors from other units to the program.

Biology courses will play a significant role in the B.Sc. program and thus instructors from Biology will be involved in the program. Specifically, BIOL 1P91 and 1P92 are required and then a number of 2nd and 3rd year Biology courses are offered as core selections (from a list of courses). Please note that on September 15, 2020 we consulted with the Biology Department (Chair Jeff Stuart and Associate Dean of Math and Science, Shyamal Bose) in order to ensure that these courses could support the B.Sc. in Psychology (see Appendix H).

In first year, students will be required to take CHEM 1P91 and CHEM 1P92. On June 16, 2021, we consulted with the Chair of Chemistry, Georgii Nikonov, to ensure that these courses could handle additional students in the BSc in Psychology. Georgii indicated that Chemistry could accommodate an extra 40 students in these courses (see Appendix H for evidence of consultation).

In first year, students will be required to take MATH 1P97 (Calculus with Applications). On September 25, 2020 we consulted with Chair of Mathematics and Statistics, Stephen Anco, in order to ensure this course could support the B.Sc. in Psychology (see Appendix H) and he indicated that MATH 1P97 had sufficient capacity for an additional 420 students.

We anticipate that the B.Sc. program will be offered starting in Fall 2022. The following courses (and instructors) will contribute to our B.Sc. in Psychology program in teaching the following courses:

BIOL 1P91: Introduction to Biology I (Instructors: Joffre Mercier, Ping Liang, Stephanie Martin, Charles Despres)

BIOL 1P92: Introduction to Biology II (Instructors: Fiona Hunter & Stephanie Martin)

BIOL 2P02: Introduction to Molecular Biology (Instructor: Amanda Lepp)

BIOL 2P03: Cell Biology (Instructor: Aleksandar Necakov, Amanda Lepp)

BIOL 2P05: Evolution (Instructor: Michael Bidochka)

BIOL 2P92: Principles of Zoology (Instructors: Jacinta Dano & Miriam Richards)

BIOL 2P97: Human Physiology (Instructor: Amanda Lepp)

BIOL 3P03: Paleontology and Paleobiology (Instructor: Francine McCarthy)

BIOL 3P60: Animal Behaviour (Instructors: Miriam Richards & Glenn Tattersall)

BIOL 3P64: Introductory Insect Biology (Instructor: Fiona Hunter)

MATH 1P97: Calculus with Applications (Instructor: Mark Willoughby)

CHEM 1P91: Chemical Principles and Properties I (Instructor: Martin Lamaire/TBA)

CHEM 1P92: Chemical Principles and Properties II (Instructor: Martin Lamaire/TBA)

PHYS 1P21: Introductory Physics I (Instructor: Barak Shoshany)

PHYS 1P91: Introductory Physics I with Laboratory (Instructor: Barak Shoshany)

PHYS 2P02: Introduction to Medical Physics (Instructor: Thad Harroun)

COSC 1P02: Introduction to Computer Science (Instructors: Dave Bockus, Earl Foxwell)

d) Document the role of adjunct and part-time faculty in the delivery of the program.

Sessional Instructors will be employed when needed for additional course sections, or when faculty members who normally teach those courses are on sabbatical or other leave. Importantly, our department attempts to minimize the number of classes overall taught by sessional instructors, but in particular we make it a priority to have our required second year courses taught by tenured or tenure-track faculty.

e) *Clearly identify and provide the rationale for any new faculty positions required to deliver the program. Include the results of consultation with the relevant Dean(s).*

There will be no new faculty positions required to mount and deliver the programs. However, Psychology faculty retirements will need to be replaced in a timely fashion in order to ensure the feasibility of the B.Sc. in Psychology program in term of teaching needs, particularly those faculty who teach core courses within the B.Sc. program.

Table 5.1: Instructor Qualifications and Teaching Assignments Within the Program (Current + past four years)

Instructor Name	Demographics						Courses		Supervisions							Comments
	Area of Expertise	Academic Year	Terminal Degree	Rank	Tenure or Tenure Stream	Start Date	Undergraduate	Graduate	Core or Participating	Undergraduate Thesis	Major Research Paper	Graduate Thesis (Masters)	Graduate thesis (Doctoral)	Graduate Committee Memberships	Post-Doctoral Fellows	
Ashton, Mike	Individual Differences	19/20	PhD	AC	T	1999	1.5	1	C	1	0	0	1	6	0	
	Personality	18/19		F	T		2	0	C	3	0	1	0	8	0	
		17/18		F	T		2	0	C	2	0	1	0	10	0	
		16/17		F	T		0	0	C	0	0	0	0	8	0	Sabbatical + Parental Leave
		15/16		F	T		3	0	C	3	0	0	0	8	0	
Arnell, Karen	Cognition	19/20	PhD	F	T	2002	1.5	0.5	C	2	0	0	2	10	0	
	Attention	18/19		F	T		1.5	0.5	C	2	0	0	2	10	0	
		17/18		F	T		1	0	C	0	0	2	0	9	0	Half year sabbatical
		16/17		F	T		1.5	0.5	C	2	0	2	0	9	0	
		15/16		F	T		1.5	0.5	C	2	0	0	1	8	0	

Belicki, Kathryn	Clinical Psychology	19/20	PhD DSc	F	T	1986	0	0	C	0	0	0	0	0	0	
	Personality	18/19		F	T		2	0	C	0	0	0	1	0	0	
		17/18		F	T		1	0	C	0	0	1	1	0	0	
		16/17		F	T		2	0	C	2	0	1	1	0	0	
		15/16		F	T		1.5	0.5	C	1	1	1	1	2	0	
Baker, Julie	Neuropsychology	19/20	PhD	IN		2013	2	0	C	0	0	0	0	0	0	Currently teaches
	Cognitive Neuroscience	18/19		IN			2	0	C	0	0	0	0	0	0	and participates on graduate
	Abnormal Psychology	17/18		IN			2	0	C	0	0	0	0	0	0	committees at other schools
		16/17		IN			2	0	C	0	0	0	0	0	0	
		15/16		IN			2	0	C	0	0	0	0	0	0	
Book, Angela	Forensic Psychology	19/20	PhD	F	T	2005	1	0	C	0	0	2	5	multiple	0	Admin Leave July – Dec 2019
		18/19		AC	T		0.5	0	C	1	0	1	4	3	0	Associate Dean
		17/18					0	0	C	5	0	2	5	4	0	Associate Dean
		16/17					0	0	C	5	0	3	3	4	1	Associate Dean
		15/16					0	0	C	5	0	3	3	3	1	Postdoc: Danielle Molnar
Brudzynski, Stephen	Biological Psychology	19/20	PhD DSc	EM		1997	0	0		0	0	0	0	1	0	
	Neuroscience	18/19		EM			0.5	0	P	0	0	0	0	1	0	
		17/18		EM			0.5	0	P	0	0	0	2	2	0	
		16/17		F	T		1.5	0.5	C	0	0	0	2	2	0	
		15/16		F	T		1.5	0.5	C	0	0	0	2	2	0	
Busseri, Michael	Social Psychology	19/20	PhD	AC	T	2009	1.5	0.5	C	2	0	0	1	8	0	GPD (comes with FCE teaching reduction)

	Personality Psychology	18/19		AC	T		0.5	0.5	C	1	0	1	0	1	0	GPD (Graduate Program Director)
	Lifespan Development	17/18		AC	T		0.5	0.5	C	1	0	1	0	1	0	GPD
		16/17		AC	T		0.5	0.5	C	1	0	1	0	1	0	GPD
		15/16		AC	T		0.5	0.5	C	1	0	1	0	1	0	GPD
Campbell, Karen	Cognitive Neuroscience	19/20	PhD	AT	TS	2017		0.5	C	0	0	2	2	7	0	
		18/19		AT	TS			0	C	0	0	3	1	3	0	Maternity Leave Sept-May
		17/18		AT	TS			0.5	C	0.5	3	1	0	3	0	
Cote, Kimberly	Sleep Cognition	19/20	PhD	F	T	2000	0	0	C	2	0	1	2	1	0	Chair
		18/19		F	T		1	0.5	C	0	0	1	2	2	0	Associate Chair
		17/18		F	T		1	0	C	0	0	1	2	1	0	Half Year Sabbatical
		16/17		F	T		1.5	0.5	C	2	0	2	2	3	0	
		15/16		F	T		1	0.5	C	2	0	2	1	4	0	CPI release for blended course development
Dale, Gillian	Cognitive Psychology	19/20	PhD	IN		2013	0	0		0	0	0	0	0	0	
		18/19		IN			0	0		0	0	0	0	0	0	
		17/18		IN			0	0		0	0	0	0	0	0	
		16/17		IN			1.5	0	P	0	0	0	0	0	0	2 non-psychology MA grad committees
		15/16		IN			0	0		0	0	0	0	0	0	
Dane, Andrew	Clinical Psychology	19/20	PhD	AC	T	2000	2.25	0	C	1	0	1	1	10	0	Co-teaching 2P01 on overload
		18/19		AC	T		1	0	C	2	0	1	1	10	0	Sabbatical D2
		17/18		AC	T		2.25	0	C	2	0	0	1	9	0	Co-Taught 2P01 on overload

		16/17		AC	T		2	0	C	3	0	1	1	7	0	
		15/16		AC	T		2	0	C	2	2	1	1	8	0	
Dragan, Martin	Human Sexuality	19/20	DHS	IN		2015	0	0	P	0	1	0	0	0	0	
	Health and Behaviour	18/19		IN			1	0	P	0	2	1	0	0	0	
		17/18		IN			1	0	P	0	0	0	0	0	0	
		16/17		IN			0.5	0	P	0	0	0	0	0	0	
		15/16		IN			0.5	0	P	0	0	0	0	0	0	
Dwivedi, Veena	Cognitive Neuroscience	19/20	PhD	AC	T	2017	1.5	0.5	C	0	0.5	0	0	3	0	
	Sentence Processing	18/19		AC	T		0.5	0	C	3	0	0	0	1	0	Sabbatical D3 2019
	Cognitive Science	17/18		AC	T		0.5	0	C	2	0	0	0	0	0	
Emrich, Stephen	Cognitive Science	19/20	PhD	AC	T	2013	1	0	C	0	0	0	3	8	0	Sabbatical D2
	Visual Working Memory	18/19		AC	T		0.5	0.5	C	2	0	0	3	8	0	Sabbatical D3
	Perception	17/18		AC	TS		1.5	0.5	C	2	0	0	3	7	0	
		16/17		AC	TS		1	1	C	2	0	1	2	5	0	
		15/16		AC	TS		1	1	C	2	0	3	0	5	0	
Evans, Angela	Developmental Psychology	19/20	PhD	AC	T	2011	1	0.5	C	1	0	0	3	6	0	
		18/19		AC	T		1.5	0.5	C	2	0	1	2	3	0	
		17/18		AC	T		0	0	C	0	0	3	0	3	0	Sabbatical
		16/17		AC	T		1.5	0.5	C	2	0	2	0	3	0	
		15/16		AC	T		1	0	C	0	0	2	0	3	0	Parental Leave D2
Fisher, Lianne	Human Learning	19/20	MA	IN		2018	0.5	0	C	0	0	0	0	0	0	
		18/19	MA	IN			0.5	0	C	0	0	0	0	0	0	

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Good, Dawn	Neuropsychology Neuroscience	19/20	PhD	F	T	1985	0	0	C	0	0	0	0	Multiple	0	
		18/19		F	T		1.5	0.5	C	3	0	1	1	Multiple	0	
		17/18		F	T		1.5	0.5	C	3	0	1	1	Multiple	0	
		16/17		F	T		1.5	0.5	C	3	0	1	1	Multiple	0	
		15/16		F	T		1.5	0.5	C	3	0	1	1	multiple	0	
Hafer, Carolyn	Social Psychology	19/20	PhD	F	T	1991	0	0	C	0	0	0	0	0	0	Retirement
	Social Justice	18/19		F	T		1	0	C	0	0	0	1	2	0	Sabbatical
		17/18		F	T		1.5	0.5	C	3	0	0	2	7	0	
		16/17		F	T		1.5	0.5	C	4	0	0	2	8	0	
		15/16		F	T		1.5	0.5	C	1	0	0	2	6	0	
Hall, William	Applied Social Psychology	19/20	PhD	AT	TS	2019	1.5	0	C	1	2	0	0	1	0	0.5 course release
Hodson, Gordon	Prejudice Social Psychology	19/20	PhD	F	T	2004	0.5	1	C	1	0	0	2	3	0	MA committee outside Brock
		18/19		F	T		1	0.5	C	2	0	0	2	4	0	
		17/18		F	T		0.5	1	C	3	0	1	1	4	0	
		16/17		F	T		0	0	C	0	0	2	1	4	0	Sabbatical
		15/16		F	T		1	1	C	1	0	1	1	3	0	
Hosker-Field, Ashley	Forensic Psychology	19/20	PhD	IN		2016	0	0	C	0	0	0	0	0	0	
		18/19		IN			0.5	0	C	0	0	0	0	0	0	
		17/18		IN			1	0	C	0	0	0	0	0	0	
		16/17		IN			0.5	0	C	0	0	0	0	0	0	
Kotler, Jennifer	Kinship, Evolution, Genetics	19/20	PhD	IN		2020	0.5	0	P	0	0	0	0	0	0	

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Lackner, Christine	Developmental Neuroscience	19/20	PhD	AD		2018	0	0		2	0	0	0	0	0	
		18/19		AD			0	0		0	1	0	0	0	0	
		17/18		AD			0	0		2	1	0	0	0	0	
		16/17		AD			0	0		0	0	0	0	0	0	
		15/16		AD			2	0	P	0	0	0	0	0	0	
Mahy, Caitlin	Developmental Psychology	19/20	PhD	AC	T	2014	1.0	0.5	C	0	0	2	1	Multiple	0	Undergraduate Program Director
	Children's future-oriented thinking and memory	18/19		AC	T		0.5	0.5	C	2	0	1	1	Multiple	0	Maternity Leave January-August; Undergraduate Program Director
		17/18		AT	T		1.5	.5	C	2	0	1	1	Multiple	0	
		16/17		AT	T		0	0	C	0	0	1	0	Multiple	0	Maternity Leave June-February
		15/16		AT	T		1.5	.5	C	2	0	2	0	0	0	
Martini, Tanya	Pedagogy	19/20	PhD	F	T	2003	2.75	0	C	0	0	0	0	1	0	
	Human Learning	18/19		F	T		2	0	C	2	0	0	0	2	0	
		17/18		F	T		3.75	0	C	2	0	0	0	2	0	
		16/17		F	T		2.5	0	C	1	0	0	0	1	0	
		15/16		F	T		2.5	0	C	2	0	0	0	1	0	
McCormick, Cheryl	Biological Psychology	19/20	PhD	F	T	2004	0.5	0.5	C	4	0	4	0	8	0	Associate Dean FMS
	Neuroscience	18/19		F	T		0.5	0.5	C	1	0	4	2	8	0	Associate Dean FMS
		17/18		F	T		0.5	0.5	C	3	0	2	4	7	0	Associate Dean FMS
		16/17		F	T		0.5	0	C	5	0	2	4	7	0	Sabbatical Course release
		15/16		F	T		0.5	0.5	C	0	0	1	5	7	0	Director, Neuroscience Course release

Mitterer, John	Pedagogy	19/20	PhD	F	T	80s	0	0	C	0	0	0	0	0	0	
		18/19		F	T		2	0	C	0	0	0	0	0	0	
		17/18		F	T		0	0	C	0	0	0	0	0	0	Leave
		16/15		F	T		2	0	C	0	0	0	0	0	0	
		15/16		F	T		2	0	C	0	0	0	0	0	0	
Mondloch, Catherine	Developmental Psychology	19/20	PhD	F	T	2004	0.5	0	C	0	0	0	0	Multiple	0	Sabbatical
	Perceptual Expertise	18/19		F	T		0	0	C	0	0	0	0	Multiple	0	Chair (1.5 course release)
		17/18		F	T		0	0	C	0	0	0	0	Multiple	0	Chair (1.5 course release)
		16/17		F	T		0	0	C	0	0	0	0	Multiple	0	Chair (2 course release)
		15/16		F	T		0	0	C	0	0	0	0	Multiple	0	Chair (2 course release)
Molnar, Danielle	Child and Youth	19/20	PhD	AC	T	2016	0	0	C	0	0	0	0	Multiple	0	6 month sabbatical
		18/19					1.5	0.5	C	1	0	2	0	Multiple	0	
		17/18					1.5	0.5	C	1	0	11	0	Multiple	0	
		16/17					1	0.5	C	0	0	1	0	Multiple	0	
Muir, Cameron	Behavioural Neuroscience	19/20	PhD	AC	T	2000	2	0	C	0	0	0	0	0	0	
		18/19		AC	T		2	0	C	0	0	0	0	0	0	
		17/18		AC	T		2	0	C	0	0	0	0	0	0	
		16/17		AC	T		2	0	C	0	0	0	0	0	0	
		15/16		AC	T		2	0	C	0	0	0	0	0	0	
Murphy, Tim	Sleep Deprivation	19/20	PhD	F	T	2006	3	0	C	1	0	0	0	3	0	
		18/19		F	T		3	0	C	0	1	0	0	2	0	
		17/18		AC	T		3	0	C	2	0	0	0	2	0	

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		16/17		AC	T		0	0	C	0	0	0	0	1	0	12 month Sabbatical
		15/16		AC	T		2	0	C	2	1	0	0	1	0	
Nishimura, Mayu	Developmental Psychology	19/20	PhD	IN		2015	0.5	0	C	0	0	0	0	0	0	
		18/19		IN			0.5	0	C	0	0	0	0	0	0	
		17/18					0	0		0	0	0	0	0	0	
		16/17		IN			0.5	0	C	0	0	0	0	0	0	
		15/16		IN			0.5	0	C	0	0	0	0	0	0	
Segalowitz, Sid	Cognitive Neuroscience	19/20	PhD	F	T	1974	0.5	0	C	1	0	0	0	7	2	Director, Lifespan Centre
	Psycholinguistics	18/19		F	T		1	0	C	2	0	0	0	5	2	Director, Lifespan Centre
		17/18		F	T		0.5	0	C	2	0	0	1	5	2	Director, Lifespan Centre
		16/17		F	T		1	0.5	C	1	0	0	1	7	0	Director, Lifespan Centre
		15/16		F	T		0.5	0.5	C	3	0	1	2	6	0	Director, Lifespan Centre
Shulman, Elizabeth	Psychosocial Development	19/20	PhD	AT	TS	2014	0	2	C	1	3	2	0	0	0	
	Adolescent Risk Taking	18/19		AT	TS		0.5	1.5	C	0	0	1	0	1	0	
		17/18		AT	TS		0.5	1.5	C	0	0	1	0	0	0	
		16/17		AT	TS		0	0	C	0	0	1	0	0	0	Maternity Leave
		15/16		AT	TS		0	1.5	C	1	0	0	0	0	0	
Skorska, Malvina	Biological Psychology	19/20	PhD	IN		2015	0	0		0	0	0	0	0	0	
	Human Sexuality	18/19		IN			0	0		0	0	0	0	0	0	
	Social Psychology	17/18		IN			0	0		0	0	0	0	0	0	
		16/17		IN			1	0	C	0	0	0	0	0	0	

		15/16		IN			0	0		0	0	0	0	0	0	
Thai, Sabrina	Social Cognition	19/20	PhD	AT	TS	2019	1.5	0	C	1	0	0	0	3	0	0.5 course release
		18/19		AT	TS		1	0	C	0	1	0	0	3	0	
Willoughby, Teena	Developmental Psychology	19/20	PhD	F	T	1995	1	0	C	1	1	1	2	4	0	
	Adolescent Development	18/19		F	T		0	0	C	0	0	2	1.5	2	0	Sabbatical
		17/18		F	T		0.5	1	C	2	0	2	2	4	0	
		16/17		F	T		0	0	C	1	1	1	2	4	0	
		15/16		F	T		1	0.5	C	1	0	1	2	4	0	
Zheng, Reno	Cognitive Neuroscience	19/20	PhD	IN		2012	1	0	C	0	0	0	0	0	0	
	Statistics	18/19		IN			1	0	C	0	0	0	0	0	0	

*F = Professor, AC = Associate, AT = Assistant, EM = Emeritus, AD = Adjunct, IN = Instructor, etc.

Table 5.3: Contributions by Instructors from Other Program (Current + past four years)

Instructor Name	Area of Expertise	Year	Other Unit	Courses		Supervisions							Comments
				Undergraduate	Graduate	Core or Participating	Undergraduate Thesis	Major Research Paper	Graduate Thesis – Masters	Graduate Thesis – Doctoral	Grad Committee Member	Post-Doctoral Fellow	
Bidochka, Michael	Nutrient exchange between plants and fungi	19/20	Biology			<u>P</u>							
Bockus, Dave	User interfaces, artificial intelligence, computer hardware	19/20	Computer Science			<u>P</u>							
Danco, Jacinta	Zoology	19/20	Biology			P							
Depres, Charles	Plant Immunity	19/20	Biology			P							
Foxwell, Earl	Computer science	19/20	Computer Science			<u>P</u>							
Harroun, Thad	Neutron beams	19/20	Physics			<u>P</u>							
Hunter, Fiona	Insect Biology Behavioural Ecology	19/20	Biology			P							
Lemaire, Martin	Synthesis of new molecular materials	19/20	Chemistry			<u>P</u>							
Lamaire, Martin	Synthesis of new molecular materials	19/20	Chemistry			<u>P</u>							
Lepp, Amanda	Human Physiology	19/20	Biology			P							
Liang, Ping	Human Molecular Biology Bioinformatics	19/20	Biology			P							
Martin, Stephanie	Biology	19/20	Biology			P							

Table 5.3: Contributions by Instructors from Other Program (Current + past four years)

Instructor Name	Area of Expertise	Year	Other Unit	Courses		Supervisions							Comments	
				Undergraduate	Graduate	Core or Participating	Undergraduate Thesis	Major Research Paper	Graduate Thesis – Masters	Graduate Thesis – Doctoral	Grad Committee Member	Post-Doctoral Fellow		
McCarthy, Francine	Paleontology Paleobiology	19/20	Biology			P								
Mercier, Joffre	Hormones and Behaviour	19/20	Biology			P								
<u>Necakov, Aleksander</u>	<u>Notch signalling pathway</u>	<u>19/20</u>	<u>Biology</u>			<u>P</u>								
Richards, Miriam	Animal Behaviour Sociobiology	19/20	Biology			P								
<u>Shoshany, Barak</u>	<u>Quantum mechanics</u>	<u>19/20</u>	<u>Physics</u>			<u>P</u>								
Tattersall, Glenn	Animal Behaviour	19/20	Biology			P								
Willoughby, Mark	Mathematics; Calculus	19/20	Mathematics & Statistics			P								

5.1.3: Staff Complement

Indicate the availability of sufficient staff (technical and administrative) to support the proposed program, providing information on permanent staff that will have teaching responsibilities (Table 5.4) and all administrative staff (Table 5.5), directly associated with the program.
Requests for any new staff positions required for the program should be clearly identified and the rationale for the positions reported.

We currently have sufficient staff to administer the B.Sc. Psychology program with the exception of our academic advisor, which we need to have increased from 1.0 FTE to 1.5 FTE ~~a part time to a full time position~~. We do not have any permanent staff with teaching responsibilities, but we have several administrative staff (see Table 5.5. below) who will be involved in the program broadly.

Table 5.5: All other Administrative Support Staff directly associated with the Program (Current + past four years)

Name	Academic Year	Start Date	Position	Comment
Linda Diraddo	2019-2020	2003	Administrative Assistant	Adequate to support the delivery of the B.Sc. program
	2018-2019			
	2017-2018			
	2016-2017			
	2015-2016			
Joanne Boekstyn	2019-2020	1984	Administrative Coordinator	Adequate to support the delivery of the B.Sc. program
	2018-2019			
	2017-2018			
	2016-2017			
	2015-2016			
Kirsti Van Dorsser	2019-2020	2005	Department Administrator/ <u>Academic Advisor</u>	
	2018-2019			
	2017-2018			
	2016-2017			
	2015-2016			
<u>Carole Moss Vaisnavi Sugumar</u>	<u>2019-2020</u> <u>2021-2022</u>	<u>2019</u> <u>202</u> <u>1</u>	Academic Advisor	Will need additional 0.5 FTE of this position to mount B.Sc. program

Tammy Stewart	2019-2020	2007	Coordinator	Adequate to support the delivery of the B.Sc. program
	2018-2019			
	2017-2018			
	2016-2017			
Lindsay Grifa	2019-2020	2017	Graduate Administrative Coordinator	Adequate to support the delivery of the B.Sc. program
	2018-2019			
Linda Pidduck	2017-2018	1989	Graduate Administrative Coordinator	
	2016-2017			
	2015-2016			
Tommy Nguyen	2019-2020	2019	Technical Analyst	Adequate to support the delivery of the B.Sc. program
Elham Salimi	2018-2019	2018	Technical Analyst	
Thomas Nelson	2017-2018	2017	Technical Analyst	

Comment on the adequacy of the staff complement to support delivery of the proposed program.

The current staff are adequate to support the delivery of the B.Sc. (with Major) and B.Sc. (Honours) in Psychology as long as we are able to employ a part-time advisor in addition to our one full-time advisor/administrator and part-time advisor.

Clearly identify and provide the rationale for any new staff positions required to support delivery of the program. Include the results of consultation with the relevant Dean(s).

The B.Sc. in Psychology program will require one part-time academic advisor who would specialize in academic advising for students the B.Sc. program. This academic advisor would need office space (and relevant equipment) in which to conduct their work.

5.1.4: Fiscal Resources

With respect to financial resources, Proponents will provide a business plan for the proposed program for the first five (5) years of operation that includes the utilization of existing resources and clearly identifies required new resources.

Please see attached budget (Table 5.6 below) that includes the addition of one part-time academic advisor (in addition to our 1.0 FTE advising and 0.5 FTE administrator support that we currently have) and then additional teaching support to add an additional lab/seminar in required courses. As shown in the budget, the program is fiscally feasible with an intake of 40 students per year. We have been conservative in our estimates based on the assumption that all 40 new students each year will be domestic. In reality, it is likely that we will have a few international students in the program each year and this program could grow over time assuming sufficient resources. Please note that we anticipate attracting 20 new students to Brock University with the B.Sc. in Psychology and we expect that the other 20 students will come from our existing B.A. in Psychology students, which is why we only anticipate needing one additional seminar in many of our core Psychology courses.

Table 5.6: Proposed Budget for New Program in BSc in Psychology

	Year 1 Forecast	Year 2 Forecast	Year 3 Forecast	Year 4 Forecast	Year 5 Forecast
<i>Insert Academic Year ==></i>	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
ENROLLMENT (Headcount)					
Intake	40	40	40	40	40
Returning Students Year 2	0	40	40	40	40
Returning Students Year 3	0	0	40	40	40
Returning Students Year 4	0	0	0	40	40
Returning Students Year 5	0	0	0	0	0
Total Enrollment	40	80	120	160	160
Domestic vs International Enrollment					
Domestic	40	80	120	160	160
International	0	0	0	0	0
Total Enrollment	40	80	120	160	160
Annualized Tuition Rate					
Domestic Tuition (flat fee)	\$6,089.40	\$6,089.40	\$6,089.40	\$6,089.40	\$6,089.40
International Tuition (flat fee)	\$27,885.60	\$27,885.60	\$27,885.60	\$27,885.60	\$27,885.60
REVENUE					
Domestic					
Tuition	\$6,089.40	\$6,089.40	\$6,089.40	\$6,089.40	\$6,089.40
Ancillary Fees (flat fee)	\$552.45	\$552.45	\$552.45	\$552.45	\$552.45
Total Domestic	\$6,641.85	\$6,641.85	\$6,641.85	\$6,641.85	\$6,641.85

International					
Tuition	\$27,885.60	\$27,885.60	\$27,885.60	\$27,885.60	\$27,885.60
Ancillary Fees (flat fee)	\$552.45	\$552.45	\$552.45	\$552.45	\$552.45
Total International	\$28,438.05	\$28,438.05	\$28,438.05	\$28,438.05	\$28,438.05
Revenue					
Tuition Revenue	\$243,576.00	\$487,152.00	\$730,728.00	\$974,304.00	\$974,304.00
Ancillary Revenue	\$22,098.00	\$44,196.00	\$66,294.00	\$88,392.00	\$88,392.00
Special Purpose Funding (if applicable)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTAL REVENUE	\$265,674.00	\$531,348.00	\$797,022.00	\$1,062,696.00	\$1,062,696.00
EXPENSES					
New Faculty Positions (Number)	0.00	0.00	0.00	0.00	0.00
Salaries (salary rate*number)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Benefits (22.72% of salary)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
New Staff Positions (Number)	0.50	0.50	0.50	0.50	0.50
Salaries (salary rate*number)	\$28,457.00	\$28,457.00	\$28,457.00	\$28,457.00	\$28,457.00
Benefits (27.57% of salary)	\$7,845.59	\$7,845.59	\$7,845.59	\$7,845.59	\$7,845.59
Stipends (Number)	0.00	0.00	0.00	0.00	0.00
Salaries (salary rate*number)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Benefits (9.13% of Salary)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Teaching Support (Number)	2.50	5.00	7.50	10.00	10.00
Teaching Assistant rate (TA rate*number)	\$10,263.00	\$20,526.00	\$30,789.00	\$41,052.00	\$41,052.00
Benefits (9.13% of Salary)	\$937.01	\$1,874.02	\$2,811.04	\$3,748.05	\$3,748.05
TOTAL STAFFING COSTS	\$47,502.61	\$58,702.62	\$69,902.63	\$81,102.64	\$81,102.64

Operating Costs					
Equipment (new and replacement)					
Marketing					
Other Expenses					
Indirect Overhead Costs (41%)	\$99,866.16	\$199,732.32	\$299,598.48	\$399,464.64	\$399,464.64
TOTAL EXPENSES	\$147,368.77	\$258,434.94	\$369,501.11	\$480,567.28	\$480,567.28
GROSS REVENUE	\$118,305.23	\$272,913.06	\$427,520.89	\$582,128.72	\$582,128.72
Weighted Grant Units (Core Operating Grant)	\$107,920.00	\$311,996.72	\$516,073.44	\$720,150.16	\$720,150.16
To be Negotiated					

Assumptions:

Projected intake yr 1 = 40, yr 2 = 40, yr 3 = 40, yr 4 = 40.

Projected attrition 0.

WGU, Psychology 1st year = 1

WGU, Psychology (upper year honours) = 1.891, Yr 2 = 1.891, Yr 3 = 1.891, Yr 4 = 1.891.

Weighted Grant Unit (WGU) for a UG = 1 based on ministry reported FTEs and WGUs in 2019.

Rate per Weighted Grant Unit (WGU) = \$2,698 based on 18-19 FoSS Actual Revenue & Expense Allocation.

Indirect Overhead costs = 41% based on 18-19 FoSS Actual Revenue & Expense Allocation (\$28321148 / \$69091178).

Indirect Overhead costs includes: Fellowships, scholarships, Bursaries and Student Awards; Space; Academic Support (includes library costs); Student-specific support units; Shared Services (includes IT Services); Ancillary; Global

Academic Advisor, Admin. Professional, level J mid-range (2019 rates) @ \$56,914 (35 hrs) x 50% (17.5 hrs) per annum.

Estimated 0% annual payroll Increase for temporary instructors. Instructor rate \$6,604.53 as per CUPE Collective Agreement Sep 1, 16 - Aug 31, 19

Estimated 0% annual payroll increase for temporary Grad. TA's. Grad. TA rate \$32.13 + supplement \$2.08 = \$34.21 per hour as per CUPE Collective Agreement Sep 1, 16 - Aug 31, 19

Temporary teaching costs include 9.13% benefits.

Teaching Assistants - max 20.

5.1.5: Space

Provide evidence that adequate physical space (office, teaching space, research, etc.) exists to accommodate participants (faculty, staff and students) in the program.

Identify and provide the rationale for any new space required for the program. Evidence that the Proponents have consulted with the University Committee on Space regarding the program's space requirements must be included.

We consulted with Roland Mech (from the University Committee on space) on July 7, 2017 when preparing our statement of intention (see attached). At that time the recommendation was made that we would need another office space for the part-time advisor. However, since 2017, the Psychology department hired a part-time advisor (needed for the B.A. program) and this advisor currently had a dedicated office, which could be shared with the additional part-time advisor hired for the B.Sc. program. We spoke with Roland Mech again on July 9, 2020 and he indicated that there was no need for further consultation. Thus, there is no additional space required as a part of the B.Sc. program.

5.1.6: Support Services

Provide evidence that there are adequate support services (library, information technology, CPI, Co-op, etc.) for both teaching and research, to sustain the quality of scholarship and research activity produced by undergraduate students. Evidence for such support services will document consultation and include a report, from all appropriate units, detailing the impact of the proposed program on existing resources.

For each specific support service, identify and provide the rationale for any new resources required to support delivery of the program.

Library

Provide information about the library holdings, availability of and access to the library resources relevant to support the proposed program.

The library has provided a statement to the effect that existing library resources for the Psychology department is sufficient to support the B.Sc. in Psychology (see Appendix H).

Clearly identify and provide the rationale for any new library resources required to support delivery of the program. Include evidence of consultation with the Library.

N/A

Information Technology Services (ITS)

Provide information regarding the hardware, software/internet, audio-visual, and other ITS resources relevant to support delivery of the proposed program.

There will be no additional services required through ITS (the current services to Psychology would be sufficient). The Psychology Department currently has its own Technical Analyst (T. Nguyen), primarily to support the IT needs of many active research labs that require specialized technology, IT support, and equipment such as EEG systems, eye-trackers, large computational requirements, etc. We consulted with Andy Morgan from IT services on September 10, 2020 and confirmed that no additional resources are necessary, although we do note that our

current Technical Analyst position is key to the continued success of the Psychology program. An email explaining this is attached in the appendices (Appendix H).
<i>Clearly identify and provide the rationale for any new ITS resources required to support delivery of the program. Include evidence of the consultation with ITS.</i>
N/A
Co-op, Career and Experiential Education (CCEE)
<i>Provide information regarding the CCEE resource implications for existing resources relevant to support delivery of the proposed program.</i>
We consulted with Co-op and the Experiential Education Coordinator for the Faculty of Social Sciences (Carolyn Findlayson) to ensure that students in the B.Sc. in Psychology who wish to pursue Co-op could be supported. Please see attached email from Cara Krezek and Julia Zhu from the stage of the SOI for this program indicating that they could support our B.Sc. students who enrol in the Co-op program from August 13, 2018 (Appendix H).
<i>Clearly identify and provide the rationale for any new CCEE resources required to deliver the program. Include evidence of the consultation with CCEE.</i>
Not applicable.
Additional Resources
<i>Provide information regarding additional resources relevant to support delivery of the proposed program.</i>
Not applicable.
<i>Clearly identify and provide the rationale for any additional resources required to deliver the program. Include evidence of the consultation where appropriate.</i>
Not applicable.

5.2: Resources for Undergraduate Programs (IQAP 3.5.11)

Provide evidence of and document planning related to:

<i>The availability and qualifications of adequate numbers of faculty and staff to achieve the goals of the program; or</i>
Because all courses for the B.Sc. in Psychology are currently taught as part of the B.A. in Psychology, there are an adequate number of faculty and staff to achieve the goals of the program <u>with the exception of Academic Advising which will need additional support</u> . It will be critical to replace faculty and staff retirements in a timely manner in order to ensure adequate expertise and support for the B.Sc. in Psychology program. Existing courses are consistently taught by full-time faculty members with <u>up-to-date up-to-date</u> knowledge (as evidenced by

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publication and grant records, see Tables 6.1, 6.2, and 6.3). Teaching evaluations are also positive, and some of the faculty have received multiple awards for their teaching.

Established plans as well as commitments from the appropriate individuals/units to provide the necessary resources for implementation of the program;

The Department of Psychology has committed to launching this B.Sc. program and the Dean of Social Sciences (Ingrid Makus) has also indicated her approval of the program (May 25, 2018; see Appendix H).

Planned/anticipated class sizes;

Class sizes will increase by a maximum of 20 (1 additional seminar) for required courses, as per consultation with Psychology faculty on optimal size change.

6.0: Quality and Other Indicators (IQAP 3.5.12)

6.1: Quality of the Faculty

Provide appropriate indicators (e.g., qualifications, research, innovation and scholarly record) that document evidence of the quality of the faculty. The expertise of the faculty will be documented through the completion and inclusion of: Table 6.1 - Intellectual Contributions; Table 6.2 - External Research Grants and Contracts; and, Table 6.3 - Internal Research Grants and Contracts.

Comment on how the expertise and quality of faculty, as judged by the intellectual contributions and research grants and contracts received, will contribute to the success of the proposed program.

The quality of the faculty is outlined in Tables 6.1, 6.2, and 6.3. The current Psychology faculty represent a group of highly productive faculty who publish regularly in their areas of expertise and the majority have active research programs that are funded externally by NSERC, SSHRC, and other organizations. Faculty are also regular recipients of internal funding at Brock University within the Faculty of Social Sciences as well as University wide.

As can be seen from the attached CVs of Psychology Department faculty who teach most of the courses in the B.Sc. degree (see Appendix C), the instructors are productive researchers and effective, experienced instructors. These individuals are publishing actively, being awarded external funding, and making important contributions to the University and surrounding community.

Table 6.1: Intellectual Contributions (Past Eight Years)

Faculty Name	A. Publication of Books and Monographs	B. Contributions to Edited Books	C. Papers in Peer Reviewed Journals	D. Peer Reviewed Abstracts	E. Papers Delivered at Conferences and Professional Meetings	F. Contributions to Panels, Workshops, and Clinics	G. Invited Presentations	H. Consulting (Government, Related Professionals and Agencies	I. Preparation of Instructional, Clinical, Curriculum or Policy Materials for such Agencies	J. Editorial and Refereeing Duties	K. Creation, Performance, Direction, Programming, Design and Staging of Creative Works for the Public	L. Curation of Juried Exhibitions	M. Festivals and Competitions Adjudicated, Master Classes offered	N. Professional Residencies	O. Development of Software, Hardware, or Equipment	P. Scholarly Contributions to Pedagogy	Q. Other Scholarly Contributions to Agencies, Communities, Governments or Organizations	R. Other Publications (non-refereed) with Significant Public Impact
Ashton, Michael	4	1	40	0	Multi	0	0	0	0	multi	0	0	0	0	0	0	3	1
Arnell, Karen	0	0	16	0	20	0	2	0	0	multi	0	0	0	0	0	0	0	0
Belicki, Kathryn	1	1	5	0	15	4	8	0	0	3	0	0	0	0	0	0	0	0
Baker, Julie	0	0	1	0	26	2	0	2	2	0	0	0	0	0	0	0	0	0
Book, Angela	0	0	30	0	22	0	1	0	0	multi	0	0	0	0	0	0	5	1
Brudzynski, Stephan	0	10	21	0	16	13	8	1	0	multi	0	0	0	0	0	0	2	0
Busseri, Michael	0	0	31	0	34	13	0	0	0	multi	0	0	0	0	0	0	7	0
Campbell, Karen	0	1	26	0	1	0	11	0	0	multi	0	0	0	0	0	0	0	20
Cote, Kimberly	0	2	14	0	0	3	4	0	0	multi	0	0	0	0	0	0	9	8
Dane Andrew	0	7	14	0	15	4	5	0	0	multi	0	0	0	0	0	0	2	0
Dwivedi, Veena	0	0	4	0	27	0	11	0	0	multi	0	0	0	0	0	0	0	0
Emrich, Stephen	0	1	17	0	0	0	5	0	0	multi	0	0	0	0	0	0	0	22
Evans, Angela	0	2	25	0	17	0	3	0	0	multi	0	0	0	0	0	0	4	0
Good, Dawn	3	0	14	0	85	19	0	0	0	multi	0	0	0	0	0	0	12	1
Hafer, Carolyn	0	6	13	0	8	0	9	0	0	multi	0	0	0	0	0	0	0	0

Hall, William	0	2	7	0	17	0	1	0	0	18	0	0	0	0	0	0	3	3
Hodson, Gordon	2	15	63	7	110	0	8	0	0	multi	0	0	0	0	0	0	0	42
Mahy, Caitlin	0	1	25	0	27	0	10	0	0	multi	0	0	0	0	0	0	0	2
Martini, Tanya	3	0	11	0	13	2	6	0	0	multi	0	0	0	0	0	0	0	1
McCormick, Cheryl	0	2	51	0	4	0	18	0	0	multi	0	0	0	0	0	0	0	43
Mitterer, John	12	0	1	0	6	0	3	5	2	2	0	0	0	0	0	0	0	0
Mondloch, Catherine	0	0	39	0	49	0	13	1	0	multi	0	0	0	0	0	0	3	0
Molnar, Danielle	2	5	35	0	multi	0	0	0	0	multi	0	0	0	0	0	0	0	0
Muir, Cameron	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Murphy, Tim	0	0	8	16	13	0	1	0	0	0	0	0	0	0	0	0	0	0
Segalowitz, Sid	1	0	40	0	38	0	4	0	0	multi	0	0	0	0	0	0	2	25
Skorska, Malvia	0	1	11	1	6	0	0	0	0	multi	0	0	0	0	0	0	0	0
Shulman, Elizabeth	0	2	22	0	10	0	0	1	0	multi	0	0	0	0	0	0	1	0
Thai, Sabrina	0	2	4	0	3	0	4	0	0	10	0	0	0	0	0	0	0	0
Willoughby, Teena	3	0	66	0	78	0	0	0	0	multi	0	0	0	0	0	0	0	1
Zheng, Reno	2	7	19	0	63	1	10	0	4	multi	0	0	0	0	0	0	0	0

Table 6.2: Research Grants and Contracts – External Sources (past eight years)

Name	Year	CFI		CIHR		NSERC		SSHRC		Other Major Granting Agencies		Other Grants and Contracts		Year Total	Individual Total
		#	Amount	#	Amount	#	Amount	#	Amount	#	Amount	#	Amount		
Arnell, Karen	2012					2	140725							140725	
	2013					1	145000							145000	285725
Ashton, Michael	2011							1	105000					105000	105000
Belicki, Kathryn														0	0
Baker, Julie														0	0
Book, Angela	2017							1	150000					150000	
	2019							1	300000					300000	450000
Brudzynski, Stephan	2012					1	125000							125000	
	2018					1	40000							40000	165000
Busseri, Michael	2011							1	21427					21427	
	2016							1	75438					75438	
	2017									1	514574			514574	611439
Campbell, Karen	2017					1	500000					1	190690	650000	
	2019					1	150000					1	15000	340690	990690
Cote, Kimberly	2014					1	130000							130000	
	2019					1	140000							140000	270000
Dane, Andrew	2012											2	50607	50607	
	2017							1	196623					196623	247230
Dwivedi, Veena	2016							2	2560270					2560270	
	2019							1	186232					186232	2746502
Emrich, Stephen	2013					1	180000							180000	
	2014					1	62216							62216	
	2019					1	140000							140000	382216
Evans,	2013							1	208152					208152	

Angela	2018						1	24703			1	15000	39703	
	2019								1	242266			242266	281969
Good, Dawn	2011-2019													>10000
Hafer, Carolyn	2014						1	230310					230310	230310
Hall, William	2019						1	2500000					2500000	2500000
Hodson, Gordon	2015						2	241491					241491	
	2017										2	37700	37700	279191
Mahy, Caitlin	2014					1	145000						145000	
	2016						1	48998					48998	
	2017						1	211966					211966	
	2018								1	150000			150000	555964
Martini, Tanya	2013									1	26622	26622	26622	
McCormick, Cheryl	2016					2	486000						486000	
	2019			1	1430000	1	105206						1535206	2021206
Mitterer, John													0	0
Mondloch, Catherine	2011					1	200000						200000	
	2012					1	120000						120000	
	2014					1	65000	1	314100				379100	
	2016					1	195000						195000	894100
Molnar, Danielle	2016						1	255661					255661	
	2017						2	216126					216126	
	2018			1	661726								661726	1133513
Muir, Cameron												0	0	
Murphy, Tim												0	0	
Segalowitz,	2012								1	65000			65000	

Sid	2013				1	200000			1	10000			210000	
	2014						1	230317	2	107811			338128	
	2016			1	1430000			1	357119				1787119	2400240
Shulman, Elizabeth	2011										1	750	750	
	2016			1	1433440								1433440	
	2017					1	150000						150000	1584190
Skorska, Malvina	2018			1	650250								65250	650250
Thai, Sabrina	2012						1	105000					105000	
	2015								1	15000			15000	
	2017						1	84375					84375	
	2019						1	54447					54447	258822
Willoughby, Teena	2011						1	104233					104233	
	2013			1	337940								337940	
	2014						1	292325			1	6800	299125	
	2016			1	1430000								1430000	
	2017								1	160000			160000	
	2018						1	24703					24703	3796001
Zheng, Reno												0	0	

Table 6.3: Research Grants and Contracts – Internal Sources (past eight years)

Faculty Name	Year	BUAF		CIHR Internal		SSHRC Internal		Dean/Faculty		Dept		Other		Year Total	Individual Total
		#	Amount	#	Amount	#	Amount	#	Amount	#	Amount	#	Amount		
Ashton, Michael														0	0
Arnell, Karen														0	0
Belicki, Kathryn	multiple							3	6800			multiple	10000	16800	16800
Baker, Julie														0	0
Book, Angela	2015					1	5000					1	5000	10000	
	2016					1	5000					1	5000	10000	20000
Brudzynski, Stephan														0	0
Busseri, Michael	2014							1	2500					2500	
	2015							2	6200					6200	8700
Campbell, Karen	2017							1	3000					3000	3000
Cote, Kimberly	2017							1	3000					3000	
	2018	1	5000											5000	8000
Dale, Gillian														0	0
Dane, Andrew	2012											1	8411.31	8411.31	
	2015							1	2000					2000	
	2017					1	4925							4925	15336.11
Dwivedi, Veena	2011	1	4200											4200	
	2012					1	3000	1	650			1	2000	5650	
	2013			1	2400			1	650	3	4480	1	1200	8730	
	2014					1	5000	2	3650					8650	
	2015					2	6500	2	2650			1	4500	13650	
	2016							3	4650					4650	
	2017							1	650			1	5000	5650	
	2018											1	5000	5000	51980
Emrich, Stephen	2016							1	2000					2000	2000
Evans, Angela	2012											1	4000	4000	
	2016							1	972					972	
	2017							1	2900					2900	
	2018							1	2917					2917	10789
Good, Dawn													0	0	
Hafer, Carolyn	2013							1	1800					1800	1800

Hall, William														0	0
Hodson, Gordon	2012						1	2000						2000	
	2014						1	2000						2000	
	2015						1	3000			1	6000		9000	
	2017						1	7859.86						7859.86	74859.86
Hosker-Field, Ashley													0	0	
Mahy, Caitlin	2014						1	2000						2000	
	2015				1	3962	1	2000						5962	7962
Martini, Tanya	2011										1	26222		26222	
	2013										1	6679		6679	
	2014										1	6679		6679	
	2015										1	2856		2856	
	2016										1	9000		9000	
	2017										1	9000		9000	
	2018										1	9000		9000	69436
McCormick, Cheryl	2013						1	4000						4000	
	2016						1	2000						2000	6000
Mitterer, John														0	0
Mondloch, Catherine	2013						1	1825						1825	
	2019						1	3000						3000	4825
Molnar, Danielle	2016						1	2963.97						2963.97	2963.97
Muir, Cameron														0	0
Murphy, Tim	2011										1	3822		3822	
	2012										1	5854		5854	
	2013						1	1600						1600	
	2015										1	4500		4500	
	2017						1	1600						1600	17376
Segalowitz, Sid	2013										1	1000000		1000000	1000000
Shulman, Elizabeth	2015						1	2000						2000	
	2016	1	600											600	
	2018						1	2984						2984	5584
Skorska, Malvina													0	0	
Thai, Sabrina													0	0	
Willoughby, Teena	2013									2	1004400		1004400	1004400	
Zheng, Reno														0	0

6.2: Faculty Expertise Linked to the Program Structure

With reference to the program structure outlined in Section 3 explain how the faculty expertise will contribute to ensuring the intellectual quality of the student experience.

The Department of Psychology has a very strong group of faculty members who excel in both research and teaching. Specifically, several faculty with expertise in behavioural and cognitive neuroscience and lifespan psychology, would make substantial contributions to teaching and supervision of undergraduate students in the B.Sc. in Psychology Program. Many of these faculty have active research labs that employ cutting edge techniques, which would provide excellent training for students in the Honours stream of the B.Sc. in Psychology program.

7.0: Student Demand (IQAP 3.5.7)

Provide evidence of the existence of a population of potential students to whom this program would be of interest by providing data documenting the demand for the new degree/program on the part of potential students including:

a) The origin of the student demand (local, regional, domestic and/or international);

Prospective Student Demand

Over the past few years, potential students at the Ontario University Fair, and the Brock Fall Preview and Spring Open House events have repeatedly asked whether the Psychology department offers a Bachelor of Science option. Often after students heard that we did not offer a B.Sc., they would typically move on from our booth suggesting that we were immediately losing students who were really seeking a ~~B.Sc.~~B.Sc.

Current Student Demand

Due to this perceived interest, we conducted a survey of Psychology students in May 2018. Note that many students do not check their Brock emails over the spring term. 115 students completed the survey, equally representing 1st, 2nd, 3rd, and 4th year students with a slight peak in 3rd year students.

Results were compelling:

- 43% of our current students indicated they would have preferred a B.Sc. program compared to the B.A. program if it had been available (with another 30% indicating maybe and only 27% indicating no)
- 47% of our current students would have met the B.Sc. Program requirements suggesting that the B.Sc. will attract an increased number of students with strong science and math backgrounds
- 27% of current students had taken BIO 1P91 and BIO 1P92
- Finally, 71% of current students indicated that they would have taken BIO 1P91 and 1P92 in order to earn a B.Sc.

Thus, taken together, this survey suggests that many of our current students would be interested in the B.Sc. in Psychology degree option and that it would attract additional students who likely would not consider our B.A. in Psychology program. Note that since this survey, the department has added MATH 1P97, CHEM 1P91, and CHEM 1P92 as a ~~first-year~~first-year requirement for the B.Sc. in Psychology program. This would likely decrease the number of students who would meet the program requirements reported in this survey, but we believe that many students would be interested and wanted to ensure that our B.Sc. was similar in requirements to our comparator programs.

Retention of Students from the Neuroscience Program

Some neuroscience majors struggle with the heavy science demands (e.g., chemistry, physics) and need to leave that program. Retention would be enhanced if these students could migrate to a B.Sc. in Psychology, which does not require these subjects but still provides an emphasis on the natural sciences (requirements in Biology and Math in first year). They are unlikely to take on a B.A. We plan to maintain a relationship with the Neuroscience program advisor to make him/her aware of the B.Sc. in Psychology option so that they could inform students who do not meet requirements of the Neuroscience program of this option.

Demand for B.Sc. programs at other Universities

We are an anomaly in not offering a B.Sc. in Psychology at Brock University. The majority of schools in Ontario either offer only a B.Sc. in Psychology or offer both a B.A and B.Sc. program. Of 16 other Ontario universities only two (Windsor, Ryerson) do not offer a B.Sc., and Ryerson does so through another program (comparable to

our Neuroscience program). One university (University of Toronto) only offers a B.Sc. in Psychology. We anticipate that some proportion of our current B.A. students will opt for a B.Sc. given our survey and that some students who do not currently apply to the psychology program at Brock University because their goal is to get a B.Sc. will do so. In short, we will likely reduce the size of the B.A. program, draw some students (those who are struggling) from the Neuroscience program (and thus improving student retention), and draw new students to Brock who currently apply elsewhere.

To anticipate the proportion of students who will select the B.Sc. we contacted four universities offering both a B.A. and a B.Sc. One (University of Guelph) is discontinuing the B.Sc. in favour of a B.Sc. in Neuroscience. Brock has an interdisciplinary Neuroscience program and as noted above some students unable to successfully complete all of the first-year science requirements are expected to switch to the B.Sc. in Psychology program. One (McMaster) has the majority of students in the B.Sc. (240 in Honours B.Sc. vs. 137 in Honours B.A.). Two (Wilfrid Laurier, Waterloo) have between 15 and 20% of majors enrolled in the B.Sc. program. Waterloo notes that the B.Sc. program attracts students who want to pursue psychology but are keen to earn a B.Sc. (i.e., students considering post-grad studies in medicine).

Thus, we anticipate that some of our current B.A. students will elect the B.Sc. option with some drawing from other programs (e.g., Neuroscience, Health Sciences, Biology) reflecting an increase in enrollment (estimate of 20 new students/year from other faculties and 20 new students to Brock, who would have otherwise pursued a B.Sc. in Psychology elsewhere).

According to the Office of Institutional Planning and Analysis, by 2024 we can anticipate the net impact will be a growth 80 Brock Psychology students after 4 years, with a B.Sc. program size of roughly 160 students.

b) Evidence of basis for the projected five (5) year enrollment presented in Section 4.3;

Due to the evidence for student demand, we predict that the 5-year enrolment plan is practical (and even conservative). We expect to admit 40 students per year to the program, and do not foresee any problems with meeting this target. As noted previously, we anticipate that 20 students will be new students to Brock and 20 students to come from our existing B.A. program (who would have otherwise taken our B.A. in Psychology program). See Section 10 for a further discussion of student demand and societal need.

c) Expected duration for the student demand;

The student demand will likely endure, especially given the fact that societal demand for training in science is ongoing. Many other universities have successful B.Sc. in Psychology programs and we don't foresee this demand changing over time. (see below)

d) Evidence of the level of professional interest, if applicable and,

Not applicable.

NOTE: the Ministry of Advanced Education and Skills Development will consider enrollment in competing and comparable programs at other institutions when evaluating potential demand for the proposed program.

8.0: Societal Need (IQAP 3.5.8)

Provide evidence of a societal need for students who have successfully completed the proposed program. Proponents will describe the demand for graduates of the proposed degree/major on the part of society by addressing the following:

- a) Various dimensions of societal need for graduates (socio-cultural, economic, scientific, technological, etc.), with examples of career paths for graduates:

Society clearly needs expertise in health, medical sciences, and human-technology interfaces. A B.Sc. will produce highly qualified personnel and provide students with a competitive edge when applying to post-grad programs and jobs. For example, the CEEHRC (Canadian Epigenetics, Environment and Health Research Consortium) has identified the need to develop research capacity in epigenetics, the study of gene-environment interactions and how the environment (e.g., diet, stress, parental behavior) modifies gene expression—impacting brain, behaviour and health. This field of study has a natural home in Psychology. As noted in this article, Canada is gaining strength in science and technology and the B.Sc. will provide an important option for students in the Niagara Region: <https://www.theglobeandmail.com/report-on-business/careers/management/canada-becoming-an-in-demand-destination-for-foreign-tech-talent/article36499942/>.

Examples of Career Paths for Graduates:

- Research Analyst
- Research Assistant
- Research Technician
- Laboratory Technician
- Laboratory Manager/Coordinator
- Statistical Assistant
- Instructor/Teacher
- Neuropsychologist
- Policy Analyst
- Data Science
- Clinical Sciences
- Rehabilitation Officer

-Speech Language Pathologist
-Occupational Therapist
-Physiotherapist
<u>-Medicine</u>
<i>b) Geographic scope of the societal need for graduates (local, regional provincial, national, international); and,</i>
Since Brock University serves many students in the Niagara region as well as those from the Greater Toronto area, graduates of the B.Sc. in Psychology will have the appropriate background training to further their training and education, or to enter the workforce. Further, we expect our program to attract some international students who are seeking a B.Sc. in Psychology.
<i>c) Duration of the societal need;</i>
We expect that the societal need for individuals with training in the natural sciences in psychology will be ongoing and increase with time.
<i>Evidence in support of the above may include:</i>
<i>The probable availability of positions upon graduation (e.g., include external letters of support from potential employers or governmental agencies). Describe and document career opportunities including non-academic positions for graduate degrees;</i>
Students who complete the B.Sc. in Psychology program will be well prepared for careers such as research positions, laboratory managers/coordinators, statistical assistants, neuropsychologist assistants, or technicians. The B.Sc. in Psychology program will also prepare students for graduate work (in research but also occupational therapy, speech language pathology, Teacher's College, etc.).
<i>In the case of professional programs, an assessment of the congruence of the proposed program with the regulatory requirements of the profession;</i>
Not applicable.
<i>Employment rates for graduates of existing and related programs; and</i>
94.2% of graduates with B.Sc. from Carleton University and 95.6% of graduates with a B.Sc. from Wilfrid Laurier University were employed or pursuing further education 2 years post-graduation (2018-2019 Ontario University Graduate Survey).
<i>Employment outlook based on federal, provincial or sector reports, where available.</i>
Given the societal demand for knowledge related to the biological underpinnings of behaviour and research methodologies, as well as the promising rate of employment of other B.Sc. in Psychology graduates from similar institutions, we are optimistic that students graduating from our B.Sc. program will have essential skills and a knowledge base that are sought after by employers in a variety of fields.
<i>NOTE: the Ministry of Advanced Education and Skills Development may consider other sources of information related to societal and labour market need in evaluating the potential societal need for the proposed program.</i>

9.0: Qualification for Public Funding (IQAP 3.5.13)

In providing the information in this section, proponents will consider:

Differences between the existing programs, including innovative and distinguishing aspects of the proposed program;

Internally: B.A. in Psychology at Brock University

This proposed B.Sc. in Psychology is different from the current B.A. in Psychology given its greater focus on biology (Introduction to biology courses required in the first year of study), chemistry (two chemistry courses required in the first year of study), and ~~and~~ mathematics (calculus with applications course is required in the first year of study) as well as psychology courses that focus on the biological underpinnings of human behaviour. Throughout their degree, B.Sc. in Psychology students might wish to take additional chemistry and physics courses as electives. ~~In the Honours B.Sc. program students will gain 2.0 full credits from their thesis (vs. 1.5 credits in the B.A. program) reflecting the intensive nature of lab research involved in the natural sciences aspects of Psychology (animal research, experimental and behavioural research in the lab).~~ Broadly, our B.Sc. will provide students with a solid foundation in the biological sciences and some basic skills in mathematics. In order to maintain our excellent thesis program, Honours B.Sc. students will also have the opportunity to take the Honours Thesis Seminar to help support them through their thesis year.

Internally: B.Sc. in Neuroscience at Brock University

This proposed B.Sc. in Psychology is different from the current B.Sc. in Neuroscience in that the program focuses on biological aspects of human behaviour rather than neural or cellular mechanisms that the Neuroscience degree emphasizes. The B.Sc. in Psychology will take a ~~more macroscopic~~ more macroscopic approach to the study of Psychology. The Neuroscience Program at Brock also requires more natural sciences courses in the first year of study, specifically ~~Chemistry (CHEM 1P91 and CHEM 1P92) and~~ Physics (PHYS 1P91) ~~as well as~~ and a Neuroscience course (NEUR 1P01). In second year, the Neuroscience program requires further ~~Biology and~~ Chemistry courses, whereas our B.Sc. in Psychology students will be able to focus on psychology content courses at the ~~second-year~~ second-year level in addition to some biology courses. Thus, the B.Sc. in Psychology will allow students to take a wider variety of courses in Psychology specifically, including courses in social/personality and clinical psychology (beyond their course classes that will focus on the biological bases of behaviour).

Externally: B.Sc. in Psychology at other Ontario Universities

Our B.Sc. will be similar in structure to many other B.Sc. degree offerings in Psychology at other Ontario Universities (specifically our two comparator institutions, Carleton University and Wilfrid Laurier University), however, the program at Brock will be innovative with its focus on career preparation in the B.Sc. with Major stream. Students will take PSYC 2P01: Roadmap to Careers in Psychology during 2nd year and then Majors will also take PSYC 4P07: Psychology Students' Transition to Work in their final year. Thus, in addition to gaining a broad background in the biological basis of behaviour, biology, and mathematics and other natural sciences, students will also have substantial preparation prior to entering the workforce.

Comments from other institutions regarding the proposed new program. Note: MAESD will seek input from other institutions regarding any new program proposals;

Dr. Guy Lacroix, current Undergraduate Chair in Psychology at Carleton University reviewed our proposal and provided the following comments:

"The proposed B.Sc. in Psychology is well-designed and structured. It is also highly comparable to other similar programs in Ontario and Canada. It will allow Brock students who wish to focus more on the natural sciences aspect of psychology to reach their academic goals. Moreover, I would note that students will benefit from Brock’s innovative program choices from a vocational training standpoint. Few departments in Canada have courses comparable to both PSYC 2P01 (Roadmap to Careers in Psychology) and PSYC 4P07 (Psychology Students' Transition to Work). Thus, Brock psychology students will be especially well-prepared for graduate programs and the workplace."

Guy Lacroix
Associate Professor and Undergraduate Chair
Department of Psychology
Carleton University
1125 Colonel By Drive
Ottawa, ON

Dr. Bruce McKay, Chair of the Psychology Department at Wilfrid Laurier University reviewed our proposal and provided the following comments:

“The proposed B.Sc. in Psychology at Brock University bridges the gap between their current BA Psychology and B.Sc. Neuroscience degrees – the proposed program provides a more intensive natural sciences understanding of Psychology relative to the BA Psychology program, and a more Psychology-intensive understanding of brain and behaviour relative to the B.Sc. Neuroscience program.

The first year of the proposed B.Sc. Psychology degree provides a solid foundation in Psychology and Biology, with recommended courses that will serve students well as they progress in their degree; it is also an excellent foundational first year in undergraduate science that would permit students to pivot into many other B.Sc. programs in second year. The second year of the proposed program places an important emphasis on brain and behaviour, and research methods and statistics, and provides students the opportunity to increase their breadth of understanding of the larger discipline of Psychology by selecting from a suite of relevant courses from cognition to perception to abnormal and social psychology. The third year in the program continues to develop statistical expertise and further refine the understanding of brain-behaviour relationships with focused courses in behavioural neuroscience, cognitive neuroscience, neuropsychology, neuropharmacology, and others. At the fourth year level, in addition to further specializing in specific areas of psychology and neuroscience, numerous opportunities to engage in supervised research projects are provided. Throughout the program there are impressive for-credit career development learning opportunities, raising awareness of careers in Psychology and how to transition into the workforce with a Psychology degree, as well as a co-op option and other work-integrated learning opportunities.

I anticipate student demand to be quite strong for Brock’s proposed B.Sc. Psychology program. Overall I am very impressed with the structure of the program, the breadth of psychology and neuroscience courses on offer, and the work-integrated learning opportunities intrinsic to the program.”

Comments regarding health-related programs from the Ministry of Health and Long Term Care, if applicable;

Not applicable.

Comments from other relevant stakeholders, as required; and

Not applicable.

Comment on the impact of any proposed experiential learning components within the proposed program on experiential learning programs at other institutions, if applicable.

Not applicable.

10.0: Information Required by the Ministry for the Approval of New Programs

In addition to the above information required in the IQAP to satisfy the requirements of the Quality Assurance Framework, for the purposes of funding (i.e. grant allocation) for new programs the Ministry of Advanced Education and Skills Development (MAESD) requires that institutions specifically address the following in their request for program approval.

Describe how the proposed program is consistent with an area of strength and/or area of growth identified in the [Strategic Mandate Agreement](#) (SMA). If not aligned, describe how the program is consistent with the mission, aims, objectives and existing strengths of Brock.

The proposed B.Sc. fits with the strategic plan in many ways:

- a) Brock University's SMA (2017-20) states that one aim "is to contribute to the betterment and social, cultural and economic development of the Niagara Region". It is noted in the SMA that "Niagara currently has one of the lowest household incomes in Canada, one of the lowest university attainments in the province and has been in a prolonged phase of economic transformation." One stated aspiration to encourage local students to strive to attain a postsecondary education. **Providing a B.Sc. in Psychology at Brock would ensure that students from the Niagara Region who elect to complete their studies locally would have an option that is available at nearly every other university in the province.**
- b) SMA-2 also aspires to improve retention rates in each year through a coordinated and targeted campaign across the Brock community focusing on interventions that address academic, financial, psychological, social and demographic barriers to student success. Although relatively small, the Centre for Neuroscience at Brock University is an innovative, transdisciplinary program. Each year, about 40% of first-year students exit the program, in large part because they are not successful in the required chemistry and physics courses. Currently, the majority of these students migrate to the Faculty of Applied Health Sciences, where they are able to earn a B.Sc. in many different programs (e.g., B.Sc. Medical Sciences; Biomedical Sciences; Kinesiology, depending on student interest). **Providing a B.Sc. in Psychology at Brock would provide such students with another option, one more suitable for students exiting the Neuroscience-Psychology stream. This option will increase retention rates.**
- c) In the SMA-2, Brock emphasizes transdisciplinarity and indicates Health & Well-being throughout the Lifespan as an area of strength and as an area of expansion. Psychology is central to these goals and the proposed B.Sc. program would enable students to capitalize on these strengths. First, Psychology is a large program. In 2017-18 FCE enrollment was 3,335; we offered 29.0 sections with an average class size of 115. Second, Psychology is integral to the Lifespan Development Centre and to research directly related to health and well-being across the lifespan (e.g., the impact of stress during adolescence on the development of brain and behaviour; cognitive neuroscience of aging; the effect of sleep on cognitive and brain function; developmental changes in memory and

attention). ***The B.Sc. will ensure students have a depth of understanding directly related to Health & Well-being with an emphasis on perception, cognition, and neural/biological mechanisms.***

d) SMA-2 also emphasizes experiential learning and states that as “*a component of their degree programs, graduate and undergraduate students have the opportunity to engage in basic and applied research as valuable members of a research team, which may or may not be associated with the TD hubs. They are able to interact with principal investigators and contributors from across multiple disciplines.*” The lab-based nature of courses in Psychology, the co-op option available in both our B.A. and proposed B.Sc. programs, and the opportunity to complete an Honours Thesis provide excellent experiential learning opportunities. Many faculty members in Psychology have NSERC funding, providing an opportunity to support summer USRA students (an extra-curricular learning opportunity). Many faculty members support multiple volunteer/paid undergraduate Research Assistants. Faculty members in Psychology are well-funded and publish a rate well above the mean for Brock faculty (.79/faculty member); they are in an excellent position to provide training to both undergraduate and graduate students. ***Although these opportunities are available in the B.A. program, many students would prefer to earn a B.Sc. given their career/education goals and earning a B.Sc. will reflect that the student has emphasized the natural science sub-field of psychology and has completed first-year Biology, Chemistry, and Calculus.***

e) An area of focus in Brock’s SMA-2 is the “*need to address the demand for health, economic, social and cultural innovations that contribute to well-being*”. “*Academic programs such as ... Psychology [and] Neuroscience...are building the highly skilled workforce needed to address the physical and social determinants of health.*” According to CHMA, by age 40 about 50% of the population will have, or have had, a mental illness; it is critical that students understand the neural mechanisms underlying depression, anxiety, schizophrenia etc. ***A B.Sc. in Psychology will provide students with an understanding of the brain from a psychological perspective, consistent with the institutional aspiration (SMA-2) to contribute to the “health and well-being of its citizens”.***

f) SMA-2 includes goals of maintaining/increasing tri-council funding, number of published papers, and number of citations (impact). Psychology is already a leader in each of these areas at Brock. ***A B.Sc. will attract undergraduate students to Brock with different strengths than those specifically attracted by the B.A. (e.g., with a stronger background in Math & Science).*** That background is especially well suited to teaching and research in perception, cognition, and neuroscience—current strengths in our department that directly address issues around health and well-being. Successful students will feed our MA and PhD programs in Psychology, growing those programs and increasing the ability of faculty members in the Behavioural Cognitive Neuroscience and Lifespan Development streams to attract students to their labs—increasing publication rates and success in granting competitions. (Note. At the present time we do not have an M.Sc. program; that might be something we pursue in the future.)

f) The B.Sc. in Psychology was listed as a potential new program for development in SMA-2.

Explain how the proposed program fits with Brock’s current program offerings and the University’s capacity to deliver the proposed program.

The **current proposed** B.Sc. in Psychology will offer an alternative to our B.A. in Psychology and also to the B.Sc. in Neuroscience for students who wish to study psychology with an emphasis on the biological basis of behaviour. Thus, it is distinct from both our B.A. program that does not have this focus and the B.Sc. in Neuroscience that focuses on the cellular or neural mechanisms with less emphasis on macroscopic behaviour. The University has the capacity to deliver the proposed program as it relies on current courses already offered by the Psychology department and only requires one additional part-time advisor. In sum, the B.Sc. in Psychology will increase student options and will cost the University very little in terms of resources and thus the University has sufficient capacity to deliver the program.

Provide at least two (2) examples of both institutional and sector comparator programs (including program name, university, and most recent tuition fee exclusive of additional fees) used to set the proposed tuition fee. Comparators may be similar credentials, similar programs or programs with similar cost structures. The Ministry prefers tuition comparators in Ontario, and then in Canada if Ontario comparators are not available. If no comparators are available for tuition fee setting, please provide the rationale. Justify the reasoning for the proposed tuition; if higher than comparators, describe how the impact on accessibility will be mitigated.

Program Comparators - Institution							
Program Name	Tuition fee for the program's full academic year, as defined by the institution	Academic year	Tuition fees: how it is charged (per year/session/course/credit)	Number of semesters covered by tuition noted in column 2	Number of units of study covered by tuition noted in column 2	Number of semesters for program completion	Number of units of study for program completion
B.A. in Psychology	\$6089.40	2019/2020	Flat fee (4+ credits)	2	4+	8	20
B.Sc. in Neuroscience	\$6089.40	2019/2020	Flat fee (4+ credits)	2	4+	8	20

Program Comparators - Sector (only the program, institution names, and tuition fees are mandatory)								
Program Name	Institution Name	Tuition fee for the program's full academic year, as defined by the institution	Tuition fees: how it is charged (per year/session/course/credit)– if known.	Tuition year	Number of semesters covered by tuition noted in column 1	Number of units of study covered by tuition noted in column 1	Number of semesters for program completion	Number of units of study for program completion
B.Sc. in Psychology	Carleton University	\$7209.68	Per credit	2019/2020	2	5	8	20
B.Sc. in Psychology	Wilfrid Laurier University	\$6058.92	Per credit	2019/2020	2	5	8	20

Commentary:

Our tuition costs are set by Brock University and would be the same as those for the B.A in Psychology or B.Sc. in Neuroscience. The fees are lower than Trent University and Carleton University, and similar to those at Wilfrid Laurier University.

List comparator programs both at Brock and other Ontario institutions, with particular reference to universities in the region; document how any duplicative similarities with existing programs at the University and other post-secondary institutions are justified; document that the program has consulted with other regional universities regarding the establishment of a similar program where the existing program is a recognized area of differentiation or leadership for the institution or where the proposed program requires substantial new investment in faculty, infrastructure, or experiential/entrepreneurial learning outside the regular learning environment.

See comments from other institutions above.

As mentioned previously, Brock University is the exception to most programs that have a B.Sc. option in Psychology. Wilfrid Laurier, Carleton University, and Trent University are all comprehensive Universities in Ontario that offer B.Sc. in Psychology degrees. Like these programs, our B.Sc. in Psychology program emphasize biology courses and psychology courses that focus on the biological underpinnings of behaviour. Unique to our B.Sc. in Psychology at Brock is our emphasis on career development and training from our required 2nd and 4th year (for B.Sc. with Major students) courses. The B.Sc. in Psychology will be distinct from the B.A. program in

that the B.Sc. requires a calculus course in first year, as well as first year Biology and Chemistry courses, and an emphasis on current Psychology course offerings that focus on the biological basis of behaviour such as courses in cognition, cognitive and behavioural neuroscience, and lifespan development. Further, it will require additional science courses in 2nd, 3rd, and 4th year.

Given the interest and strong enrolments in our B.A. in Psychology program over the past several years, we expect the B.Sc. to attract additional new students but to also offer an alternative degree for our current B.A. students who have taken biology courses and meet the entrance requirements and provide a degree to improve retention of Neuroscience students.

Comment on any differences between the proposed program and comparators (number of credits/courses, structure, etc.).

There are several similarities between our proposed B.Sc. in Psychology program and the programs at Carleton and Wilfrid Laurier, which we comment on further below. Overall, the total number of credits, courses, and structure of the programs are similar. Notably, our statistics and research methods courses are similar as are our requirements for the completion of the Honours thesis in the 4th year of the Honours B.Sc. program. Below we highlight and comment the differences between the proposed program and these comparators.

Carleton University's B.Sc. in Psychology

In addition to a first-year psychology course, first year students take 1.0 credit from math (elementary calculus and linear algebra) and then choose 2 credits from Biology, Chemistry, Earth Sciences, Geography, or Physics. Our B.Sc. in Psychology only requires first year Biology and Chemistry. but recommends that students consider Chemistry and other natural sciences as electives. Our program will also require a first-year math course, Calculus with Applications (MATH 1P97). Otherwise, Carleton University's B.Sc. program is similar in that students choose Psychology courses and credits from the natural sciences and take courses in Research Methods and Statistics.

Wilfrid Laurier's B.Sc. in Psychology

In the first year of study, the B.Sc. in Psychology at Laurier requires first year math (calculus for the life sciences) and a community engagement and service course. Students also choose two courses among first year Biology, Chemistry, Physics, Earth Science, or Computer Science. Our program will require Biology, Chemistry, and Calculus (MATH 1P97) in the first year. Our program focuses on first year Biology and Chemistry because this background will be necessary for understanding the biological underpinnings of behaviour. Our students will be encouraged to pursue Chemistry and other natural sciences for their elective credits. Our program includes PSYC 2P01: Roadmap to Careers in Psychology which is somewhat similar to the community engagement and service course, but with a greater focus on exploration of careers within Psychology. In upper years, there is similar content in terms of focusing on courses that examine cognition and biological aspects of behaviour.

	Introduced
	Reinforced
	Mastered

Program Learning Outcomes	
1. Depth and Breadth of Knowledge	
a) ability to describe concepts, principles, overarching themes in psychology especially biological aspects of behaviour	
b) ability to develop a working knowledge of psychology content domains, especially biological bases of psychological functioning	
c) ability to explain complex behaviour by integrating concepts developed from different content domains	
d) ability to interpret, design, conduct basic psychological research	
e) ability to apply knowledge of research skills, physiological methodologies, to be an informed consumer of research or critic regarding unsupported claims about behaviour and its biological bases	
f) ability to use scientific reasoning to interpret psychological phenomena at a biological/behavioural level	
g) Psychological information literacy, including the ability to develop a comprehensive strategy for locating and using relevant scholarship (e.g., databases, credible journals) to address psychological questions, and a developed understanding of the characteristics and relative value of different information sources (e.g., primary vs. secondary, peer reviewed vs. nonreviewed, empirical vs. nonempirical)	
h) Developed critical thinking and analytical skills	
i) ability to compare and contrast the nature of psychology with other disciplines (e.g., biology, economics, political science), including identifying the potential contribution of psychology to interdisciplinary collaboration	
j) ability to understand the evolutionary origins of the brain and behaviour	
2. Knowledge of Methodologies	
a) ability to evaluate the effectiveness of selected problem-solving strategies	
b) ability to read and summarize complex ideas accurately from psychological sources and research	
c) ability to interpret complex statistical findings and graphs, and to explain these findings in common language.	
3. Application of Knowledge	
a) ability to apply psychological concepts, theories, and research findings as these relate to everyday life	
b) ability to engage in innovative and integrative thinking and problem solving	
c) ability to critically evaluate points of view, decisions or information sources	
d) ability to apply problem-solving skills	
e) ability to synthesize ideas, information or experiences into new understandings or methods	
4. Communication Skills	
a) ability to write effectively for different purposes	
b) ability to exhibit effective presentation skills for different purposes	
5. Awareness of Limits of Knowledge	
a) Recognition of the limits of their knowledge and ability, and how this might influence analyses and interpretations	
b) ability to accurately self-assess performance quality by melding external standards and expectations with their own performance criteria	
c) ability to pursue and respond appropriately to feedback from educators, mentors, supervisors, and experts to improve performance	
d) ability to attend to and monitor the quality of their own thinking (i.e., make adaptations using metacognitive strategies).	
6. Autonomy and Professional Capacity	
a) Enhanced teamwork capacity	
b) ability to generate, apply, and evaluate potential solutions to problems that develop when working with teams	
c) ability to interact effectively with others	

d) ability to build and enhance interpersonal relationships	
e) ability to apply psychological content and skills to career goals	
f) ability to develop meaningful professional direction for life after graduation	
g) ability to evaluate the characteristics of potential work settings or graduate school programs to optimize career direction and satisfaction	
h) ability to develop strategies to enhance resilience and maintain skills in response to rapid social change and related changes in the job market.	
i) ability to apply ethical standards to evaluate psychological science and practice	
j) ability to adopt values that build community at local, national, and global levels	

Legend for Assessments	
1	Quiz or Test (in class, excluding midterm or final exam)
2	midterm exam
3	final exam
4	seminar participation grade
5	lecture participation grade
6	lecture participation, based on clicker information
7	discussion facilitation grade
8	individual oral presentation
9	group oral presentation
10	poster presentation
11	research proposal/research report
12	literature review essay
13	other essay
14	reaction/thought papers
15	peer- or self-assessment of seminar work
16	debate
17	lab report/seminar assignment
18	assignment
19	final project
20	other

	Introduced
	Reinforced
	Mastered

Program Learning Outcomes		
1. Depth and Breadth of Knowledge		
a) ability to describe concepts, principles, overarching themes in psychology especially biological aspects of behaviour		
b) ability to develop a working knowledge of psychology content domains, especially biological bases of psychological functioning		
c) ability to explain complex behaviour by integrating concepts developed from different content domains		
d) ability to interpret, design, conduct basic psychological research		
e) ability to apply knowledge of research skills, physiological methodologies, to be an informed consumer of research or critic regarding unsupported claims about behaviour and its biological bases		
f) ability to use scientific reasoning to interpret psychological phenomena at a biological/behavioural level		
g) Psychological information literacy, including the ability to develop a comprehensive strategy for locating and using relevant scholarship (e.g., databases, credible journals) to address psychological questions, and a developed understanding of the characteristics and relative value of different information sources (e.g., primary vs. secondary, peer reviewed vs. nonreviewed, empirical vs. nonempirical)		
h) Developed critical thinking and analytical skills		
i) ability to compare and contrast the nature of psychology with other disciplines (e.g., biology, economics, political science), including identifying the potential contribution of psychology to interdisciplinary collaboration		
j) ability to understand the evolutionary origins of the brain and behaviour		
2. Knowledge of Methodologies		
a) ability to evaluate the effectiveness of selected problem-solving strategies		
b) ability to read and summarize complex ideas accurately from psychological sources and research		
c) ability to interpret complex statistical findings and graphs, and to explain these findings in common language.		
3. Application of Knowledge		
a) ability to apply psychological concepts, theories, and research findings as these relate to everyday life, especially those concerning the biological bases of psychological functioning		
b) ability to articulate how psychological and neuroscientific principles can be used to explain social issues, address pressing societal needs, and inform public policy		
c) ability to evaluate how the mind, brain, and body interact to influence psychological and physical health		
d) ability to propose and justify appropriate psychology- and neuroscience-based interventions in applied settings (e.g., clinical, school, community, or industrial settings)		
e) ability to explain how psychological constructs and their biological underpinnings can be used to understand and resolve interpersonal and intercultural conflicts		
f) ability to engage in innovative and integrative thinking and problem solving		
g) ability to critically evaluate points of view, decisions or information sources		
h) ability to apply problem-solving skills		
i) ability to synthesize ideas, information or experiences into new understandings or methods		
4. Communication Skills		
a) ability to write effectively for different purposes		
b) ability to exhibit effective presentation skills for different purposes		
5. Awareness of Limits of Knowledge		

a) Recognition of the limits of their knowledge and ability, and how this might influence analyses and interpretations		
b) ability to accurately self-assess performance quality by melding external standards and expectations with their own performance criteria		
c) ability to pursue and respond appropriately to feedback from educators, mentors, supervisors, and experts to improve performance		
d) ability to attend to and monitor the quality of their own thinking (i.e., make adaptations using metacognitive strategies).		
6. Autonomy and Professional Capacity		
a) Enhanced teamwork capacity		
b) ability to generate, apply, and evaluate potential solutions to problems that develop when working with teams		
c) ability to interact effectively with others		
d) ability to build and enhance interpersonal relationships		
e) ability to apply psychological content and skills to career goals		
f) ability to develop meaningful professional direction for life after graduation		
g) ability to evaluate the characteristics of potential work settings or graduate school programs to optimize career direction and satisfaction		
h) ability to develop strategies to enhance resilience and maintain skills in response to rapid social change and related changes in the job market.		
i) ability to apply ethical standards to evaluate psychological science and practice		
j) ability to adopt values that build community at local, national, and global levels		
7. Other		
a) ability to conduct independent, original research in the field of psychology with a focus on the biological underpinnings of psychological phenomena *		

Legend for Assessments	
1	Quiz or Test (in class, excluding midterm or final exam)
2	midterm exam
3	final exam
4	seminar participation grade
5	lecture participation grade
6	lecture participation, based on clicker information
7	discussion facilitation grade
8	individual oral presentation
9	group oral presentation
10	poster presentation
11	research proposal/research report
12	literature review essay
13	other essay
14	reaction/thought papers
15	peer- or self-assessment of seminar work
16	debate
17	lab report/seminar assignment
18	assignment
19	final project

Appendices

APPENDIX A –Course Level Learning Outcomes

Course: PSYC 1F90

Course Calendar Description:

Foundations of Psychology

Methodological approaches and contemporary issues in psychology and their application to everyday life.

Lectures, seminar, 3 hours per week.

Note: prerequisite to all courses in Psychology except [PSYC 2F23](#) and [PSYC 2F24](#)

Completion of this course will replace previous assigned grade and credit obtained in PSYC 1F25 and [PSYC 1F26](#)

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
1. Explain major concepts and foundational research findings in psychology	Attending lectures & seminars, reading textbook, completing research project	Quiz; mid-term exam; final exam; research project 4+4+4+4	Using lectures, seminars, reading lists, and assessment methods each year to incorporate current research, advances in clinical practice, innovative pedagogy, and constructive suggestions from teaching evaluations.
2. Discuss how major concepts in psychology have been applied in various contexts such as business and health care	Attending lectures & seminars	Quiz; mid-term exam; final exam; seminar participation 4+4+4	Using lectures, seminars, reading lists, and assessment methods each year to incorporate current research, advances in clinical practice, innovative pedagogy, and constructive suggestions from teaching evaluations.
3. Recognize the operation of psychological principles in “real life” situations and apply psychological principles to everyday issues	Participating in seminars, reading material for seminars, completing questionnaires and exercises	Seminar participation; research project 4+4	Using lectures, seminars, reading lists, and assessment methods each year to incorporate current research, advances in clinical practice, innovative pedagogy, and constructive suggestions from teaching evaluations.

<p>! Differentiating psychology from related disciplines (e.g., psychiatry, social work, sociology, biology) and state legal definition of a psychologist</p>	<p>Attending lectures & seminars, reading textbook</p>	<p>Quiz; mid-term exam; final exam; 4%</p>	<p>Using lectures, seminars, reading lists, and assessment methods each year to incorporate current research, advances in clinical practice, innovative pedagogy, and constructive suggestions from teaching evaluations.</p>
<p>*! Find and critically read primary research articles, and write a basic research report formatted in a standard research style.</p>	<p>Attend seminars; complete a research project</p>	<p>Seminar participation; research project 4%</p>	<p>Using lectures, seminars, reading lists, and assessment methods each year to incorporate current research, advances in clinical practice, innovative pedagogy, and constructive suggestions from teaching evaluations.</p>

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Course: PSYC 2F23

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Course Calendar Description:

Statistics and Research Design in the Behavioural Sciences

Principles of research design and data analysis in the context of psychological research.

Lectures, tutorial, 4 hours per week.

Prerequisite(s): [PSYC 1F90](#) or one Social Science credit.

Note: 4U Mathematics of Data Management or equivalent background recommended.

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Learning Outcome k <i>A student will be able to:</i> k	Learning Activity/Experience k <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement k
1. Employ basic statistical techniques most commonly employed by psychologists. k	Attending lectures, reading textbook, completing assignments, attending seminars to discuss solutions.	Quizzes, Tests, final exam, seminar participation =Y4%4&4:>k	Attend office hours with teaching assistants. Discussing solutions during seminars in preparation for tests and exams.
2. Identify the critical components and aspects of research design such as independent and dependent variables, types of measurement scales, potential errors and confounds in experimental design	Attending lectures, reading textbook, completing assignments, attending seminars to discuss solutions.	Quizzes, Tests, final exam, seminar participation =Y4%4&4:>k	Discussing solutions duringk seminars in preparation for tests and exams, using discussion (“chat”) option on course webpage. Attend office hours with teaching assistants.
3. Analyze numerical data by hand in order to test hypotheses. k	Attending lectures, reading textbook, completing assignments, attending seminars to discuss solutions.	Quizzes, Tests, final exam, seminar participation =Y4%4&4:>k	Completing assignments, using discussion option on course webpage to compare solutions with others. Attend office hours with teaching assistants.
4. Think critically about the reporting and interpretation of statistical results. k	Attending lectures, reading textbook, completing assignments, attending seminars to discuss solutions.	Quizzes, Tests, final exam, seminar participation =Y4%4&4:>k	Completing assignments, using discussion option on course webpage to compare solution with others. Attend office hours with teaching assistants.

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Course: PSYC 2P01

Course Calendar Description:

Roadmap to Careers in Psychology

Career exploration and applications in psychology and related fields.

Seminar, online activities, 3 hours per week.

Restriction: open to PSYC (single) majors. Not open to combined majors and minors.

Prerequisite(s): [PSYC 1F90](#)

Note: students are expected to register during their second year of study. Must be completed before registering in required 4 courses.

Learning Outcome A student will be able to:	Learning Activity/Experience A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement
Y! Critically consider, reflect on, and integrate what skills have been learned from significant experiences (including course-based, work-related, extracurricular)	Online module related to significant learning experiences	Successful completion of online module (20)	Consider having students share these experiences with other students, who may have alternate perspectives on the skills that could be learned from these experiences when speaking with an employer
%! Effectively communicate about their transferrable career-relevant skills, both orally and in writing	Seminar discussions related to email etiquette, practicing elevator pitch with peers; completing online modules that require videotaped job interviews and development of a LinkedIn profile, resume, and cover letter	Participation in seminar discussions; successful completion of online modules (4,20)	Consider implementing peer reviews of videotaped interviews and allow for second attempt at interviews after receiving peer and TA feedback
&! Identify appropriate resources for a job search, and have a clear sense of the information that is relevant when performing such a search	Completion of job resource online module using recommended web-based sources to learn more about salary, educational requirements, projected demand, and necessary skills for a career path of interest	Successful completion of online module (20)	Consider having students complete the assignment for a second, alternative career path (ie., “Plan B”) in the event that they are unsuccessful in their attempts to secure a position in their career of choice
:! Assess their own preferred methods for managing conflict, and evaluate	Completion of conflict resolution questionnaire and participation in seminar discussion related to conflict resolution	Participation in seminar (20)	Consider implementing role-playing exercises in seminar that would allow students to “try out”

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strategies that might be effective for resolving potential conflicts in a wide range of workplace settings k			their conflict resolutions with another person
*!K Conduct themselves professionally while volunteering with a community organization k	Completion of a 40-hour volunteer experience with a community-based organization	Successful completion of the volunteer experience reflection paper (14,20)	Consider securing additional feedback from supervisors in the community that would provide students with information about areas of strength and aspects of performance that may benefit from further practice or thought

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Course: PSYC 2P12

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Course Calendar Description:

Lifespan Development

Introduction to theories and research in human development across the lifespan. Topics include development in physical, perceptual, cognitive, linguistic, social and/or emotional domains.

Lectures, 3 hours per week.

Restriction: open to PSYC (single or combined), HEAR, "0@9 400K, , SPLS majors and PSYC minors until date specified in Registration guide.

Prerequisite(s): [PSYC 1F90](#)!

Note: students may not concurrently register in [CHYS 2P10](#)!

Completion of this course will replace previous assigned grade and credit obtained in [CHYS 2F05](#) and [2P10](#)!

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Learning Outcome k <i>A student will be able to:</i> k	Learning Activity/Experience k <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement k
YK Identify developmental patterns across the lifespan	Attending lecture Completing Reading & Smartbook assignments	Online multiple-choice tests In-class short answer tests Credit for completing Smartbook assignment k =Y4Y+>k	Improved support to help students stay on track
%K Understand the process underlying human development	Attending lecture Videos Smartbook Assignments	Online multiple-choice tests In-class short answer tests Credit for completing Smartbook assignment k =Y4Y+>k	Developing handouts to guide students as they watch documentaries etc.
&K Describe key theoretical perspectives and methodological approaches	Attending lecture Completing Reading & Smartbook assignments k	Online multiple-choice tests In-class short answer tests Credit for completing Smartbook assignment k =Y4Y+>k	New text, on which I am an author, places more emphasis on <i>how</i> research is done
:!K Apply research in this field to daily life k	Attending lecture Completing Reading & Smartbook assignments k	Online multiple-choice tests In-class short answer tests k Assignments and quizzes after completing each 'quest'	<i>Quest</i> is a new tool that will be used for the first time in 2020-21. k

Course: PSYC 2P15

Course Calendar Description:

Abnormal Psychology

Mental disorders with respect to classification, diagnosis, etiology, treatment, and applied case studies. Biological and psychosocial risk factors for mental disorders.

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined), and PSYC minors until date specified in Registration guide. After that date open to PSYC (single or combined), 0@9 majors, GHUM, SOSC students and PSYC minors until date specified in Registration guide.

Prerequisite(s): PSYC 1F90

Completion of this course will replace previous assigned grade and credit obtained in PSYC 3F20 and &w%4k

<p>Learning Outcome</p> <p><i>A student will be able to:</i></p>	<p>Learning Activity/Experience</p> <p><i>A student will learn this by:</i></p>	<p>Assessment</p> <p><i>Achievement of this outcome will be demonstrated by:</i></p>	<p>Strategy for Improvement</p>
<p>Y! Understand classification, diagnosis and assessment of psychological disorders</p>	<p>Attending lectures, reading textbook and case study book, participating in seminar</p>	<p>Success on Mid-term test; Final exam; written case formulation</p> <p>2,3,20</p>	<p>9r ising lectures, seminars, reading lists, and assessment methods each year to incorporate current research, advances in clinical practice, innovativrkk pedagogy, and constructivrkk suggestions from teaching r aluations.</p>
<p>%!Identify biological, psychological, and social determinants of psychopathology</p>	<p>Attending lectures, reading textbook and case study book, participating in seminar</p>	<p>Success on Mid-term test; Final exam; written case formulation</p> <p>2,3,20</p>	<p>9r ising lectures, seminars, reading lists, and assessment methods each year to incorporate current research, advances in clinical practice, innovativrkk pedagogy, and constructivrkk suggestions from teaching r aluations.</p>
<p>3 Understand theory and research about pharmacological and psychosocial treatment of mental disorders</p>	<p>Attending lectures, reading textbook and case study book, participating in seminar</p>	<p>Success on Mid-term test; Final exam; written case formulation</p> <p>2,3,20</p>	<p>9r ising lectures, seminars, reading lists, and assessment methods each year to incorporate current research, advances in clinical practice, innovativrkk pedagogy, and constructivrkk</p>

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			suggestions from teaching evaluations.
4. Apply knowledge of diagnostic criteria, etiology and treatment of mental disorders to clinical case studies.	Reading case study book and participating in seminar	Success on Seminar participation and seminar presentation k :4+k	9 r using lectures, seminars, reading lists, and assessment methods each year to incorporate current research, advances in clinical practice, innovative pedagogy, and constructive suggestions from teaching evaluations.
5. Communicate effectively with oral and written communication	Participating in seminar, giving seminar presentations, and completing written case formulation	Success on seminar participation, seminar presentation, and written case formulation k 4,8,20	9 r using lectures, seminars, reading lists, and assessment methods each year to incorporate current research, advances in clinical practice, innovative pedagogy, and constructive suggestions from teaching evaluations.
6. Think critically about diagnosis, case formulation, and treatment plans for psychological disorders	Attending lecture, participating in seminar	Success on mid-term test; final exam; seminar participation; and seminar presentation k %4&4:4+k	9 r using lectures, seminars, reading lists, and assessment methods each year to incorporate current research, advances in clinical practice, innovative pedagogy, and constructive suggestions from teaching evaluations.

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Course: PSYC 2P20

Course Calendar Description:

Cognition

How the mind processes information. Topics include recognition, attention, memory, problem solving, judgment and decision making.

Lectures, lab, 3 hours per week.

Restriction: open to PSYC (single or combined), 0@9, SPLS majors and PSYC minors until date specified in Registration guide.

Prerequisite(s): PSYC 1F90

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Understand classic and recent experiments in cognitive psychology	Attending weekly lectures where experiments will be taught. Attend weekly labs where they will perform classic cognitive psychology experiments in a hands-on manner.	Success on midterm and final exam questions Success on 4 assignments based on lab experiments Success on poster assignment where poster is created from an existing experiment 2,3,10,18	Consider adding required textbook
Understand basic principles and theories in cognitive psychology	Attending weekly lectures where principles and theories will be taught.	Success on midterm and final exam questions Success on 4 assignments based on lab experiments 4&4Y+k	Consider adding required textbook
Strengthen their analytic and critical thinking skills	Attending weekly lectures and labs where we work through the logic of cognitive psychology experiments.	Success on midterm and final exam questions Success on 4 assignments based on lab experiments Success on poster assignment where poster is created from an existing experiment 2,3,10,18	
Strengthen their experimental design skills	Attending weekly lectures and labs where we work through the logic of cognitive psychology experiments	Success on midterm and final exam questions	Include an assignment where they design their own version of the experiment

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	k	Success on 4 assignments based on lab experiments k %4&4Y+k k	
5. Better understand how to create, read, and communicate graphical data k	Attending weekly lectures and lab where graphs of actual data are shown and discussed. Graphing data they collect in the labs.	Success on midterm and final exam questions Success on 4 assignments based on lab experiments Success on the poster which must contain a graph of the data k 2,3,10,18	k
6. Increase their ability to work with others	Working with a partner on the large poster assignment where they create and present a poster of an existing cognitive psychology experiment	Success on the poster assignment where they must work in pairs 10	Help them to find suitable partners more easily
7. Increase their ability to present psychology knowledge to others (including verbally)	The large poster assignment where they create and present a poster of an existing cognitive psychology experiment k	Success on the poster assignment where they verbally present the poster they created to the instructor and/or TA and classmates k 8,10	Be more presentation time for each poster.

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Course: PSYC 2P25

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Course Calendar Description:

Personality and Individual Differences

Introduction to theory and research in personality and related individual differences. Topics include measurement and structure of personality characteristics; biological bases, genetic and environmental origins, and evolutionary function of personality; personality disorders; personality as a predictor of life outcomes; other domains of psychological variation (religious beliefs and political attitudes, sexuality, occupational interests, mental abilities).

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined) majors and minors until date specified in Registration guide!

Prerequisite(s): [PSYC 1F90](#)!

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Learning Outcome A student will be able to:	Learning Activity/Experience A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement
Understand personality and individual differences	Reading the textbook, attending lectures, writing an essay, and participating in seminars	Performance on class tests and exams	Continuous updating and critical review of course materials and assessments, with monitoring of student responsiveness and performance
Write about fundamental issues in personality and individual differences	Writing, especially writing an essay	Performance on essay assignment	Continuous updating and critical review of course materials and assessments, with monitoring of student responsiveness and performance
Discuss fundamental issues in personality and individual differences	Writing, especially participating in seminars	Performance in seminar participation	Continuous updating and critical review of course materials and assessments, with monitoring of student responsiveness and performance

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Course: PSYC 2P30

Course Calendar Description:

Fundamentals of Social Psychology

Theory, methods and research examining the influence of others on phenomena such as cognition, the self, attitudes, group processes and communication.

Lectures, 3 hours per week.

Restriction: open to PSYC (single or combined) majors and minors until dates specified in Registration guide.

Prerequisite(s): [PSYC 1F90](#)

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Learn key concepts in social psychology	Attending lectures, readings textbook, doing online quizzes on reading	Performance on exams; grading on weekly quizzes	Contemplating additional take home exams
Learn writing skills, critical thinking, written communication; find own voice	Writing an essay, having it graded with copious feedback, rewriting essay and expanding with new literature and critical thinking	Each paper is graded for mastery, writing skills, and areas of improvement	Contemplating peer feedback
Literature searches on relevant material	Using library resources to locate published papers relevant to their chosen paper.	Successful completion of the second written assignment	Creating online videos and resources to help students

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Course: PSYC 2P36

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Course Calendar Description:

Brain and Behaviour I

(also offered as ["0@9k%w&Fk](#))

Introduction to behavioural neuroscience and biological aspects of behaviour. Basics of the structure and function of the nervous system in relation to behaviour and activities of the brain from the neuron through to interrelationships among neural systems (central and peripheral nervous system, and hormonal regulation). Topics include neuronal function, drugs and behaviour, brain plasticity and recovery from injury, sensation and perception, and the organization of the brain emphasizing human behaviour.

Lectures, 3 hours per week; lab, 3 hours per week.

Restriction: open to PSYC (single or combined), HEAR, ["0@9](#), SPLS majors and PSYC minors until date specified in Registration guide.

Prerequisite(s): [PSYC 1F90](#)!

Note: materials fee required. Students may not concurrently register in [PSYC 2P35](#)!

Completion of this course will replace previous assigned grade and credit obtained in [PSYC 2P35](#)!

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Learning Outcome k <i>A student will be able to:</i> k	Learning Activity/Experience k <i>A student will learn this by:</i> k	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement k
Y! <i>To provide foundational knowledge of neural substrates, brain, and brain-behaviour relationships.</i> k k	Lecture participation Discussion of seminar material and assignments Lab participation & assignments	%4&4:4*4Y:4YIk	Weekly feedback on weekly assignments, feedback on lab reports, thought papers, examinations
%! <i>To provide learning in a participation/ interactive format with participation labs, dissection labs, films, readings, presentations and case studies to encourage active exchange of ideas.</i> k	Lecture participation Discussion of seminar material and assignments Lab participation & assignments k	%4&4:4*4Y:4YIk k	Weekly feedback on weekly assignments, feedback on lab reports, thought papers, examinations k
&! <i>To enhance your interest, intrigue and understanding of the physiological, particularly neurological, basis of behaviour, function, cognitions and thought.</i> k	Lecture participation Discussion of seminar material and assignments Lab participation & assignments k	%4&4:4*4Y:4YIk k	Weekly feedback on weekly assignments, feedback on lab reports, thought papers, examinations k

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Course: PSYC 2P37

Course Calendar Description:

Brain and Behaviour II

(also offered as ["0@9k%w&Fk](#)

Physiological basis of neural mechanisms relevant to human actions and cognitions such as motivation (sleep, sexual behaviour, eating), emotions and stress, learning and memory, communication and language, and thought (psychological/psychiatric disorders).

Lectures, 3 hours per week; lab, 3 hours per week.

Restriction: open to PSYC (single or combined), HEAR, ["0@9](#) , SPLS majors and PSYC minors until date specified in Registration guide.

Prerequisite(s): [PSYC 2P35](#) [k%w&Fk](#)

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
<p><i>To provide foundational knowledge of neural substrates, brain, and brain-behaviour relationships.</i></p>	<p>Lecture participation Discussion of seminar material and assignments Lab participation & assignments</p>	<p>4:4*4Y:4YIk</p>	<p>Weekly feedback on weekly assignments, feedback on lab reports, thought papers, examinations</p>
<p><i>To provide learning in a participation/ interactive format with participation labs, dissection labs, films, readings, presentations and case studies to encourage active exchange of ideas.</i></p>	<p>Lecture participation Discussion of seminar material and assignments Lab participation & assignments</p>	<p>4:4*4Y:4YIk</p>	<p>Weekly feedback on weekly assignments, feedback on lab reports, thought papers, examinations</p>
<p><i>To enhance your interest, intrigue and understanding of the physiological, particularly neurological, basis of behaviour, function, cognitions and thought.</i></p>	<p>Lecture participation Discussion of seminar material and assignments Lab participation & assignments</p>	<p>4:4*4Y:4YIk</p>	<p>Weekly feedback on weekly assignments, feedback on lab reports, thought papers, examinations</p>

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Course: PSYC 2P49

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Course Calendar Description:

Perception

Introduction to human perception emphasizing visual and auditory perception, including theory and applications to neurophysiology, speech recognition and development. Integration of smell, taste, balance and time perception to demonstrate the biological and cognitive bases of perception.

Lectures, 2.5 hours per week, seminar, 1 hour, alternating weeks.

Restriction: open to PSYC (single or combined), HEAR, "0@9 majors and PSYC minors until date specified in Registration guide.

Prerequisite(s): [PSYC 1F90](#)!

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Learning Outcome k A student will be able to: k	Learning Activity/Experience k A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement k
1. An introductory-level understanding of the steps and processes in human perception, including the relationship between physical stimulus, sensory receptors, neural activity and perceptual experience. k	Attending lectures and completing readings	Successful completion of weekly on-line quizzes, midterms and final exams k Y4%4&k	Develop assignments that are not dependent on tests and quizzes
2. Demonstrate understanding of perceptual phenomena	Attending seminars and completing seminar/lab assignments	Successful completion of lab/seminar assignments k YIk	Better integrate online/computer-based demonstrations

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Course: PSYC 3F40

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Course Calendar Description:

Psychological Research

Research methods emphasizing correlational and experimental designs and associated analyses (regression and ANOVA). Development of the student's capacity to evaluate scientific literature, generate testable hypotheses, gather and analyze data and report results in a manuscript.

Lectures, 3 hours per week.

Restriction: open to PSYC (single or combined) and "0@9" majors with a minimum 77 percent major average and a minimum of 8.0 overall credits and 3.0 PSYC credits above.

Prerequisite(s): PSYC 1F90!

Prerequisite(s): PSYC 1F90 and 2F23!

Corequisite(s): PSYC 3P39!

Note: Neuroscience majors with a minimum 70 percent major average and a minimum of 8.0 overall credits may register. Contact the Department.

Completion of this course will replace previous assigned grade and credit obtained in PSYC 3P30!

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Learning Outcome A student will be able to:	Learning Activity/Experience A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement
YK Understand the scientific method and research designs and analyses in psychology.	Attending lectures, reading the textbook, completing problem sets, writing artificial research manuscripts, conducting all stages of own mini-research project	Performance on tests and exams, on problem sets, on writing manuscripts, and on executing the mini-research project 1,2,3,11,20	Continuous updating and critical review of course materials and assessments, with monitoring of student responsiveness and performance
%K Write clearly and informatively in the appropriate style (e.g., for a scientific manuscript or for other works)	Grrk@)e, but especially writing artificial research manuscripts	Performance on writing artificial research manuscripts and on segments of tests and exams concerning proper writing Y4%4&4Y&k	Grrk@)rk
&K Design research studies appropriate to research questions, analyze data using appropriate methods, and interpret data critically and accurately.	Grrk@)e, but especially completing problem sets and conducting relevant stages of own mini-research project	Performance on problem sets and on different segments of mini-research project, of tests and exams, and of writing manuscripts Y4%4&4YY4Y&k	Grrk@)rk

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Course: PSYC 3P05

Course Calendar Description:

Visual Perception From Eye to Brain

Historical and contemporary issues in the cognitive neuroscience of visual perception. Different approaches to perception, emphasizing neuroimaging and neuropsychology. Topics may include face and object perception, emotion, short and long-term memory, and neural correlates of consciousness.

Lectures, lab, 3 hours per week.

Restriction: open to PSYC (single or combined), 0@9 majors and PSYC minors until date specified in Registration guide. After that date open to PSYC (single or combined), 0@9 majors, GHUM, SOSC students and minors until date specified in Registration guide.

Prerequisite(s): PSYC 1F90; one of PSYC 2P354 & PSYC 2P204

<p>Learning Outcome</p> <p><i>A student will be able to:</i></p>	<p>Learning Activity/Experience</p> <p><i>A student will learn this by:</i></p>	<p>Assessment</p> <p><i>Achievement of this outcome will be demonstrated by:</i></p>	<p>Strategy for Improvement</p>
<p>Y!A comprehensive understanding of various topics of visual perception (e.g., working memory, object recognition, etc.), the brain regions and mechanisms that mediate these processes, and the tools and techniques used to assess this relationship.</p>	<p>Attending lectures and completing textbook readings</p>	<p>Successful completion of midterm and final exams.</p> <p>%4&k</p>	<p>Incorporating more frequent and smaller assessments</p>
<p>%!The ability to read, understand, critically analyze, and communicate (both orally and in writing) the main purpose and findings of scientific articles relating to visual perception.</p>	<p>Reading assigned seminar papers and summarizing papers in both seminar presentations and research paper</p>	<p>Successfully summarizing seminar readings and presenting article in seminar presentation and engaging in/leading seminar discussion</p> <p>:4+k</p>	<p>Add presentation/discussion skills unit</p>
<p>&!The ability to assess controversies in visual perception by independently finding original research articles relating to these debates, and by communicating how the findings</p>	<p>Finding original research article in visual perception and relating it to ongoing debate in field</p>	<p>Successfully summarizing debate and article in research essay</p> <p>Y&4YFk</p>	<p>Incorporate library quizzes to help facilitate research</p>

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of the articles speak to a current debate in the field. k			
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Course: PSYC 3P06

Course Calendar Description:

Introduction to Cognitive Neuroscience

(also offered as [NEUR 3P06](#))

Neural basis of human cognition, emphasizing contemporary methods in cognitive neuroscience. Methodology (e.g. neuroimaging), perception, memory, language, emotion, executive functions and social cognition.

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined) [1F90](#), SPSL majors and PSYC minors until the date specified in the Registration guide. Students must have a minimum of 8.0 overall credits and 1.0 PSYC credit above [PSYC 1F90](#).

Prerequisite(s): [PSYC 1F90](#); one of [PSYC 2P204](#) or [PSYC 2P204](#) or permission of the instructor.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
A comprehensive understanding of various topics of cognitive neuroscience (e.g., attention, perception, etc.), the brain regions and mechanisms that mediate these processes, and the tools and techniques used to assess this relationship.	Attending lectures and completing textbook readings	Successful completion of midterm and final exams.	Incorporating more frequent and smaller assessments
The ability to read, understand, critically analyze, and communicate (both orally and in writing) the main purpose and findings of scientific articles relating to cognitive neuroscience.	Reading assigned seminar papers and summarizing papers in both seminar presentations and research paper	Successfully summarizing seminar readings and presenting article in seminar presentation and engaging in/leading seminar discussion	Add presentation/discussion skills unit
The ability to assess controversies in cognitive neuroscience by independently finding	Finding original research article in cognitive neuroscience and relating it to ongoing debate in field	Successfully summarizing debate and article in research essay	Incorporate library quizzes to help facilitate research

original research articles relating to these debates, and by communicating how the findings of the articles speak to a current debate in the field.			
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Course: PSYC 3P18

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Course Calendar Description:

Adolescent Development

Theories and research pertaining to development during adolescence. Topics include biological, cognitive and socioemotional development, and the various contexts (family, peers, schools, culture) in which development occurs.

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined), "0@9", PHTH majors and PSYC minors until date specified in Registration guide. After that date open to PSYC (single or combined), "0@9", PHTH majors, GHUM, SOSC students and PSYC minors until date specified in Registration guide. Students must have a minimum of 8.0 overall credits or 3.0 PSYC credits above PSYC 1F90. Not open to CHYS (single or combined) majors.

Prerequisite(s): PSYC 1F90 and %wY%

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Learning Outcome k A student will be able to: k	Learning Activity/Experience k A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement k
YK Improve active reading (distinguishing between a thesis and supporting pieces of evidence)	Producing <u>hand-written</u> outline(s) of the textbook chapters. For each heading, the student must write—in his or her own words: the main point or points of that section (up to 3). This will help students learn to distinguish between the central claim and the details presented to support it. The design of the outline is up to you. k	Successful distillation of the main points of the subsections of the text in the chapter outlines and the production of relevant points of discussion. k Y+k	N/A: This component of the course has generated positive feedback.
2. critical thinking (e.g., identifying questions, problems, or gaps in knowledge; evaluating, analyzing, synthesizing, or critiquing information)	Chapter outlines must include 5 “items” (total) that are a combination of: something that stood out as particularly interesting or surprising; connections between material presented in the text and other things, such as current events or material you learned from another course; and questions about the material in that section. At least two items must be questions (to be addressed in seminar). k The paper assignment requires the student to apply knowledge learned in the course to the real world.	Successful distillation of the main points of the subsections of the text in the chapter outlines and the production of relevant points of discussion. k Successful execution of the selected paper topic. k Y+k	N/A: Chapter outlines have generated positive feedback. k More detailed instruction for the paper options, update the articles and topics to keep them current.

3. oral communication	Group presentation in seminar of “learning module” teach a lay audience about a current debate/controversy related to adolescence and the scientific evidence informing it.	Successful oral presentation of the student’s portion of the learning module and ability to answer questions about it. k +k k	wÖvide more detailed instructions and tips for students on effectivevk oral communication. Provide examples (online videos).
4. written communication	Students compose a short paper on a topic of their choosing (from a list provided). The paper is either a summary and analysis of an empirical article, a policy position paper, or a critical evaluation of a media report on an issue related to adolescence.	Successful execution of the selected paper topic. Demonstration of ability to integrate feedback on the draft. k Y&k	Dedicate more time in seminar or lecture to going over the writing tips sheet provided by the instructor.
5. provision of constructivvk feedback	Students provide peer-reviews of another student’s paper draft. They also provide constructive feedback on oral presentations.	wÖvision of relevant and helpful feedback on peer’s paper. k 20	wÖvide a rubric to help guide and standardize students’ feedback
6. Team work	Students work as a team (groups of 3-4) on a learning module (with citations) that they present orally in seminar and turn in as a Powerpoint presentation. The learning module is meant to teach a lay audience about a current debate/controversy related to adolescence and the scientific evidence informing it.	Anonymous peer review of other group members, executed through a form students complete in seminar. k 20	"/.k
6. Acquisition of content knowledge.	Student will learn to: - Identify major features of adolescent development - Distinguish between different domains of development (e.g., physical, psychosocial, cognitivr>k - Understand how development in one domain may be affected by development in another - Explain how contextual factors (e.g., culture, poverty, peers) affect adolescent development - Analyze, evaluate, interpret, and communicate research findings related to adolescent development	Attending lecture; Reading and outlining chapters of the textbook; Attending and participating in seminar discussions; Completion of paper and learning module assignments. :4*4Y%4Y+k	Eliminate homework quizzes based on textbook question pool. These do not contribute to the goals of active reading and critical thinking.

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	- Bring scientific theory and evidence to bear in discussions/dilemmas related to adolescents		
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Course: PSYC 3P19

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Course Calendar Description:

Psychology of Aging

Theories and methods of lifespan development as applied to the special issues that emerge during late adulthood; how physiological, social and cognitive factors interact as individuals cope with the tasks of later years.

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined), [CHYS](#) (single or combined), [CHYS](#) (Honours)/BEd (Primary/Junior), HEAR, ["0@9](#), PHTH, SPLS majors and PSYC minors until date specified in Registration guide. After that date open to PSYC (single or combined), [CHYS](#) (single or combined), [CHYS](#) (Honours)/BEd (Primary/Junior), HEAR, ["0@9](#), PHTH, SPLS majors, GHUM, SOSC students and PSYC minors until date specified in Registration guide. Students must have a minimum of 8.0 overall credits or 3.0 PSYC credits above [PSYC 1F90](#).

Prerequisite(s): [PSYC 1F90](#), [PSYC 2P12](#), [CHYS 2P10](#)

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Learning Outcome k A student will be able to: k	Learning Activity/Experience k A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement k
YK Demonstrate understanding of major theories and methods of aging research.	Attending lecture, reading the textbook, and completing weekly study questions.	Success on the midterm and final exams (consisting of multiple choice and short answer questions). k %4&k	Could make weekly study questions more interactive through a forum on Sakai.
%K Identify the main biological, cognitive, and social changes that occur in older adulthood.k	Attending lecture, reading the textbook, and completing weekly study questions. k	Success on the midterm and final exams (consisting of multiple choice and short answer questions). k %4&k	Could make weekly study questions more interactive through a forum on Sakai.
&K Create a podcast critically evaluating recent research on aging.	Creating a podcast with a partner communicating a finding from a recent empirical study on aging.	A clear, concise review of a recent study (including the background rationale, research question, methodology, and summary of results) communicated with some creative flair. k YY4Y+k	k
!:K Develop a series of interview questions (to be posed to an older individual) based on their understanding of	Attending lecture, reading the textbook, and thinking about the unique life experiences of the individual in question.	Questions will be submitted to the instructor prior to the interview. A good set of questions will be based on the theories and research covered in the class and textbook.	Consider having students review each other's questions and providing peer feedback.

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major theories and themes in aging research.		k 20	
*!K Write a comprehensive case study based on their interview that integrates the individual's responses with findings from the literature.	9f iewing their interviewee's responses and comparing these responses to findings from relevant studies in the literature.	Writing up a summary of their participants' responses and citing relevant literature. Complete interview notes to be submitted along with the case study paper. 20	k
F!K Appreciate that personal history, experiences, lifestyle, and beliefs interact with and influence an individual's aging experience.	9f iewing their interviewee's responses and comparing these responses to findings from relevant studies in the literature.	The final section of case study paper includes a personal reflection on what the student has learned from the interview experience. k 18,20	Consider having students discuss their experiences with partners in class.
I!K Engage in debate and discussion on various topics in the field of aging.	Attending lectures and seminars. Preparing for seminars prior to attendance (e.g., doing the reading, watching assigned films). k	Participation in lecture and seminar. Discussion points handed in at the end of each seminar. k :4*k	k

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Course: PSYC 3P20

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Course Calendar Description:

Human Memory

Current theories and research on human memory from cognitive psychology and cognitive neuroscience. Encoding, storing, and retrieving memories in different time scales and/or systems of memory (e.g., short-term memory, working memory, long-term memory, prospective memory).

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined) majors and minors until date specified in Registration guide. Students must have a minimum of 8.0 overall credits or 3.0 PSYC credits above [PSYC 1F90](#).

Prerequisite(s): [PSYC 1F90](#) and [2P20](#).

Note: may be offered on-site or online

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Learning Outcome k <i>A student will be able to:</i> k	Learning Activity/Experience k <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement k
YK Demonstrate understanding of classic and current issues in human memory, including both behavioural and neuropsychological approaches to data and theory.	Attending lecture, reading the textbook, and completing weekly study questions.	Success on the midterm and final exams (consisting of multiple choice and short answer questions). k %4&k	Could make weekly study questions more interactive through a forum on Sakai.
%K Explain the different stages and forms of memory, and how these different types of memory are carried out in the brain.	Attending lecture, reading the textbook, and completing weekly study questions. k	Success on the midterm and final exams (consisting of multiple choice and short answer questions). k %4&k	Could make weekly study questions more interactive through a forum on Sakai.
&K Summarize and discuss the findings from a recent study on human memory in plain language.	Create a presentation with a partner covering a recent study from the human memory literature.	A clear, concise review of a recent study (including the background rationale, research question, methodology, and summary of results). Produce visually interesting PowerPoint slides without too much text. k	k

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<i>4.K Engage in debate and discussion on various topics in the field of memory.</i>	Attending lectures and seminars. Preparing for seminars prior to attendance (e.g., doing the reading, watching assigned films).	Participation in lecture and seminar. Discussion points handed in at the end of each seminar k :4*k	Consider incorporating peer review/feedback.
*!K Formulate a research question in writing about a topic of interest to you related to memory, describe the current state of the literature on the topic, and design a study to address your research question.	Reading the textbook, identifying an area of interest, reading the literature in that area, developing a research question and a way to experimentally test that question.	Writing a research proposal that describes the past literature, rationale for the proposed study, and includes a description of the methods (study design, participants, procedures), expected results, and future directions for the area of research. k YYk	k

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Course: PSYC 3P26

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Course Calendar Description:

Puberty and Adolescence

Adolescent development from a psychobiological perspective. Topics include occurrence and consequence of early puberty, the influence of hormones and social factors on adolescent development, and adolescent engagement in risky behaviour.

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined) majors and minors until date specified in Registration guide. Students must have a minimum of 8.0 overall credits or 3.0 PSYC credits above PSYC 1F90.

Prerequisite(s): PSYC 1F90 and PSYC 1F91

Note: may be offered on-site or online

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Learning Outcome A student will be able to:	Learning Activity/Experience A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement
Understand concepts, theory, and research on development from a psychobiological perspective	Midterm, final exam, research paper	Midterm, final exam, research paper	Update lectures and research.
Improve communication by participation in seminar	Seminar participation	Seminar participation	Consider alternate seminar assignments.
Formulate a written thesis and defend it with research findings	Research paper	Research paper	Consider providing alternate writing assignments to a research essay.

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Course: PSYC 3P30

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Course Calendar Description:

Critical Thinking in Psychology

Development of scientific thinking and discovery procedures in psychology. The design of experiments and quasi-experiments. Control of variables, statistical power and alternative sources of data. Critical analysis of typical examples of contemporary psychological research.

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined), 0@9 majors and PSYC minors with either a minimum of 8.0 overall credits or 3.0 PSYC credits

Prerequisite(s): PSYC 1F90

Prerequisite(s): PSYC 1F90 and 2F23

Completion of this course will replace previous assigned grade and credit obtained in PSYC 3F40

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Learning Outcome A student will be able to:	Learning Activity/Experience A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement
1. Understand the scientific method and research designs and analyses in psychology.	Attending lectures, reading the textbook, completing assignments, participating in seminar activities.	Performance on tests and exams, on assignments, and on seminar activities.	Continuous updating and critical view of course materials and assessments, with monitoring of student responsiveness and performance
2. Design scientifically sound psychological studies	Attending lectures, but especially the seminar activities where students design psychological studies.	Performance on seminar activities (e.g., group presentations)	Attending lectures
3. Critically consume research-related findings	Attending lectures, but especially attending lectures, reading the textbook, and completing assignments.	Performance on assignments.	Attending lectures
4. Respond to criticisms of psychological science.	Attending lectures, but especially attending lectures and readings the textbook.	Performance on assignments.	Attending lectures

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Course: PSYC 3P34

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Course Calendar Description:

Psychology of Human Sexuality

Introduction to the psychological study of human sexuality. Biopsychosocial approaches are applied to different issues in human sexuality. Topics may include sexual differentiation, gender identity and sexual orientation, attraction and love, paraphilias, and sexual physiology!

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined), ["0@9](#) majors and PSYC minors until date specified in Registration guide. Students must have a minimum of 8.0 overall credits or 3.0 PSYC credits above [PSYC 1F90](#)!

Prerequisite(s): [PSYC 1F90](#)!

Completion of this course will replace previous assigned grade and credit obtained in [HLSC 2P50](#)!

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Learning Outcome k A student will be able to: k	Learning Activity/Experience k A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement k
YK To obtain a broad Y rÖ view of a number of topics on human sexuality	Quiz, test, exam, lectures, seminars, assignments	Quiz, test, midterm exam, final exam, seminar participation grade, debate, seminar assignment k Y4%4&4:4YF4Y+k	Updated lectures and seminars
%K to understand research approaches to the study of sexuality	Quiz, test, exam, lectures, seminars, assignments	Quiz, test, midterm exam, final exam, seminar participation grade, debate, seminar assignment k Y4%4&4:4YF4Y+k	Update lectures and seminars
&K Be open and honest communication about sexuality	seminars	Seminar participation grade, debate k :4YFk	9r ise “warm-up” seminars
:!K To understand the role of biology, environment, and culture in shaping our sexuality	Quiz, test, exam, lectures, seminars, assignments k	Quiz, test, midterm exam, final exam, seminar participation grade. k Y4%4&4:k k k	Update lectures and seminars k k k
*!K To develop skills in critical thinking, public speaking, writing, and	Debate, seminars	Seminar participation grade, debate k :4YFk	9r ise seminar activities

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working as member of a group k			
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Course: PSYC 3P37

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Course Calendar Description:

Human Evolutionary Psychology

Human psychological characteristics in terms of function and evolution. General principles of evolutionary psychology, individual differences, group differences, adaptations to the natural environment, kin relationships, co-operation and conflict, sexuality and mating, and social organization. Critical evaluation of evidence that a given psychological characteristic may be an adaptation.

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined) majors and minors until the date specified in the registration guide. Students must have a minimum of 8.0 credits or 3.0 PSYC credits above PSYC 1F90!

Prerequisite(s): PSYC 1F90; one of PSYC 2P254, 2P304, or 2P24 or permission of the instructor.

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Learning Outcome A student will be able to:	Learning Activity/Experience A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement
Understand human evolutionary psychology	Reading the textbook, attending lectures, writing an essay, and participating in seminars (including delivery of a seminar presentation)	Performance on class tests and exams	Continuous updating and critical review of course materials and assessments, with monitoring of student responsiveness and performance
Write about fundamental issues in human evolutionary psychology, with critical review and synthesis of relevant research	Writing an essay, especially writing an essay	Performance on essay	Continuous updating and critical review of course materials and assessments, with monitoring of student responsiveness and performance
Discuss and present fundamental issues in human evolutionary psychology	Writing an essay, especially participating in seminars (including delivery of a seminar presentation)	Performance in seminars	Continuous updating and critical review of course materials and assessments, with monitoring of student responsiveness and performance

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Course: PSYC 3P38

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Course Calendar Description:

Motivation and Emotion

Scientific examination of human and nonhuman motivation and emotion from evolutionary, physiological, developmental and social perspectives. Topics include hunger, thirst, reproduction, sleep, aggression, stress, arousal, love, drug addiction, curiosity and creativity.

Lectures, seminar, 3 hours per week

Restriction: open to PSYC (single or combined), 0@9 majors and PSYC minors until date specified in Registration guide. Students must have a minimum of 8.0 overall credits and 3.0 PSYC credits above PSYC 1F90.

Prerequisite(s): PSYC 1F90

Completion of this course will replace previous assigned grade and credit obtained in PSYC 3V88.

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Learning Outcomes <i>A student will be able to:</i>	Learning Activities / Experiences <i>A student will learn this by:</i>	Assessments <i>Achievement of this outcome will be demonstrated by:</i>	Strategies for Improvement
Scientifically describe, from evolutionary, physiological, developmental, and social perspectives, fundamental dimensions of motivation and emotion that are common to all mammals, and distinguish distinctively human and social issues.	Attending lectures and completing all assigned weekly readings – including assigned textbook and journal readings	%4k&k k k	Review lectures
Discuss contemporary topics in human motivation and apply classroom material to discussions with peers in a seminar setting	Completing assigned journal article readings and preparing weekly seminar participation questions, attending weekly seminars	: w k k	Stay current with topics
Demonstrate skills in presenting findings of a recently published research paper on a topic of their choice relating to human motivation	Prepare and present a recently published finding in the field of human motivation	:4k6k	w
Integrate multiple complex ideas into concise writing	Preparing a short essay summarizing selected recently published research on human motivation	Y%k	Use seminar leaders to help students write concisely

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Course: PSYC 3P39

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Course Calendar Description:

Computer Data Analysis

(also offered as "0@9k&w&6k

Applications of computers to management and analysis of data, including data entry, statistical procedures and interpretation of output, using SPSS.

Lectures/lab, 3 hours per week.

Restriction: open to PSYC (single or combined) and "0@9 majors with a minimum 77 percent major average, a minimum of 8.0 overall credits and 3.0

PSYC credits above PSYC 1F90!

Prerequisite(s): PSYC 1F90 and 2F23!

Note: Neuroscience majors with a minimum 70 percent major average and a minimum of 8.0 overall credits may register. Contact the Department.

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Learning Outcome k A student will be able to: k	Learning Activity/Experience k A student will learn this by: k	Assessment k Achievement of this outcome will be demonstrated by: k	Strategy for Improvement k
1. Better understand a variety of useful inferential data analytic techniques	Attending weekly lectures and completing all 11 weekly hands-on assignments focused on different techniques each week.k	Success on the 11 weekly hands-on assignments. Success on the midterm and final exam. k %4k&4kY+k k	Add a question to many assignments where they use the technique learned that week to answer a question of their own from a large data file they are given.
2. Better understand a variety of descriptive statistics and useful data screening techniques	Attending weekly lectures and completing all 11 weekly hands-on assignments focused on different techniques each week.k	Success on the 11 weekly hands-on assignments. Success on the midterm and final exam. k %4k&4kY+k k	Add a question to many assignments where they use the technique learned that week to answer a question of their own from a large data file they are given. k
3. Become familiar with how to set-up data files, run commands, and interpret output files in SPSS data analysis software package for variety of techniques	Attending weekly lectures and completing all 11 weekly hands-on assignments, each of which require them to enter data into SPSS in an appropriate format, run appropriate commands, and interpret the resultant output. k	Success on the 11 weekly hands-on assignments. Success on the midterm and final exam. k %4k&4kY+k k	Add a question to many assignments where they use the technique learned that week to answer a question of their own from a large data file they are given. k
4. Improve their ability to write-up and results of various types of studies using APA style as	Attending weekly lectures and completing the 9 of the weekly assignments which	Success on the 11 weekly hands-on assignments. Success on the midterm and final exam.	Add a question to many assignments where they use the technique learned that week to

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appropriate for a thesis or journal paper submission	require them to report their results in an APA-style paragraph.	k %4k&4kY+k k	answer a question of their own from a large data file they are given. k
5. Better understand how to create, read, and communicate graphical data	Attending weekly lectures and completing all of the 11 weekly assignments which require them to create and interpret graphical data. k	Success on the 11 weekly hands-on assignments. Success on the midterm and final exam. k %4k&4kY+k k	k
6. Better understand the nature and assumptions of null hypothesis testing	Attending weekly lectures that focus on various ways to test hypotheses and completing the corresponding weekly assignments	Success on the 11 weekly hands-on assignments. Success on the midterm and final exam. k %4k&4kY+k k	Add a question to many assignments where they use the technique learned that week to answer a question of their own from a large data file they are given. k
7. Increase experimental design skills and ability to critique experimental designs	Attending weekly lectures and completing all 11 weekly assignments.	Success on the 11 weekly hands-on assignments. Success on the midterm and final exam. k %4k&4kY+k k	Add a question to many assignments where they use the technique learned that week to answer a question of their own from a large data file they are given.
8. Better understand how data analysis skills can be a marketable asset for them in the “real world” and gaining confidence in terms of what they have to offer in terms of understanding what can be done with data	Attending weekly lectures where we discuss this. Completing the weekly hands-on assignments helps gain confidence with analyzing, interpreting data in a variety of ways with SPSS software.	Success on the 11 weekly hands-on assignments. Y+k	Perhaps add a question to the last assignment asking them some ways in which they think SPSS skills in particular (or data analysis skills more generally) could be a marketable skills on the job market

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Course: PSYC 3P45

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Course Calendar Description:

Comparative Psychology I

Introduction to comparative psychology, emphasizing the similarity and differences of behaviour patterns across several species (including humans).

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined), "0@9 majors and PSYC minors until date specified in Registration guide. After that date open to PSYC (single or combined), "0@9 majors, GHUM, SOSC students and PSYC minors until date specified in Registration guide. Students must have a minimum of 8.0 overall credits or 3.0 PSYC credits above PSYC 1F90!

Prerequisite(s): PSYC 1F90!

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Learning Outcome k A student will be able to: k	Learning Activity/Experience k A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement k
YK Understand concepts, theories, and research in comparative psychology.	Success on midterm and final exam; success on research paper; active participation in lecture and seminar.	Midterm exam, final exam, seminar participation grade, lecture participation grade, literature review essay =%4k&4k:4k*4kY%>	Update lectures and consider alternative assessments.

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Course: PSYC 3P46

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Course Calendar Description:

Psychology of Food and Eating

Psychological, biological and social factors influencing food/beverage consumption in humans, including theoretical and applied aspects. Topics include physiological control of food intake; biological, orosensory, social and cultural factors influencing food selection; the effects of food on behaviour; eating disorders; and obesity and weight control.

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined), OC1 4@9 majors and PSYC minors until date specified in Registration guide. After that date open to PSYC (single or combined), 0@9 4OC1 majors, GHUM, SOSC students and PSYC minors until date specified in Registration guide. Students must have a minimum of 8.0 overall credits or 3.0 PSYC credits above PSYC 1F90!

Prerequisite(s): PSYC 1F90!

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Learning Outcome k <i>A student will be able to:</i> k	Learning Activity/Experience k <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement k
1. Use food and eating to illustrate the ways in which psychology is able to examine complex phenomena from biological, perceptual, cultural, and developmental perspectives	Completing tests; completing reflection papers; seminar participation	Tests; reflections papers; seminar participation (1, 4, 14) k	Update lectures, seminars, and consider alternative assessments
2. develop a deeper understanding of the factors that underlie our own eating behavior	Completing tests; completing reflection papers; seminar participation	Tests; reflections papers; seminar participation (1, 4, 14) k	Update lectures, seminars, and consider alternative assessments
3. help prepare students for the various challenges of the workplace after university. This includes expectations regarding deadlines and due dates for assessment items	Completing reflection papers; seminar participation	Tests; reflections papers; seminar participation (1, 4, 14) k	Update lectures, seminars, and consider alternative assessments
4. critically evaluate pseudoscientific claims by countering them with empirical research	Completing tests; completing reflection papers; seminar participation	Tests; reflections papers; seminar participation (1, 4, 14) k	Update lectures, seminars, and consider alternative assessments

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5. develop awareness of the social, political and economic forces that determine food preferences, choices, and behaviors, and their complex interplay.	Completing tests; completing reflection papers; seminar participation	Tests; reflections papers; seminar participation (1, 4, 14) k	Update lectures, seminars, and consider alternative assessments
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Course: PSYC 3P51

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Course Calendar Description:

Health Psychology

Introduction to psychological aspects of health and illness. How behaviour, social context and attitudes influence physiological processes and our health. Topics include health promotion, stress, psychoneuroimmunology, health and physical activity, pain and the health care system.

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined), ["0@9](#), PHTH majors and PSYC minors until date specified in Registration guide. After that date open to PSYC (single or combined), ["0@9](#), PHTH majors, GHUM, SOSC students and PSYC minors until date specified in Registration guide.k

Prerequisite(s): [PSYC 1F90](#)!k

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Learning Outcome k <i>A student will be able to:</i> k	Learning Activity/Experience k <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement k
YK Identify and explain the history, research methodology, theory and content of the study of human healthy psychology so that students may apply the learning to their own life or career	Lectures, textbook readings	%4k&k	9ř ise lectures
%K Critique popular media coverage of health psychology issues by comparing popular press with the scientific lit.	Assigned journal article and popular press readings; k Weekly seminar participation questions; k Weekly seminars	&4kY+k	Stay current with topics
&K Demonstrate skills in presenting findings of popular media critique of current health psychology issues	Prepare and present a current health research topic and critique discrepancies between information provided by the popular press and the scientific community	:4k+k	Neep current on sources of popular press media outlets of scientific information
:!K Integrate multiple complex ideas into a concise writing critique	Preparing a short essay critiquing popular press coverage of a selected health psychology research finding	Y+k	@se seminar leaders to help students with concise writing.

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Course: PSYC 3P59

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Course Calendar Description:

Introduction to Human Neuropsychology

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Brain function and behaviour through basic research on neuropsychological and neurocognitive function through clinical syndromes and cases. Topics include neural basis of perception, memory, language, motor control, emotion and executive functions. Recovery and advances in assessment, diagnosis, prognosis and treatment of such functional deficits.

Lectures, seminar, 4 hours per week.

Restriction: open to PSYC (single or combined), "0@9, SPLS majors and PSYC minors until date specified in Registration guide. Students must have a minimum of 8.0 overall credits and 1.0 PSYC credit above PSYC 1F90!

Prerequisite(s): PSYC 1F90/PSYC 2P354/w&F for permission of the instructor.

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Learning Outcome k A student will be able to: k	Learning Activity/Experience k A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement k
1. Understand and explain basic ideas and concepts key in field of human neuropsychology	Attending lectures, participating in seminar discussions, reading the textbook, integrating ideas from readings in written and oral presentations k	2, 3, 4, 8, 12, 18 (generating questions and answers for seminar discussions based on seminar readings) k	B@e not taught this course yet.
2. Communicate basic ideas and concepts in human neuropsychology via their synthesis and comprehension of journal article	Writing short summaries of article, 15 mins presentation of paper in front of peers and evaluators k k k	4,9,10 k	;kkkkkkkkkkkkkkkkkkkkk; k
3. Identify and evaluate basic techniques and assessment used in human neuropsychology k	Attending lectures, participating in seminar discussions, reading the textbook. k	%4k&k	;kkkkkkkkkkkkkkkkkkkkk;
4. Analyze and evaluate assessment techniques in identifying and diagnosing neurobehavioral disorders	Attending lectures, participating in seminar discussions, reading the textbook. Participating in experiential component (still to be determined—? rain Injury Niagara or Alzheimer Society of Niagara)	4,5,20	;kkkkkkkkkkkkkkkkkkkkk;

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:! <i>Engage in debates on various controversial topics in the field of cognitive development</i> k	Participating in discussion in lecture and debates and discussion in seminars.	Successful participation in lecture and seminar. (4,5)	Allow for expression of ideas in both written and oral forms to encourage active participation from every student.
*! <i>Design information on children's cognitive development aimed at the general public or specific knowledge users</i> k	Participating in knowledge mobilization activities in seminar.	Success in producing knowledge mobilization pamphlet in seminar. (4)	Consider ways to improve this assignment such as allowing students to work independently or in small groups.

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Course: PSYC 3P65

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Course Calendar Description:

Brain and Language

Neural basis of human language, emphasizing contemporary methods in cognitive neuroscience. Topics include methodology (e.g., behavioural and neuroimaging), biological and developmental bases of language, foundations of language, and word and sentence comprehension.

Lectures/lab, 3 hours per week.

Restriction: open to PSYC (single or combined), ["0@9"](#), SPLS majors and PSYC minors until the date specified in the Registration guide. Students must have a minimum of 8.0 overall credits and 1.0 PSYC credit above [PSYC 1F90](#).

Prerequisite(s): [PSYC 1F90](#); one of [PSYC 2P204](#), [PSYC 2P204](#), or [PSYC 2P204](#) or permission of instructor.

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Learning Outcome k A student will be able to: k	Learning Activity/Experience k A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement k
1. Understand and explain basic ideas and concepts key in field cognitive neuroscience of language	Attending lectures, participating in seminar discussions, reading the textbook, integrating ideas from readings in written and oral presentations k	2, 3, 4, 8, 12, 18 (generating questions and answers for seminar discussions based on seminar readings) k	Revising lectures and updating seminar readings k
2. Demonstrate skill in use of software programs necessary for experimental work	Attend and participate in seminars dedicated to Excel (data analysis) and Psychopy (open-source software for programming experiments), work on assignments	4YIk	Update examples in lecture. Consider "Testable" software program
3. Apply basic ideas and concepts in neuroscience of language	Choose a journal article (from list of 25 provided) and summarize and present as conference-style poster	4,9,10	Update selection of papers
4. Communicate basic ideas and concepts in neuroscience of language via their synthesis and comprehension of journal article k 5. Identify and evaluate basic techniques used in cognitive neuroscience of language k k	Writing short summaries of article, presenting a conference-style poster in front of peers and evaluators k k Attending lectures, participating in seminar discussions, reading the textbook. k	4,9,10 k k k k k k k %4&k	Use Kritik (online assessment tool) for students to also evaluate each other k k k k k k Update lecture examples

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Course: PSYC 3P67

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Course Calendar Description:

Bases of Neuropsychopharmacology

(also offered as "0@9k&wF" k

Mechanisms of drug action and classification of psychoactive agents. Elements of pharmacokinetics (drug absorption, distribution, metabolism and elimination) and a review of the major groups of psychoactive agents including hypnotics, analgesics, anxiolytics, antidepressants, psychostimulants and neuroleptics, emphasizing mechanisms and consequences of drug action on selected neurotransmitter systems (dopaminergic, noradrenergic, cholinergic, serotonergic).

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined), "0@9 majors and PSYC minors until date specified in Registration guide. Students must have a minimum of 8.0 overall credits or 3.0 PSYC credits above PSYC 1F90!k

Prerequisite(s): PSYC 1F907 PSYC 2P35k V0kw&F

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Learning Outcome k A student will be able to: k	Learning Activity/Experience k A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement k
1. Understand principles of pharmacokinetics, i.e., drug delivering to the body and to the brain, their metabolism, and elimination.	Attending lectures, studying handouts, reading supplementary materials at the seminars and taking active part at the seminars.	Successfully finishing three detailed in-class tests and taking active part in seminar discussions. k Y4:k	Answering students' questions by emails with further explanations, providing more handouts and references.
2. Understand pharmacodynamics, i.e., mechanisms of drug action and the way they change neuronal and brain functions.	Attending lectures, studying handouts, reading supplementary materials at the seminars and taking active part at the seminars.	Successful finishing three detailed in-class tests and taking active part in seminar discussions. k Y4:k	Answering students' questions by emails with further explanations and providing more handouts and references.
3. Understand classification of psychoactive agents	Attending lectures, studying handouts, reading supplementary materials at the seminars and taking active part at the seminars.	Successfully finishing three detailed in-class tests and taking active part in seminar discussions. k Y4:k	Answering students' questions by emails with further explanations and providing more handouts and references.
4. Understand principles of the relationship between chemical structure and their pharmacological effects.	Attending lectures, studying handouts, reading supplementary materials at the seminars and taking active part at the seminars.	Successfully finishing three detailed in-class tests and taking active part in seminar discussions. k Y4:k	Answering students' questions by emails with further explanations and providing more handouts and references.

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5. Gaining deeper understanding of chemical nature of brain functions and the danger of using psychoactive drugs.	Attending lectures, studying handouts, reading supplementary materials at the seminars and taking active part at the seminars.	Successfully finishing three detailed in-class tests and taking active part in seminar discussions. k Y4:k	Answering students' questions by emails with further explanations and providing more handouts and references.
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Course: PSYC 3P68

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Course Calendar Description:

Sleep and Wakefulness

Functions, mechanisms, rhythms, physiology and psychology of sleep contrasted with counterparts during wakefulness. Current issues in sleep research and sleep disorders medicine.

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined), "0@9 majors and PSYC minors until date specified in Registration guide. After that date open to PSYC (single or combined), "0@9 majors, GHUM, SOSC students and PSYC minors until date specified in Registration guide. Students must have a minimum of 8.0 overall credits or 3.0 PSYC credits above [PSYC 1F90](#)!

Prerequisite(s): [PSYC 1F90](#)!

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Learning Outcome k <i>A student will be able to:</i> k	Learning Activity/Experience k <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement k
1. Understand basic principles and practice in sleep research and sleep disorders medicine	Attending lectures and doing assigned reading	Success on exams; demonstration of understanding through written essay and seminar discussion k %4&4:4Y&k	Spend time showing students how to connect reading material to lectures and take effective notes
2. Know the basic neural mechanisms and electrophysiological features of sleep and wakefulness k	Attending lectures and doing assigned reading; complete sleep neural mechanisms tutorial created by instructor. k	Success on exams; demonstration of understanding through written essay and seminar discussion k %4&4:4Y&k	Find digital resource, possibly interactive, for content.
3. Understand homeostatic and circadian processes underlying sleep/wake regulation k	Attending lectures and doing assigned reading;	Success on exams, and demonstrating understanding of core concepts throughout course. k %4&k	Test and retest on construct and require application of it throughout course
4. Outline diagnostic criteria and treatment options for various sleep disorders k	Attending lectures and doing assigned reading; seminar readings and participation k	Success on tests and demonstration of understanding and critical thinking in seminars k Y4:k	More use of diagnostic manuals (e.g., DSM, WHO, ICSD) and r aluation of case studies; consider guest lecture by medical professional

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5. Think critically on controversial issues in sleep research	Attending lectures and doing assigned reading; seminar readings and participationk	Mainly through success in seminar, e.g., showing critical thinking and evaluation of readings and intelligent discussion :k	More training of TAs on how to extract critical thinking on issues
6. Develop strategies to increase awareness of the consequences of sleep loss and sleep disorders	Attending lectures and doing assigned reading; seminar readings and participation; major essay assignmentk	Seminars include discussions on awareness campaigns, and major essay focusses on development of an awareness campaign (emphasized in rubric). 4,20	Spend time to show them examples of successful real-world awareness campaigns for sleep from National Sleep Foundation.

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Course: PSYC 3P72

Course Calendar Description:

Drugs and Behaviour

Basic principles of the kinetics of drugs and drug action, drug effects and drug interactions. Psychology of addictive behaviour. Effects of psychoactive drugs on behaviour and experience. Focus on recreational drugs and psychiatric medications.

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined), ["0@9](#), PHTH majors and PSYC minors until date specified in Registration guide. Students must have a minimum of 8.0 overall credits or 3.0 PSYC credits above [PSYC 1F90](#).

Prerequisite(s): [PSYC 1F90](#).

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Y! Understand basic principles of drug action and their effects on behaviour and society	Completing online lectures, digital resources, and doing assigned reading before class. Participating in in-class discussions.	Success on tests, assignments, essay, presentation Y4+4Y+k	Find quality online neuroscience tutorial
%! Know the basic principles of pharmacology and brain mechanisms of drug effects	Completing online lectures, digital resources, and doing assigned reading before class. Participating in in-class discussions.	Success on tests, assignments, essay, presentation Y4+4Y+k	Find quality online neuroscience tutorial
&! Understand the bio-psycho-social impact of drugs that are commonly used, illicit and restricted drugs, and prescription medications	Completing online lectures, digital resources, and doing assigned reading before class. Participating in in-class discussions.	Success on tests, assignments, essay, presentation Y4+4Y+k	On-going content development focused on current drugs of use that change with time, and current social topics and controversies. Use current news stories for discussion.
:! Consider issues around substance use disorders including treatment and prevention	Attending lectures, participation in class discussions, and doing assigned reading; in-class group exercises on treatment and prevention	Success on tests, assignments, essay, presentation Y4+4Y+k	Add assignment on DSM8* diagnostic categorization of Substance Use Disorders. Find new digital resources on comorbid diagnosis.

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*!K Develop digital presentation skills and participate in discussions on topics in Drugs and Behaviour	Through completion of digital presentation assignment and participation in in-class discussions. Through working with teaching assistant as resource during presentation development.	Success on digital presentation assignment and feedback 8,20	wÖVide students examples of well-done presentations. Increase duration of presentation assignment.
F!K Critically evaluate the literature and write a scholarly paper on a specific drug	Through completion of digital presentation assignment and completion of essay assignment.	Success on essay assignment k Y+k	Incorporate more skill development resources as part of course, e.g., reading literature, writing, APA, time management.

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Course: PSYC 3P75

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Course Calendar Description:

Stress

Modern theories and misconceptions about the effects of stress on psychology and health. Diverse material ranges from workplace theories of stress to the effect of stress on our immune system. Coping strategies, methods of stress appraisal and behavioural effects are also studied and physiological systems involved with the mammalian stress response.

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined), "0@9 majors and PSYC minors until date specified in Registration guide. After that date open to PSYC (single or combined), "0@9 majors, GHUM, SOSC students and PSYC minors until date specified in Registration guide.

Prerequisite(s): [PSYC 1F90](#)!

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Learning Outcome k A student will be able to: k	Learning Activity/Experience k A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement k
Compare and contrast the various theories and approaches to studying psychological and physiological stress	Attending Lectures, reading journal articles, discussing readings/issues in seminar	%4k&k k	9i ision of lectures, new seminar readings k
Discuss contemporary issues in the field of stress research and critique how it is presented to the general public in the popular media	Completing assigned journal article readings and preparing weekly seminar participation questions, attending weekly seminars	&4kY+k	Updating and maintaining current topics in seminar based on current literature k
Summarize and present current findings in stress researchk	Prepare and present a current stress research topic and critique discrepancies between information provided by the popular press and the scientific community	:4k+k	Neep current on sources of popular press media outlets of scientific information
Integrate multiple complex ideas into a concise writing critique k	Preparing a short essay critiquing popular press coverage of a selected recent stress psychology research finding	Y+k	@se seminar leaders to help students with concise writing k

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Course: PSYC 3P87

Course Calendar Description:

Behavioural Neuroscience

(also offered as ["0@9k&w+I>k](#)

Integrative approach to basic neuroscience, focusing on behavioural analysis in animal models, insights into brain and behaviour relationships provided by the traditional and the latest techniques (e.g., stereotaxic surgery, DREADDs, viral vectors and optogenetics transgenic organisms)!k

Lectures, 2 hours per week; lab, 3 hrs alternating weeks.

Restriction: open to PSYC (single or combined) and ["0@9](#) majors until the date specified in Registration guide. Students must have a minimum of 8.0 ovřÖ@j]k credits.

Prerequisite(s): [PSYC 2P36](#) and [?1-,kYw6%!k](#)

Completion of this course will replace previous assigned grade and credit obtained in PSYC (["0@9](#)) 3F81, 3P81 and 3P82.

Learning Outcome <i>A student will be able to:</i>	Learning Activity/Experience <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement
Y! Develop critical eye for current literature, experimental design and ethical issues in behavioural neuroscience	Success on quizzes, tests, lab reports, and final paper	Y4kY&4kYIk	Update lectures and consider alternate assessments
%! Gain knowledge about behavioural neuroscience assessments and techniques	Success on quizzes and tests; success in labs	Y4kYIk	Update lectures and consider alternate assessments
&! Learn tools for appropriate data acquisition and data analysis	Success on quizzes, tests, and labs	Y4kYIk	Update lectures, labs, and consider alternate assessments
:! Improve skills in scientific writing	Success on lab reports and final paper	Y&4kYIk	Consider an additional paper.

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Course: PSYC 4P07

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Course Calendar Description:

Psychology Students' Transition to Work

Use of the e-portfolio process to develop students' metacognitive awareness and their understanding of key concepts associated with transitions from university to the workplace.

Lectures, 1.5 hours per week; online activities, 1.5 hours per week.

Restriction: open to PSYC (single or combined) majors with a minimum of 13.5 credits and 5.0 PSYC credits above [PSYC 1F90](#)!

Prerequisite(s): [PSYC 1F90](#) and [2P01](#)!

Completion of this course will replace previously assigned grade and credit obtained in [PSYC 4F91](#)!

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Learning Outcome kk A student will be able to:k kk	Learning Activity/Experience kk A student will learn this by:k kk	Assessment Achievement of this outcome will be demonstrated by:k	Strategy for Improvement kk k
YK Identify and reflect upon key learning experiences (course-based, work-related, or co-curricular activities) and any changes in interests, values, and personality since PSYC 2P01: Roadmap to Careers in Psychology in second year	Attending lecture and completing the Reflections on Experiences and Skills Assignment	Success on the Reflections on Experiences and Skills Assignment; participation in lecture (5, 18)	Making this assessment more interactive!
%K Explore possible career paths including a career of interest as well as 3 other careers and reflect on which might be the best fit or most realistic	Attending lecture and completing the video assignment and reflection on a career of interest; completing a career conversation with a professional in the field	Success on the video assignment and reflection on a career of interest; participation in lecture (5, 18)	Change to peer assessment of video in future years.
&K Update your resume and tailor your current resume and cover letter to a specific job posting	Attending lecture and completing the resume and cover letter refresh assignment	Success on the resume and cover letter refresh assignment; participation in lecture =*4kY+>k	B@e students submit two versions of their resume and cover letters for two different positions
:!K Create a professional development plan for what training, education, or	Attending lecture and completing the Professional Development Assignment	Success on the Professional Development Assignment; participation in lecture (5, Y+>k	Perhaps incorporate their professional development training plan into their informational

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experiences you will pursue after your undergraduate degree			interview with a professional in the field by asking them to ask for advice and input on their training plan.
*!K Consider both Plan A and an alternate plan (Plan B) and training plans for both and communicate these plans verbally in the form of a video	Attending lecture and completing the Alternate Universe Reflection Assignment.	Success on the Alternate Universe Reflection Assignment; participation in lecture. (5, 18)	Consider students engaging in peer evaluations of each others' Plan A and Plan B.
F!K Understand the basics of knowledge mobilizations and how knowledge of psychological biases might be advantageous in the workplace	Attending lecture and completing the Knowledge Mobilization Assignment.	Success on the Knowledge Mobilization Assignment; participation in lecture. (5, 7+>k	Consider having students create video or poster presentations of their knowledge mobilization assignment.
!K How to effectively address conflict, engage in uncomfortable conversations, and consider issues of diversity in a workplace setting	Attending lectures on Workplace Conflict resolution and Diversity in the Workplace.	Participation in Lecture (5)	Consider requiring students to complete a quiz after each lecture.
+!K Effectively communicate their experiences, skills, and interests through the development of an e-portfolio	Completing the E-portfolio assignment.	Success on the E-portfolio assignment. =Y6>k	Consider requiring students to create a short video introducing themselves in their E-portfolios (like an elevator pitch).

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Course: PSYC 4P22

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Course Calendar Description:

PSYC 4P22

Advanced Seminar in Human Memory

Historic and current ideas about memory and the implication these have for our approach to memory in research, everyday function, medical and legal contexts as revealed through such topics as recollections, tip of the tongue, hypnosis and memory, eyewitness testimony and various memory disorders (psychogenic amnesia, childhood amnesia).

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined), 0@9 majors and PSYC minors with a minimum of 13.5 overall credits.

Prerequisite(s): PSYC 1F90

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Learning Outcome k A student will be able to: k	Learning Activity/Experience k A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement k
YK Understand concepts, theory, and research in human memory	Success on quizzes and tests; seminar participation; literature review essay	Quizzes, Tests, seminar participation grade, literature review essay (1, 4, 12)	Update lectures and readings.
%K Formulate a thesis in writing and support it with empirical research	Success on literature review essay	, iterature review essay (12)	Konsider additional writing assignments.
&K Communicate ideas orally and in written form	Success in seminars; success on literature review essay	Seminar participation grade; literature review essay (4, 12)	Consider novel forms of assessment.

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Course: PSYC 4P34

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Course Calendar Description:

Psychobiology of Human Sexuality

Advanced topics in human sexuality focusing on current research and a biopsychological perspective!

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined) majors and minors until date specified in Registration guide. Students must have a minimum of 13.5 overall credits or 5.0 PSYC credits above PSYC 1F90!

Prerequisite(s): PSYC 1F90, PSYC 3P34, HLSC 2P50 or permission of the instructor.

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Learning Outcome k A student will be able to: k	Learning Activity/Experience k A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement k
YK Understand concepts, theory, and research in human sexuality from a biopsychological perspective!	Success on midterms, final exam, seminar participation, paper	Midterm, Final Exam, Seminar Participation grade, literature review essay =%4&4:4Y%>k	Update lectures and research.

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Course: PSYC 4P49

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Course Calendar Description:

Human Emotion

Historical and current beliefs about the nature of human emotions. Topics may include the definition and measurement of emotions, connections between emotional experience, emotion physiology, and emotion regulation across positive and negative affect, the relationship between emotion and other domains of psychology, developmental changes in emotion across adulthood, and/or emotion-related psychopathology (depression, autism).

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined), "0@9 majors and PSYC minors until the date specified in Registration guide. Students must have PSYC 1F90 credits or 5.0 PSYC credits above PSYC 1F90.

Prerequisite(s): PSYC 1F90

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Learning Outcome A student will be able to:	Learning Activity/Experience A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement
Understand concepts, theory, and research in the study of human emotion	Success on tests, paper, and seminar participation	Tests, seminar participation grade, paper	Update lectures and seminars
Write a critique of a recent popular press article on human emotion	Success on critique paper	paper (13)	Konsider alternative papers
Present a paper in seminar	Success on seminar presentation	Seminar presentation (8)	Consider group presentations

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Course: PSYC 4P55

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Course Calendar Description:

Neural Mechanisms, Hormones and Behaviour

(also offered as "0@9k:w**">k

Relations among the hormones of the endocrine system, the nervous system and behaviour; the involvement of hormones in sexual behaviour, the mechanisms of stress and cognition; relevant research methodologies.

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined) and "0@9 majors until date specified in Registration guide. Students must have a minimum of 13.0 over credits or 5.0 PSYC credits above PSYC 1F90!

Prerequisite(s): PSYC 2P35 k v Ökw&F

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Learning Outcome k A student will be able to: k	Learning Activity/Experience k A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement k
YK Demonstrate an understanding of the major principles underlying hormonal control mechanisms that underlie regulation of behaviour	Attending Lectures, reading journal articles, discussing readings/issues in seminar	%4k&k k	9i ise lecture and assessments
%K Demonstrate general understanding of the research approaches and techniques for the investigation of hormone-behaviour relationships.	Completing assigned journal article readings and preparing weekly seminar participation questions, attending weekly seminars	&4kY+k	Updating and maintaining current topics in seminar k
&K Demonstrate the ability to read, critically evaluate, and synthesize readings from the primary literature in the field as evidenced by oral presentations and written work.	Prepare and present a current research paper on a topic of their choice in this field	:4k+k	@pdating and maintaining current topics in seminar k

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Course: PSYC 4P56

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Course Calendar Description:

Maturation and Development

(also offered as [CHYS 4P56](#))

Influences of brain maturation on psychological development and vice versa, and the implications for behaviour.

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined), [CHYS](#) (single or combined), [CHYS](#) BA (Honours)/BEd (Primary/Junior) and ["0@9](#) majors until date specified in Registration guide. Students must have a minimum of 13.0 overall credits or 5.0 PSYC credits above [PSYC 1F90](#).

Prerequisite(s): one of [PSYC 2P124](#) & [PSYC 2P101](#) & [CHYS 2P101](#).

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Learning Outcome k A student will be able to: k	Learning Activity/Experience k A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement k
1.explain major concepts, research findings, controversies in human developmental neuroscience	Weekly lectures; weekly thought papers and discuss them in seminar; reading assigned material; preparing study questions for midterm and final; writing term paper.	2,3,8,12,14, 20	Revision of lecture, new seminar readings
2.apply concepts and findings from developmental neuroscience to real world issues in education, developmental disabilities, and health	Weekly lectures; weekly thought papers and discuss them in seminar; reading assigned material; preparing study questions for midterm and final; writing term paper.	2,3,8,12,14, 20	Keeping up to date with the scientific literature, including public science magazines
3.appreciate and explain the complex relations between psychological development and neurodevelopmental processes including genetic interactions, and recognize faculty applications of neuroscience to developmental psychology in the popular press.	Weekly lectures; weekly thought papers and discuss them in seminar; reading assigned material; preparing study questions for midterm and final; writing term paper.	2,3,8,12,14, 20	Keeping up to date with the scientific literature, including public science magazines

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Course: PSYC 4P60

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Course Calendar Description:

Psychology of Bilingualism

Methodology (e.g., behavioural and neuroimaging), second language acquisition (in children and adults), social psychological aspects of bilingualism and cognitive consequences of bilingualism.

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined), 0@9, SPLS majors and PSYC minors until date specified in Registration guide. Students must have a minimum of 8.0 credits and 3.0 PSYC credits above PSYC 1F90!

Prerequisite(s): PSYC 1F90 or permission of the instructor.

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Learning Outcome A student will be able to:	Learning Activity/Experience A student will learn this by:	Assessment Achievement of this outcome will be demonstrated by:	Strategy for Improvement
1. Understand and explain basic ideas and concepts key in psychological and neuroscientific aspects of bilingualism	Attending lectures, participating in seminar discussions, reading the textbook, integrating ideas from readings in written and oral presentations	2, 3, 4, 8, 12, 18 (generating questions and answers for seminar discussions based on seminar readings)	Using lectures and updating seminar readings
2. Understand and explain what is bilingualism via recall of language families and dialects	Attending lectures, participating in seminar discussions, reading the textbook, integrating ideas from readings in written and oral presentations	%	Update examples in lecture. Consider “Testable” software program
Evaluate experiences and judgments faced by language learners	Learning and performing 2 minutes of foreign language script (Hindi movie Kabhi Khushi Kabhie Gham); transcript provided by me. Write up Reflective Practice piece on performance.	+	Incorporate Kritik software (online peer assessment tool) so that students can also evaluate performances and reflective practice writings.
4. Communicate basic ideas and concepts in cognitive and neuroscientific aspects of bilingualism via their synthesis and comprehension of journal article.	15 minute presentation of journal article in front of peers and TA in seminar	:46	Incorporate Kritik software (online peer assessment tool) so that students can also evaluate each other’s presentations.

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5. Understand and explain what is cultural humility and its role in multilingualism and multicultural society. k	Attend the cultural humility workshop (created by Prof Joe Norris and performed by Brocku Dramatic Arts students). Watch YouTube videos by creators of cultural humility (Melanie Tervalon; Jann Murray-Garcia) as well as <i>Juliane Mosely</i> .k	Y:k	Incorporate Kritik software (online peer assessment tool) so that students can also evaluate each other's reflective practice writing.

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Course: PSYC 4P63

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Course Calendar Description:

Human Psychophysiology

Concepts related to acquisition and analysis of bioelectrical signals recorded from the brain, pupillary system, skeletomotor system, cardiovascular system, electrodermal system and respiratory system. Applications to health and human factors include arousal, attention, emotion, stress, immunology, lie detection and brain injury.

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined), HEAR, ["0@9](#) majors and PSYC minors until the date specified in Registration guide. Students must have a minimum of 8.0 overall credits or 3.0 PSYC credits above [PSYC 1F90](#)!

Prerequisite(s): [PSYC 2P35](#) & [OKW&F](#)

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Learning Outcome k <i>A student will be able to:</i> k	Learning Activity/Experience k <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement k
YK Understand the 8 methods used and the types of research questions addressed in the field of Psychophysiology;k	Lectures, readings	Aests, essay, presentation Y4+4kY&k	More hands-on use of methods, and in-lab demonstrations
%K Understand relations between human behaviour and electrical activity of the brain (EEG, ERPs), the motor response system (EMG), and peripheral measures of physiological activity (EDA, EOG, HR);	Lectures, readings k	Tests, essay, presentation Y4+4kY&k	Find better new text
&K 3. Become familiar with methods and applications of brain imaging techniques (PET, fMRI, MEG);	Lectures, readings k	Tests, essay, presentation Y4+4kY&k	Find guest lecturer with more expertise in this focused and specialized area; add use of digital resources

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:! K Be able to critically evaluate the literature and discuss applications of Psychophysiology.	Lectures, readings, writing, presentation; lie detection assignment k	Essay (lie detection) and presentation +4kY&k	More digital resources; more applied material (e.g., neuropsych case studies)
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Course: PSYC 4P92

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Course Calendar Description:

History of Psychology

Historical development of the multiple orientations within psychology. Philosophical and scientific influences on the field of psychology and their relevance to new developments in psychology.

Lectures, seminar, 3 hours per week.

Restriction: open to PSYC (single or combined) majors with a minimum 80 percent major average and permission of the Department.

Prerequisite(s): one of [PSYC 3F40](#), [PSYC 4P30](#), [CHYS 3P10](#) & [WY*](#)

Corequisite(s): [PSYC 4F91](#)

Note: students not completing a thesis in the same year or students in combined programs completing a thesis in another discipline should contact the Department.

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Learning Outcome k <i>A student will be able to:</i> k	Learning Activity/Experience k <i>A student will learn this by:</i>	Assessment <i>Achievement of this outcome will be demonstrated by:</i>	Strategy for Improvement k
1. Understand the historical roots of modern psychology.	Attending lectures, reading the textbook, completing assignments, participating in seminar activities.	Performance on papers, presentations, assignments, and seminar activities. k :4k+4kY&4Y+k	Continuous updating and critical review of course materials and assessments, with monitoring of student responsiveness and performance
2. Reflect upon and integrate several subfields within psychology.	Attending lectures, reading the textbook, completing assignments, participating in seminar activities.	Performance on papers, presentations, assignments, and seminar activities. k :4k+4kY&4Y+k	Continuous updating and critical review of course materials and assessments, with monitoring of student responsiveness and performance
3. Demonstrate an awareness of how the field of psychology has been shaped by its historical context.	Attending lectures, reading the textbook, completing assignments, participating in seminar activities.	Performance on papers, presentations, assignments, and seminar activities. k :4k+4kY&4Y+k	Continuous updating and critical review of course materials and assessments, with monitoring of student responsiveness and performance
4. To critically analyse (i.e. identify and discuss the how and why) psychological theory, research, and practise by considering social, historical, and political influences.	Attending lectures, reading the textbook, completing assignments, participating in seminar activities.	Performance on papers, presentations, assignments, and seminar activities. k :4k+4kY&4Y+k	Continuous updating and critical review of course materials and assessments, with monitoring of student responsiveness and performance

PSYC 1F90: FOUNDATIONS OF PSYCHOLOGY

WHO TO CONTACT IN THE COURSE

If you cannot find the answer to your question in this manual, please contact one of the following people.

GENERAL QUESTIONS (e.g., questions about extension on an assignment, writing the exam at an alternative time, changing seminars, etc.):

The Course Manager, Tammy Stewart

Tammy's work hours: Monday – Friday 8:30 – 4:30 (drop by or email for an appointment)

MC B329

905-688-5550 x5048

Psyc1f90@brocku.ca

QUESTIONS ABOUT LECTURE OR TEXTBOOK MATERIAL, OR ABOUT 1ST TERM PROJECT:

The Senior Tutors

Office hours (Available in Sakai in the Resources Folder)

MC B304

905-688-5550 x3793

psyc1f90tutors@brocku.ca

QUESTIONS ABOUT SEMINAR MATERIAL (EXCEPT 1ST TERM PROJECT):

Your Peer Facilitator

Speak to Peer Facilitator at seminar (they are not paid to hold office hours)

CONTACTING THE PROFESSORS

John Mitterer: jmitterer@brocku.ca

Kathy Belicki: kbelicki@brocku.ca

Tanya Martini: tmartini@brocku.ca

Office hours TBA

Please note that email is not checked or answered during evenings or weekends.

Student Resources @ Brock

Brock Mobile App

Get in touch with campus security, foot patrol, counselling services, and the library via phone or email. Report emergencies quickly and easily, and receive push notifications for your safety on both Brock campuses. Connect with personal help lines, make appointments and find your way around with an interactive campus map. Users can also access local transit schedules and engage with the University on social media. Available at the App Store, Google Play, and Blackberry World.

Brock University's Mental Health and Wellness website

<https://brocku.ca/health-services/mental-health>

Student Health Services

Harrison Hall, next to Campus Security
x 3243

- Medical care and treatment
- Mental health care (assessment and counselling)
- Sexual health issues
- Health counselling and education

Student Development Centre

Personal Counselling

Schmon Tower 400
x 4750 (24 hour line)

Services for Students with Disabilities

Schmon Tower 411
x 3240
sswd@brocku.ca

A-Z Learning Services

brocku.ca/learning-services
learning@brocku.ca

- Academic skill workshops
- Drop in consultations
- Support for:
 - First generation students
 - Aboriginal students
 - ESL students
 - Transfer students
 - ALL students who could improve their academic skills! 😊

Questions about lecture or text content? Consult a Senior Tutor, office hours posted on Sakai, or email psyc1F90tutors@brocku.ca. About seminar material? Ask your PF during seminar. Administrative question (extensions, questions about marks, etc.)? Contact Tammy Stewart at psyc1F90@brocku.ca, x5048

Career Services

Learning Commons

x 3242

career@brocku.ca

- Career Resource Centre
- Mentorship Plus Program
- Career Skills Workshops

ESL Services

x 3947

eslbrock@brocku.ca

Student Ombudsperson: Carole Moss

ombuds@busu.net

x 4159

- The Ombudsperson is a neutral party who advocates for fair policies, procedures, practices and decision-making on campus.
- Common undergraduate concerns brought to the ombuds officer:
 - Academic Misconduct Charge/Appeal
 - Grade Appeal
 - Academic Probation, Suspension, Debarment
 - Help navigating University Policies and Procedures

Community Resources in Niagara

CRISIS LINES: FOR WHEN YOU NEED TO TALK TO SOMEONE RIGHT AWAY:

**** If you are in danger, call 911 immediately. If you need urgent medical or psychiatric attention, go to the nearest hospital. ****

1. Distress Centre of Niagara If you are depressed, in distress or in a crisis, call the Distress Centre.

St. Catharines, Niagara Falls And Area

905-688-3711

Port Colborne, Wainfleet and Area

905-734-1212

Fort Erie and Area

905-382-0689

Grimsby, West Lincoln

905-563-6674

2. COAST Niagara Crisis Outreach and Support Hotline COAST provides services to people in the Niagara Region who are in crisis and have a mental health concern. Ongoing telephone support and/or referral to appropriate follow-up services may be recommended to prevent further crisis.

Operates 7 days a week, 24 hours a day: 1-866-550-5205

3. The Brock Student Sexual Violence Support Centre (A Safer Brock)

Questions about lecture or text content? Consult a Senior Tutor, office hours posted on Sakai, or email psyc1F90tutors@brocku.ca. About seminar material? Ask your PF during seminar. Administrative question (extensions, questions about marks, etc.)? Contact Tammy Stewart at psyc1F90@brocku.ca, x5048

If you or a friend needs support or have questions you can text 289-990-SAFE(7233). All services are available 24-hours and are anonymous, confidential, and free.

Other Community Resources:

Canadian Mental Health Association

Crisis Line 1-866-550-5205
Niagara Branch (905) 641-5222
info@cmhaniagara.ca

Niagara Region Sexual Assault Centre: 905-682-4584

Women's Place (St. Catharines): 905-684-8331 (Shelter and counseling for women experiencing violence or abuse.)

Private Practice Psychologists and Psychotherapists:

An internet search will turn up registered psychologists as well as private practice psychotherapists and social workers with varying training and areas of specialty. In addition, you can find resources for community and self-help support.

If you would like to see a registered psychologist, the Ontario Psychological Association also offers a free referral service in which you may call and list the qualities you would like in a psychologist (gender, city of practice, type of problem they specialize in, type of therapy they offer) and they will provide you with names and numbers. However, not all psychologists are registered with this service. Their number is 1-800-268-0069 and their website is <http://www.psych.on.ca/Utilities/Find-a-psychologist.aspx>

Resources for Psychology Majors

Online Psychology Major's Manual:

<http://www.brockpsycsite.com/>

Academic Adviser: Kirsti van Dorsser

x 5683
kvandorsser@brocku.ca

Undergraduate Officer: Carolyn Hafer

x 4297
chafer@brocku.ca

Department Chair: Cathy Mondloch

x5111
cmondloch@brocku.ca

Questions about lecture or text content? Consult a Senior Tutor, office hours posted on Sakai, or email psyc1F90tutors@brocku.ca. About seminar material? Ask your PF during seminar. Administrative question (extensions, questions about marks, etc.)? Contact Tammy Stewart at psyc1F90@brocku.ca, x5048

PSYC 1F90: FOUNDATIONS OF PSYCHOLOGY COURSE OUTLINE

September 2016 – April 2017

PSYC 1F90 Professors:

First Term: John Mitterer,

Second Term: Kathy Belicki, Tanya Martini

PSYC 1F90 Course Manager:

Tammy Stewart

Required Materials:

1. Mitterer, J. O., Coon, D., & Martini, T. (2016). **Psychology: A Modular Approach, 1st Canadian Edition**
2. Belicki, K., Martini, T., Mitterer, J., & Stewart, T. (2016). **PSYC 1F90 Course Manual**

Recommended Materials:

3. Mitterer, J. O., Coon, D., & Martini, T. (2016). **MindTap to accompany Psychology: A Modular Approach, 1st Canadian Edition**

Course Grading:

1.	Progress examination (December, 2016)	15%
2.	Project	25%
3.	Seminar participation	20%
4.	Research participation	4%
5.	Sakai quizzes (4 quizzes, 4% each)	16%
6.	Final examination (April, 2017)	20%

Questions about lecture or text content? Consult a Senior Tutor, office hours posted on Sakai, or email psyc1F90tutors@brocku.ca. About seminar material? Ask your PF during seminar. Administrative question (extensions, questions about marks, etc.)? Contact Tammy Stewart at psyc1F90@brocku.ca, x5048

IF YOU REQUIRE AN EXTENSION OR ACCOMODATION

Course policies create a fair playing field where each student is treated equitably. We are willing to make accommodations based on individual needs and circumstances where it is justified and reasonable; however it is your responsibility as a student to communicate these needs in a proactive way and to provide the appropriate documentation.

GET DOCUMENTATION

- Must be on letterhead or the Brock medical form
- Must be signed by a health care professional (family physician, specialist, nurse practitioner, psychologist, counselor or equivalent)
- Dates on which academic work is affected must be listed. Medical documentation that does not include dates will not be accepted.
- In the case of compassionate grounds, an obituary or funeral notice is sufficient documentation.

NOTIFY THE COURSE MANAGER

- It is your responsibility to make us aware of any situation requiring accommodation (for example, extra time on an assignment) *before* the assignment deadline and *within 72 hours of your illness*.
- Email psyc1f90@brocku.ca.
- Include a scanned or photographed copy of your medical note with the email if possible.

UNSURE?

- If you think your situation might warrant an extension or accommodation but you are not sure, it is always best to be proactive and ask. Tammy Stewart handles all such requests and information is kept confidential. You can speak with her in person, by phone at extension 5048, or by email at psyc1f90@brocku.ca.
- While there is no guarantee that your request will be granted, it is easier to help a student who takes action early than one who waits until it is too late when often not much can be done.

DUE DATES AND LATE PENALTIES

You must complete your course work and exams on or before the assigned date or a late penalty will be applied.

Exams: Exams must be written at the time and place scheduled by the Registrar's office. With the exception of absence due to major medical or compassionate grounds, a late penalty of 20% of the exam grade will be applied to students missing the regular exam.

Project components:

****Project components are to be completed independently; collaboration that leads to overlap in the final paper will be treated as academic misconduct****

Article Summaries (worth 1 mark) due October 24-28

- Summary notes of all three articles must be submitted for the full mark

Method and Results Rough Draft (worth 1 mark) draft due October 31 – November 4

- Method and Results sections should be complete but it is expected that you may need to edit the draft for formatting, spelling, etc., before handing in your final paper

Full Rough Draft (worth 2 marks) due November 7 – 11

- Entire paper (Abstract, Introduction, Method, Results and Discussion sections) should be complete but it is expected that you may need to format for APA style and complete your reference list as well as to edit for clarity and correct spelling, grammar, etc. before handing in your final paper

You must sign a paper copy of your project component in to your seminar leader during your regular seminar time; emailed copies will not be accepted. Assignments will not be accepted by your peer facilitator once your regular seminar ends, unless there is a written confirmation of an extension attached. If you are aware you will be away from seminar the week a project component is due, make arrangements with your peer facilitator to hand your project in at an earlier time.

Project: Due November 14 – 18. Five marks out of 21 (i.e., 23.8% of your project grade) will be deducted per week. The late penalty takes effect the moment your seminar ends and penalties are assigned based on your seminar time (for example, if your seminar is Wednesday from 10:00-10:50, 5 marks are deducted at 10:51. One week later at 10:51 the penalty becomes 10 marks). This applies to both the paper copy submitted in seminar and the turnitin.com submission. You must attach your turnitin.com receipt to the paper copy of your project or your TA will not accept it and you will receive the late penalty. You must sign a paper copy of your project in to your seminar leader during your regular seminar time; emailed copies will not be accepted and students visiting seminars they are not registered in will not be allowed to sign in their papers. If you are aware you will be away from seminar the week the project is due, make arrangements with your peer facilitator to hand your project in at an earlier time. **Late papers and papers with extensions must be handed in to the Course Manager, Tammy Stewart, during her office hours (posted on Sakai) so that she can assess the late penalty.**

Research Participation: The deadline to complete the research participation hours (Option A) is Friday **April 7**. The deadline to hand in the write-ups (Option B) is **your last seminar of Term 2 (the week of April 4-7)**. Participation completed or write-ups submitted after your last seminar has ended will receive a grade of zero. Because students have had all year to complete this assignment, requests for extensions will most likely be denied.

Sakai Quizzes (Available in Sakai in the Tests and Quizzes tab):

Quizzes are available online as follows:

- **8 am Monday Oct 17 through 11 pm Sunday Oct 23**
- **8 am Monday Nov 21 through 11 pm Sunday Nov 27**
- **8 am Monday Feb 13 through 11 pm Sunday Feb 19**
- **8 am Monday Mar 20 through 11 pm Sunday Mar 26**

You will have one week to complete each of the quizzes. You can take each quiz up to three times and your highest mark will be counted toward your grade. Because you have a full week to complete the quiz we will only grant extensions if you can provide documentation to show that you were sick for the entire week. Therefore, do your quiz as early as possible in the week and do not leave the quizzes until the last minute. Quizzes not completed before the deadline will receive a grade of zero. If for some reason you cannot access the quiz, be sure to contact Tammy before the deadline by emailing psyc1f90@brocku.ca

UNIVERSITY POLICIES

IMPORTANT INFORMATION FOR STUDENTS WITH DISABILITIES:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the University community with disabilities. If you require academic accommodations related to a permanent disability (e.g., physical disability, learning disability or major depression or anxiety) to participate in this course, you are encouraged to contact the Student Development Centre Services for Students with Disabilities (SSWD@brocku.ca; 4th floor Schmon Tower, ext. 3240) and also discuss these accommodations with the professor/instructor.

ACADEMIC INTEGRITY:

The following is a message from the Associate Dean of Social Sciences: Because academic integrity is vital to the wellbeing of the university community, Brock University takes academic misconduct very seriously. Academic misconduct includes plagiarism, which involves presenting the words or ideas of another person as if they were your own, and other forms of cheating, such as using crib notes during a test or doing other students' work for them. The penalties for academic misconduct can be very severe. A grade of zero may be given for an assignment or even the course, and a second offense may result in expulsion from the University. Students are urged to read the section of the Brock University Undergraduate Calendar that pertains to academic misconduct. Students are also reminded that the Student Development Centre (Schmon Tower, Room 400) offers free workshops on writing and study skills and on avoiding plagiarism. For more information on academic integrity, visit the website of the Center for Academic Integrity, at www.academicintegrity.org.

INTELLECTUAL PROPERTY NOTICE:

The following is a statement from the University: All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

POLICY ON FINAL GRADE CHANGES:

The university has strict regulations on grade changes. We can only change grades when there is *clear* documentation of grading or clerical error. After we have submitted the final grades for the course in April, if you feel that there are mitigating circumstances that should be taken into consideration, you must file a formal appeal through the Registrar's office or approach the Dean of Social Science.

Questions about lecture or text content? Consult a Senior Tutor, office hours posted on Sakai, or email psyc1F90tutors@brocku.ca. About seminar material? Ask your PF during seminar. Administrative question (extensions, questions about marks, etc.)? Contact Tammy Stewart at psyc1F90@brocku.ca, x5048

**PSYCHOLOGY 1F90 2016-2017 LECTURES
TERM 1 WEEK-AT-A-GLANCE**

LECTURE SECTIONS:

01 T 1000-1200 DHOWES

02 M 1400-1600 DHOWES

03 W 1800-2000 DHOWES

NOTE: ALL TERM 1 CLASSES BEGIN WEDNESDAY SEPTEMBER 7. MONDAY AND TUESDAY LECTURES WILL BE ONE WEEK BEHIND DURING FIRST TERM.

Lecture Week 1: September 7 - 13

Topic: Metacognition (Studying vs. reading, mindfulness, reflective vs. experiential processing, automaticity)

Reading: Mitterer, Coon, & Martini, Modules 1, 34, & 37

Lecture Week 2: September 14 - 20

Topic: Reality (Philosophy, post-modernism, openness to experience, belief-dependent realism, authoritarianism, prejudice)

Reading: Mitterer, Coon, & Martini, Introducing Psychology (Modules 2, 3, 6)

Lecture Week 3: September 21 - 27

Topic: Evidence (Ontology vs. epistemology, empiricism, scientific method, operationism, metaphysics, falsifiability)

Reading: Mitterer, Coon, & Martini, Introducing Psychology (Modules 4 - 5)

Lecture Week 4: September 28 – October 4

Topic: Biology (Evolution, brain/mind, triune brain, evolution, biopsychosocial model, nature/nurture)

Reading: Mitterer, Coon, & Martini, Brain and Behaviour (Modules 7 - 11)

Lecture Week 5: October 5 - 7; 17 - 18 (TRUNCATED WEEK)

Topic: reality (Psychophysics, bottom-up vs. top-down processing, perceptual construction and misconstruction, illusions, art)

Reading: Mitterer, Coon, & Martini, Sensation and Perception (Modules 17 - 22)

NOTE: THE UNIVERSITY IS CLOSED ON THANKSGIVING MONDAY, OCTOBER 10. THE WEEK OF OCTOBER 10-14 IS FALL STUDY BREAK.

<u>Lecture Week 6:</u>	October 19 - 25
Topic:	Experience (Associative vs. cognitive learning, conditioning, situational determinants vs. traits)
Reading:	Mitterer, Coon, & Martini, Conditioning and Learning (Modules 27 - 31)
<u>Lecture Week 7:</u>	October 26 - November 1
Topic:	Elaboration (History, elaborative processing in memory, forgetting)
Reading:	Mitterer, Coon, & Martini, Memory (Modules 32 - 36)
<u>Lecture Week 8:</u>	November 2 – 8
Topic:	Experience (Thinking fast and slow, symbol manipulation, possible worlds)
Reading:	Mitterer, Coon, & Martini, Cognition and Intelligence (Modules 37, 39 - 41)
<u>Lecture Week 9:</u>	November 9 - 15
Topic:	Labeling (“Intelligence”, self-fulfilling prophecies, stereotype threat)
Reading:	Mitterer, Coon, & Martini, Cognition and Intelligence (Module 38)
<u>Lecture Week 10:</u>	November 16 - 22
Topic:	Tolerance (Nomothetic vs. idiographic perspective, feminism, border crossing, gender/sex, clinical psychology)
Reading:	Mitterer, Coon, & Martini, Human Sexuality (Modules 46 - 49)
<u>Lecture Week 11:</u>	November 23 - 29
Topic:	Tools (human factors, human-computer interface design, artificial intelligence)
Reading:	Mitterer, Coon, & Martini, Applied Psychology (Modules 75 - 78)
<u>Lecture Week 12:</u>	November 30 - December 6
Topic:	Integration (Term overview, review, exam outline)
Reading:	No new lecture reading for this week

**PSYCHOLOGY 1F90 2016-2017 SEMINARS
TERM 1 WEEK-AT-A-GLANCE**

NOTE: TERM 1 SEMINARS BEGIN MONDAY, SEPTEMBER 12.

- Seminar Week 1:** **September 12 - 16**
- Questions:** What does it mean to act professionally as a university student?
- Reading:** Course Manual pages 1-9 and 25-26
- Goals:** We begin with introductions and an orientation into PSYC 1F90 and we will move on to discuss the role of professionalism within the seminar environment and beyond. The professional behaviour expected of university students has three parts: 1) civility; 2) responsibility; and 3) academic integrity. This week we will cover the first two aspects of professional behaviour (academic integrity will be covered in detail in week 3). Be prepared to discuss why acting in a professional manner is important in university and to collaborate on a class code of conduct.
-
- Seminar Week 2:** **September 19 - 23**
- Questions:** How will we carry out the PSYC 1F90 Project?
- Reading:** Textbook, Modules 2, 4, 5, 79
- Goals:** As an example of the scientific approach, we will discuss this year's project. We will also begin the process of collecting and analyzing project data.
- Project:** Read the *PSYC1F90 2016-2017 Project Outline*, and come prepared to discuss the Project in its entirety. Also fill out your *Metacognitive Awareness Inventory (MAI)* and score your responses using the *Metacognitive Awareness Inventory (MAI) Scoring Guide (All included in your Course Manual)*. Make sure to bring your completed data and scoring sheets to seminar.
-
- Seminar Week 3:** **September 26 - 30**
- Questions:** What is academic integrity and what does it have to do with PSYC 1F90?
- Reading:** Complete the academic misconduct quiz found on Sakai. Print your quiz results and bring them with you to seminar. You may wish to prepare for the quiz by reading through Brock's academic integrity website at brocku.ca/academic-integrity. Read and be prepared to discuss "Real Life Cases of Academic Misconduct" found in the seminar readings section of this manual.
- Goals:** We will discuss academic integrity in general and Brock's policies around academic misconduct specifically. We will review some skills that will help you avoid inadvertently plagiarizing someone else's work and will also

Questions about lecture or text content? Consult a Senior Tutor, office hours posted on Sakai, or email psyc1F90tutors@brocku.ca. About seminar material? Ask your PF during seminar. Administrative question (extensions, questions about marks, etc.)? Contact Tammy Stewart at psyc1F90@brocku.ca, x5048

discuss ways that you can protect yourself from being plagiarized by another student.

Project: The full project data set will be introduced in seminars and lectures this week. Start work on a draft of the methods and results section of the project.

Seminar Week 4: October 3 - 7

Questions: What are theories, hypotheses, and the primary literature? How do you summarize articles from the scientific literature?

Readings: Schraw & Dennison, 1994; Schraw, 2009; Fleming & Lau, 2014 (**Project articles available on Sakai in the Resources Folder under Project**) and *Guidelines for Writing an Article Summary (Included in the Readings section of your Course Manual)*.

Goals: Hypothesizing is at the heart of the scientific method. In this seminar we will discuss the relationship between theories, hypotheses, and data collection. We will learn to summarize articles from the primary and secondary scientific literature by working together to summarize Schraw & Dennison (1994).

Project: Begin work on your project article summaries. Continue work on a draft of the methods and results section.

NOTE: THE UNIVERSITY IS CLOSED ON THANKSGIVING MONDAY, OCTOBER 10. THE WEEK OF OCTOBER 10-14 IS FALL STUDY BREAK. NO CLASSES THAT WEEK.

Seminar Week 5: October 17 – 21

Sakai Quiz this week! It covers text readings from Lecture Weeks 1 to 4 inclusive.

Questions: What is the relationship of psychology to neuroscience? What is localization of function? What is a case study?

Reading: Sacks, *Introduction and Chapter 1: The Man Who Mistook His Wife for a Hat (Included in your Course Manual)*.

Goals: In lecture we take time to describe the functioning of the nervous system. In this seminar we will discuss why psychologists need to know something about the brain, or other fields, for that matter, like statistics, linguistics, sociology, biology, etc. Be prepared to describe your favorite novel, movie, or TV show and discuss how it relates to psychology.

Project: Begin work on a draft of your full project paper. Continue work on your article summaries, which are due in seminar next week. Also continue work on a draft of the methods and results section.

Questions about lecture or text content? Consult a Senior Tutor, office hours posted on Sakai, or email psyc1F90tutors@brocku.ca. About seminar material? Ask your PF during seminar. Administrative question (extensions, questions about marks, etc.)? Contact Tammy Stewart at psyc1F90@brocku.ca, x5048

- Seminar Week 6: **October 24 - 28****
- Questions:** What is APA style? What is its function?
- Reading:** Read *A Summary of the Major Features of APA Style* (**included in the project description in your course manual**).
- Goals:** We will discuss APA style and learn to use it properly. Come to seminar with an example of an APA style citation from your own work.
- Project:** Continue work on a draft of the methods and results section, which is due in seminar next week. Continue preparing a draft of your project paper. Hand in your project article summaries and you will earn one mark toward your project.
-
- Seminar Week 7: **October 31 - November 4****
- Questions:** What is bottom-up and top-down processing? What role do bottom-up and top-down processes play in human experience?
- Reading:** Sacks, *Chapter 7: On the Level & Chapter 8: Eyes Right!* (**Included in your Course Manual**).
- Goals:** In lecture we also put a lot of time into discussing sensation and perception. In this seminar we will discuss why the theory of constructivism is important. We will focus on understanding bottom-up and top-down processes.
- Project:** Begin work on the final draft of your project paper. Continue work on the first draft of your project paper, which is due in seminar next week. Hand in your current draft of your method and results sections and you will earn one mark toward your project.
-
- Seminar Week 8: **November 7 - 11****
- Questions:** How are classical and operant conditioning relevant to humans? What is the difference between basic and applied research?
- Reading:** Textbook, Modules 28 and 31.
- Goals:** In this seminar we will discuss the application of theories of conditioning to your everyday life.
- Project:** Continue work on the final draft of your project paper, which is due in seminar next week. Hand in a rough draft of your project and you will earn two marks toward your project.
-
- Seminar Week 9: **November 14 - 18****
- Questions:** What is “metacognition”? What is “deep” vs. “shallow” processing? What are “study skills” and “mnemonics”? How can cognitive and memory theories help improve studying?
- Reading:** Sacks, *Chapter 2: The Lost Mariner* (**Included in your Course Manual**).

Questions about lecture or text content? Consult a Senior Tutor, office hours posted on Sakai, or email psyc1F90tutors@brocku.ca. About seminar material? Ask your PF during seminar. Administrative question (extensions, questions about marks, etc.)? Contact Tammy Stewart at psyc1F90@brocku.ca, x5048

Goals: In this seminar we will discuss the roles of cognition and memory in expert performance (such as doing well on examinations).

Project: ****Project due in Seminar Today** The moment seminar ends your project is late. Late papers must be signed in to the Course Manager, Tammy Stewart (office hours are posted on Sakai). Do NOT hand the paper in by any other method. For example, do NOT put it in the department essay box.**

Seminar Week 10: November 21 - 25

Sakai Quiz this week! It covers text readings from Lecture Weeks 5 to 9 inclusive.

Questions: What is “masculinity” and “femininity”? What is “androgyny”?

Reading: Textbook, Module 47. Print out a copy of the Bem Sex Role Inventory (**Available in Sakai in the Resources Folder**). Bring it to seminar, completed, and be prepared to discuss. NOTE: You will not be required to share your Bem scores with your TA or class.

Goals: To understand the difference between biological, psychological, and social dimensions of sex and gender.

Project: **Five marks will be deducted from your final grade on the project if you hand it in this week. Late papers must be signed in to the Course Manager, Tammy Stewart (office hours are posted on Sakai). Do NOT hand the paper in by any other method. For example, do NOT put it in the department essay box.**

Seminar Week 11: November 28 – December 2

Questions: What can I do to get ready for the midterm exam?

Reading: “What Works, What Doesn’t” article, found in the seminar readings section of this manual.

Goals: In this seminar we will discuss how you can effectively prepare for your exam, and address any questions you may have.

Project: **A further five marks will be deducted from your final grade on the project if you hand it in this week, the last week late projects will be accepted. Late papers must be signed in to the Course Manager, Tammy Stewart (office hours are posted on Sakai). Do NOT hand the paper in by any other method. For example, do NOT put it in the department essay box.**

2016-2017 PSYCHOLOGY 1F90 TERM 2 WEEK-AT-A-GLANCE

PART I: SOCIAL PSYCHOLOGY & THE STUDY OF PERSONALITY

INSTRUCTOR: DR. KATHY BELICKI

Week 1: January 9 - 13

Lecture Topic: 1. Term 2 Orientation
2. Impact of Social Factors: The Power of Social Influence

Lecture Reading: Text, Modules 71 & 73

Seminar Assignment:

- Look over front materials of the Term 2 portion of manual and be prepared for a “quiz” on that material
- In addition, think about your long term goals— What would you like your life to be like in ten years? What do you hope to get out of your education? How can your education at Brock help you get to the life you aspire to have in ten years?

Seminar Discussion:

- Orientation to Term 2 & exams returned.
- In anticipation of next week’s more detailed discussion, a preliminary discussion of the relation of university education to the achievement of life goals. Consider the following quotations:

From Lewis Carroll’s *Alice in Wonderland*:

“Would you tell me, please, which way I ought to go from here?”

“That depends a good deal on where you want to get to,” said the Cat.

“I don’t much care where—” said Alice.

“Then it doesn’t matter which way you go,” said the Cat.

“If you don’t know where you are going, every path will get you there.” –Anonymous

Week 2: January 16 - 20

Lecture Topic: Impact of Social Factors: Social Cognition

Lecture Reading: Text, Modules 70, 74

Seminar Assignment: Watch for an email from your Peer Facilitator with information regarding how to prepare for this seminar.

Seminar Discussion:

This week we will discuss how you can find opportunity in academic activities to develop skills that can improve your employment prospects and quality of life. *Hereafter, in seminar descriptions, statements in italics identify the “transferrable” skill we are targeting in that seminar.* This will help you see the purpose of the seminar and also realize what we are expecting from you in that seminar in order for you to earn your participation grade. ***There will be a bonus question on the final exam***

Questions about lecture or text content? Consult a Senior Tutor, office hours posted on Sakai, or email psyc1F90tutors@brocku.ca. About seminar material? Ask your PF during seminar. Administrative question (extensions, questions about marks, etc.)? Contact Tammy Stewart at psyc1F90@brocku.ca, x5048

that will allow you to earn an extra 2% on the exam in which we will pick some aspect of this course and ask you to indicate which transferrable skill(s) it is designed to develop and to describe one context outside of university in which you could exercise that skill.

NOTE: Friday, January 20th is the last day to withdraw without academic penalty.

Week 3: **January 23 - 27**

Lecture Topic: Study of Personality: An Example of our Uniqueness—Sleep & Dreams

Lecture Reading: Text, Modules 23-26

Seminar Assignment:

Read assigned portions of the *Independent Review Relating to APA Ethics Guidelines, National Security Interrogations, and Torture*. **(Included in the Readings section of your Course Manual).**

By way of background to this reading, the APA (American Psychological Association) is something like a Better Business Bureau for psychology as a profession. Although membership is voluntary and its policies have no legal status, the APA is a very influential group. The APA statement of ethics is widely adopted by universities and governing bodies. Shortly after the events of 9/11, APA changed its ethical guidelines. Subsequently, charges were made that the intent of these changes was to allow psychologists to be involved in the torture of people suspected of terrorism. In 2014 APA paid for an independent review of those allegations, and the review concluded that the changes to the ethical guidelines were motivated by...well, we'll let you read the report's conclusions for yourself!

Seminar Discussion:

This is an opportunity to practice application of abstract psychological principles, in this case social psychological principles, to a "real life" situation. *Applying abstract concepts to concrete situations is both a difficult and transferrable skill, valued by employers.* There's not much point in memorizing facts about conformity or cognitive dissonance, for example, if you can't make use of that information in your life.

- If you were a social psychologist, how would you explain the events documented in this report? What specific principles would you invoke?
- To do this, draw on material from lecture and text discussions of social influence.
- There are other social factors not described in the text or lecture that can be inferred from these events, so become a social psychologist for a day and draw on your own inferences from the material in the report. What other social factors do you see at work here?

Week 4: **January 30 – February 3**

Lecture Topic: 1. Personality: Theories & the evaluation of theories
2. Trait theories
3. Learning theories
4. Psychodynamic theories

Lecture Reading: Text, Modules 50- 54

Seminar Assignment:

1. Festinger, L. (1962). Cognitive Dissonance. **(Included in the Readings section of your Course Manual).**

2. *This week you have another opportunity to practice the important skill of applying abstract concepts to concrete situations:* Bring to seminar a real life example of cognitive dissonance that is not in your text or the Festinger article, and was not described in lecture. Break it down into the following parts:

- Cognition 1: _____
- Cognition 2: _____ (If necessary Cognition 3 etc.)
- How these cognitions are *psychologically* inconsistent
- Ways that the person can make the cognitions be more *psychologically* consistent (in other words, ways they can reduce the dissonance)

Seminar Discussion:

Be prepared to discuss—and air your questions—about what is cognitive dissonance, as well as when and how it affects us.

Note: In this seminar you will be given a keyword that you will need for next week’s assignment. If you miss this seminar, be sure to contact your TA to receive your keyword.

PART II: (COGNITIVE) DEVELOPMENT, EMOTION, EMPATHY & PROSOCIAL BEHAVIOUR

INSTRUCTOR: DR. TANYA MARTINI

Week 5: February 6 - 10

Lecture Topic: (Cognitive) Developmental Psychology

Lecture Reading: Text, Modules 12-16

Seminar Assignment:

Find, read, and bring to seminar a research article about dreams (on the specific topic given to you in seminar last week) from a peer reviewed journal (what is also called a refereed journal). Check the main PSYC 1F90 Sakai site for a link to a YouTube video put together by our psychology librarian, Colleen MacKinnon, which will provide you with some tips on how to find a peer reviewed article on your topic.

Seminar Discussion:

The first goal of this seminar is to give you experience finding and then using, primary research literature to reflect on topics of psychological interest. *The ability to conduct library research is another important transferable skill, as is the ability to read primary research literature.* In fact, being able to find and read primary literature is a valuable life skill because it allows you to make independent informed decisions about important matters such as your health.

- Last week in seminar you were provided with a specific topic/keyword/descriptor to use during your search. Use this as a starting point to find your article.

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- As you search for the research article, make a note of what search terms you used, how many references came up in response to those terms, and how relevant the references were (i.e., whether the search terms produced what you wanted). **Be sure to bring to seminar your notes about search terms used, etc., and a copy of the article you found using the topic you were provided. If you do not bring these, you will be marked as having been absent from seminar.**

The second goal is to help you reflect upon the function of dreams. Most research articles do not directly address this (and this is true of any research question). Instead, we have to search articles for clues that we then integrate, like a jigsaw puzzle, to generate hypotheses and build theories. *What transferable skill are you practicing in doing this? Hint: It has nothing to do with reflecting on, or knowing about, the function of dreams.*

- What clue(s) about dream functions does the article you found provide? Be prepared to give a brief statement about this in seminar.

Week 6: February 13 - 17
Lecture Topic: Emotion
Lecture Reading: Text, Modules 42-45
Seminar Assignment: NO SEMINAR THIS WEEK

Sakai Quiz this week! It covers text readings from Term 2, Weeks 1 to 5 inclusive.

READING WEEK FEBRUARY 20 - 24

Week 7: February 27 – March 3
Lecture Topic: Empathy & Prosocial Behaviour
Lecture Reading: Text, Module 72
Seminar Assignment: Lykken, D. T. (2001). Parental licensure. **(Included in the Readings section of your Course Manual).**

Seminar Discussion:

- Bring to seminar a discussion question based on something that provoked your interest and curiosity (or emotion!) in the reading. A discussion question is one that cannot be answered with a simple “yes” or “no” or other factual answer—it should be an open-ended question that elicits opinions. *This gives you practice at facilitating discussion, another important, transferrable skill.*
- Be prepared to summarize Lykken’s central arguments. Do not get bogged down in all the specific statistics, but focus your attention on the main arguments.
- Be sure to note on p. 887 of the article the differentiation Lykken draws between correlation and causation and be able to explain this difference using the correlation between fatherless boys and antisocial behaviour. *Being able to differentiate between correlation and causation, and being able to recognize when people are “sliding”*

innappropriately from correlation to causation, is a very helpful life skill that you will undoubtedly have occasion to use many times. It is why we also stress being able to recognize what is—and is not—an experiment.

PART III: PHYSICAL HEALTH AND PSYCHOLOGICAL WELL-BEING

INSTRUCTOR: DR. KATHY BELICKI

Week 8: **March 6 - 10**

Lecture Topic: 1. Humanistic Personality Theories and the Issue of Free Will
 2. Psychological Trauma

Lecture Reading: Text, Module 56

Seminar Assignment:

Read the following four articles (**included in the Readings section of your Course Manual**):

- “Dying Milton Woman Pleads for Funding of Cancer Drug”
- “Ontario Mother Who Pleaded for Funding of Drug Loses Battle with Cancer”
- “Health Reporting Needs the QALY Treatment”
- “Drug Costs Count: Sometimes We have to Tell the Dying ‘No’”

Seminar Discussion:

- Bring a discussion question to seminar.
- *Because these readings often provoke very different opinions among seminar participants, this discussion will likely provide you with important practice in skill of working to view complex issues from multiple perspectives, listening actively to the opinions of others, and articulating your own position in a clear, non-confrontational manner.*
- Consider the following questions: Do you think that Strauss’ assessment of how the media cover stories related to unfunded drugs (ie., they search out a sad story and essentially point the finger at governments, implying that it is unjust that the treatment is not funded) is a fair one? If so, then why do you think the media ‘bias’ their coverage in this way? If not, then what do you see as problematic about his argument? Do you agree with his suggestion that all media coverage should include information about the QALY associated with new treatments?
- What are some of the questions that come to mind about QALYs, based on what you have read? What do you see as the strengths and weaknesses associated with a system in which decisions about funding drugs is tied to a measurement like the QALY? What are some of the ethical issues that come to mind as you consider these readings?

Week 9: **March 13 - 17**

Lecture Topic: The Role of Psychological Factors in Health

Lecture Reading: Text, Modules, 55, 57 - 59

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Seminar Assignment:

- Read assigned portions of Truth and Reconciliation Commission of Canada. (2012). *They Came for the Children*. **(Included in the Readings section of your Course Manual)**
- Think about what the phrase “mental illness” actually means. How would you define that phrase to a being from another planet? Have you noticed that it means different things to other people? If yes, what do you think the phrase means to others? (Arguably it has many meanings, so you should be able to generate more than one.)

Seminar Discussion:

- Bring to seminar a discussion question.
- Go online and get information on what is Canada’s international reputation on our treatment of Indigenous people. Does this information surprise you?
- The material in this report provides rich examples of many principles we have discussed in the course (and will be discussing), not the least of which is the impact of trauma. *It gives you an excellent opportunity to practice applying abstract concepts to concrete situations. This also gives you the opportunity to practice the reverse application—using a concrete situation to help you better understand an abstract process.*
 - a. Specifically, what concepts that you have learned about in this course help account for how this situation arose? (This is an example of using abstract concepts to understand real life situations).
 - b. How does this reading help us understand how intergenerational transmission of trauma plays out? (This is an example of using a real life situation to better understand an abstract process).
 - c. What other examples can you find in this reading of the principles described in the lecture about trauma?
- Looking toward next week’s lecture. In lecture we will be discussing what the term “mental illness” actually means. Specifically, why call it mental “illness” and not mental “problems”, for example? What are we implying when we use the language of “illness”? Does the meaning change when we think about it from the perspective of a biomedical model of health versus a biopsychosocial model? If your seminar discussion is successful, you should end by being confused about what it means!

Week 10: **March 20 - 24**

Sakai Quiz this week! It covers text readings text readings from Weeks 6 to 9 inclusive

Lecture Topics: 1. What does “Mental Illness” Mean?
 2. An Overview of Four Predominant Psychological Problems

Lecture Reading: Text, Modules 60-64

Seminar Assignment:

- Read Oliver Sacks chapter 10 *Wicky Ticky Ray*, and chapter 21, *Rebecca* from the book *The Man Who Mistook His Wife for a Hat*. **(Included in the Readings section of your Course Manual).**

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Week 12: **April 4 - 7**

Lecture Topic: 1. Psychology as a Profession: Psychology vs. Psychiatry vs. Social Work vs. Psychotherapy vs. Counselling
 2. Looking towards exam

Note: Some portion of the material will be on the exam as a required question. It is not covered in the textbook, so if you miss lecture, be sure to get notes from someone!

Lecture Reading: **No new reading. Start to review text readings for exam.**

Seminar Assignment: Come prepared to discuss the questions listed under Seminar Discussion

Seminar Discussion:

- Why do you think we ask you to participate in psychological research as part of the requirements for this course?
- What skills (or insights) do you think we are we hoping you will obtain from participation?
- Turning to your experience, how was the experience of being a research participant similar to or different from what you expected?
- What advice would you give the researcher(s)? How might your perceptions have impacted the results you gave?
- Year end wrap up and preparation for the exam.

TENTATIVE Course Outline for Winter 2018

This is a guide only. Topics covered in class may not correspond exactly with this outline. You will be responsible for all material assigned in the readings as well as all material covered in class. I will keep to this schedule as closely as I can. If time allows I may insert information about methodology NOT covered in the text. Any modifications to the readings or assignments will be announced in class and/or seminars and posted on Sakai.

Week of	Lecture	Seminar	Assignment questions from Pagano text EXTRA questions are shown below table
Jan 8	Chapter 11-12	Take up progress exam	ALL weeks have extra questions EXCEPT Jan 15
Jan 15	Chapters 12 - 13	Assignment 11 (Chapter 11) Note : I hope this does not apply to too many people, but if you are considering dropping the course, Friday Jan 19 is the last day.	Text p 295-296 Q 7, 8, 9, 10, 11, 12 be prepared to discuss questions 1-6 as well. Also, in what situations is Power analysis useful? Be prepared to talk about α , β , type I and II errors, 1 and 2 tailed tests etc. Have examples of when you would be more concerned about type I error or type II error and when a 1 or 2 tailed test would be more appropriate. We may not get to all these issues in seminar but you should be familiar with them
Jan 22	Chapters 13-14	Assignment 12 due (Chapter 12)	Text p 325-326 Q's 15, 16, 17, 18, 20, 21, 23, 24 plus extra questions
Jan 29	Chapter 14-Methodology	Assignment 13 due (Chapter 13) QUIZ 8 (ch 12)	Text p 350-352 Q's 14, 15, 16, 18, 21, 23, 26 extra questions
Feb 5	Chapter 15 & review	Assignment 14 due (Chapter 14) QUIZ 9 (ch 13)	Text p 387-391 Q's 15, 18, 19, 20, 23, 25 extra questions
Feb 12	Chapter 15 – 16	Assignment 15 due (Chapter 15) QUIZ 10 (ch 14)	Text p 437-438 Q's 12, 13, 14, 15, 18, 19, 21, 22 extra questions
Feb 19	Reading Week	Everything optional ☺	
Feb 26	Chapter 16	Test 2 is Saturday March 3 18:00-19:20 review	Test will be in AS rooms watch Sakai for details for exact room assignments.
Mar 5	Chapter 17	Assignment 16 due (Chapter 16) QUIZ 11 (ch 15)	Text p 473-474 Q's 4, 5, 11, 12, 13 extra questions
Mar 12	Chapters 17-18	Test 2 taken up	
Mar 19	Chapter 18 “Pick the test”	Assignment 17 (Chapter 17) QUIZ 12 (ch 16)	Text p 515-521 Q's 3, 16, 18, 19, 22, 25, 40a,b * see below for extra question *
Mar 26	Methodology Review	Assignment 18 due (also Chapter 17) QUIZ 13 (ch 17)	Text p 515-521 Q's 6, 7, 8, 9, 10, 12, 13, 14, 15, 24, 26, 27, 29, 32, 33 extra questions
April 2 (April 9)	Methodology Review	Assignment 19 due (Chapter 18).	“pick the test” Assignment will be on Sakai Also, do these. Text p 545-549 Q's 11 through 28 ** SEE NOTE BELOW **
April 12-25	Final Exam	Scheduled between April 12 and 25 by the registrar <u>DO NOT BOOK TRAVEL UNTIL YOU KNOW YOUR EXAM SCHEDULE</u>	Re-read Pagano and do EVERY question in the txt (I am kidding, sort of. But, statistics cannot be studied; it must be practiced, the more you practice, the better you can use it!!!)

**DO NOT PANIC, you do not have to fully solve each question (you can save that for later when you are studying). You just have to decide which test is most appropriate and say why. It would also be helpful (for you) if you prepared null and alt hypotheses for each question, thought about potential problems, how you might increase power, identify the I.V. (s), D.V. (s), more worried about Type I or Type II errors, one or two tailed test, etc

Extra questionS for Assignment 12 – due week of Jan 22 (4 questions)

1. Despite the many health benefits (e.g., help improve cardiovascular efficiency and sleep quality, etc) of yoga practice, some research has shown that some yoga postures, when practiced improperly, may cause serious damage to the body (e.g., lower back, shoulder, neck); malpractice of yoga has also been linked to a number of stroke cases. As a health scientist and a yoga practitioner yourself, you want to know what factors may potentially cause these accidents. One thing you have noticed is that yoga practitioners appear to be able to stretch their body to a greater extent and you think that this hyperflexion may relate to some of the aforementioned dangers. To formally test this, you asked 25 regular yoga practitioners to stretch their neck as far back as possible. On average, they were able to stretch backward 80 degrees (st dev = 2.4 degrees). In comparison, for people without any yoga experience, they can stretch their neck backward 75 degrees (st dev = 3.5 degrees). Based on these data, what do you conclude? (If you have further interest in the topic, see “*How yoga can wreck your body*”, *New York Times*, Jan 5th, 2012).
2. A friend of yours is interested in whether listening to classical music while studying for exams may improve grades. Fifteen volunteer students participated in your friend’s study. They were provided with classical music, as they were studying for an upcoming physics midterm. After the test, the average grade of the 15 volunteers was 64.5 (st dev = 19.2). The records of a large population of physics students from previous years showed that the average grade on this midterm was 60 (st dev = 15.4). While examining these old data, your friend had also noticed that the distribution of grades appeared to be bimodal: students had either done really well or really poorly on this test. To statistically test his/her hypothesis (i.e., listening to classical music while studying may improve grades), your friend performed a single sample z test, and concluded that listening to classical music had a positive effect on grades. The procedures are shown below. After knowing that you are currently taking statistics class, your friend asked you to check whether what he/she did was appropriate. After examining his/her solution, however, you noticed several errors. What errors had your friend made in testing his/her hypothesis?

Your friend’s solution:

Null hypothesis (H_0): listening to classical music while studying has no effect on grades

Alternative hypothesis (H_1): listening to classical music while studying improves grades

$\alpha = .05$ 1-tailed

Decision rule: if $Z_{obt} \leq 1.645$, reject H_0

$$Z_{obt} = \frac{\bar{X}_{obt} - \mu_{null}}{\sigma_{\bar{x}}} = \frac{64.5 - 60}{19.2 / \sqrt{15}} = \frac{4.5}{4.9574} = 0.91$$

Because $Z_{obt} = 0.91 \leq 1.645$, we reject H_0 and conclude that listening to classical music while studying improves grades!!!!

3. You are planning a research program and estimate it will take about 2 years to complete your study so you want to be very certain of finding the effect, if there is one. You are studying the effect of concussion on hockey players’ cognitive ability. Your supervisor claims that in the past 20 years the mean score on her cognitive ability test for people WITHOUT any head injury (concussion) is 64.6 (st dev = 10.3, higher numbers are better). You hypothesize that people with a head injury will perform more poorly on this cognitive test. You run a small study with just 8 people to estimate your effect size. You find that these 8 people who have all sustained a concussion while playing hockey had a mean score of 59.8 (st dev = 11.4). If this represents an accurate estimate of the scores that hockey players achieve after a head injury, how many players would you have to include in your research to obtain a power of .90?

4. There is ample evidence from several earlier experiments on sprinters (i.e. summer athletes) that relaxation training can improve performance and you wonder if the same effect will work on winter athletes. Research has shown that relaxing will improve running times by 4% (st dev = 1.8 seconds) and you expect a similar improvement in speed skaters. The mean time for skaters on your team to skate 500 metres is 36.8 seconds (st dev = 1.2 seconds). Therefore, a 4% improvement should reduce this time by 1.5 seconds. You send 15 of your skaters for relaxation training. What would be your power based on this information if your hypothesis is correct?

Extra questions for Assignment 13 Due week of Jan 29 (5 questions)

1. Based on a sample of 30 professors who have been hired within the last 3 years, their average amount of sleep per night is 5.3 hours with a standard deviation of 1.3. A friend who has just been hired as a professor asks how much sleep per night she can expect to get next year. If I want to be 95% certain that I give an estimate that will contain the true population mean, what would I tell her?
2. You have heard about global warming and want to determine if the average temperature this January is different from past years. You find an archive of weather data and it reports that the average daily maximum temperature in early January between the years of 1950 and 1990 was -5.1 degrees Celsius with a standard deviation of 4.2. You measure the first 14 days of January and find that the average daily maximum temperature was -7.5. What would you conclude?
3. It has been reported consistently over the last few decades that the age at which women get married for the first time has been going up (i.e. women are older when they get married for the first time). The mean age for women getting married in 1960 was 22.4, but this has risen to 28.5 by 2001. However, you think this trend has changed very recently (over the last 10 years). You obtain the records for the 40 marriages in your town that occurred during the last year and find that the average age of the brides in 2011 was 27.3 (st dev = 3.16). What would you conclude? What is the effect size?
4. You wish to determine if children's attention span has changed over time. A very large scale study in 1980 found that 10 year old children could attend to a task for an average of 15.6 minutes. You test 15 children and find that their average attention span is 14.3 minutes (SD = 3.2). Would you perform a 1 or 2 tailed test (why)? What is the appropriate test to use (provide all required information) note: You do NOT have to actually do the hypothesis test (but you should, it is good practice).

Extra questions for Assignment 14 Due week of Feb 5 (4 questions)

1. You see the following in a journal article: Children's reading abilities improved after their participation in the reading clinic program, $t(39) = 2.10, p < .05$.
 - a) How many children participated in the study?
 - b) What is the effect size for this experiment?
 - c) What was the limit for the probability of making Type I error?

2. You are interested in implementing a workshop to help students deal with exam anxiety, but this can be costly as a registered mental health professional is required to lead the workshop. Thus, you decide to test the effectiveness of the intervention on a smaller number of students. You ask nine students to complete an anxiety questionnaire (scored from 0-100; higher scores indicate greater anxiety) before and after the workshop. The data are shown below.

- Was this intervention helpful? Would you implement it on a larger scale?
- What is the effect size?
- Are you more concerned about Type I or Type II error?

	<u>Before</u>	<u>After</u>	<u>D</u>	<u>D²</u>
	70	55	15	225
	60	55	5	25
	20	22	-2	4
	67	42	25	625
	88	80	8	64
	94	82	12	144
	38	40	-2	4
	50	45	5	25
	<u>82</u>	<u>73</u>	<u>9</u>	<u>81</u>
ΣX	569	494	75	1197
Variance	582.94	407.61	71.50	39340.50

3. You think that giving students more time to work on an essay will improve their grades. So, you give students 1 week to submit an essay worth 10% of their grade. Next year you assign the same topics, but give students 2 weeks for completion. You then randomly select 9 essays from each year and compare the marks.

- Do students benefit from having more time to work on their essay?
- How can you increase the power of this design?

	<u>1 week</u>	<u>2 weeks</u>	<u>D</u>	<u>D²</u>
	78	82	-4	16
	68	70	-2	4
	73	65	8	64
	87	72	15	225
	61	68	-7	49
	77	63	14	196
	83	75	8	64
	79	74	5	25
	<u>65</u>	<u>72</u>	<u>-7</u>	<u>49</u>
ΣX	671	641	30	692
ΣX ²	50611	45911	692	102932
S	8.546	5.674	8.602	78.839
SS	584.222	257.556	518	43509.3

4. You wish to compare the effect of pets on anxiety. You select a group of students and ask each person how anxious they feel on a scale of 0-100 (higher numbers mean more anxious). You then have each person pet a dog for 5 minutes and ask them again how anxious they are. What is the IV? What is the DV? What type of measurement scale is the DV? What would be the appropriate hypothesis test (use the chart at the end of chapter 18 by answering the questions in the diamonds).

5. You have a hypothesis that drivers today are more likely to have a “fall asleep” accident because people are more sleep deprived and car seats are more comfortable. You find data from a national study 20 years ago indicating that there were 6.85 accidents (SD = 1.45) per 100,000 hours driven on average. You examine data from 10 small towns in your area and find that the rate among them is just 4.52? What is the appropriate hypothesis test? Would you do a 1-tail or 2-tail test? WHY????

Extra questionS for Assignment 15 week of Feb 12 (2 questions)

1. You want to see if students from different types of schools are equally (or unequally) happy. You randomly sample groups of 10 students from three different sizes of school and have them fill out a standardized scale measuring satisfaction with their education. This scale has a potential range from 0-50 (larger scores = greater satisfaction). What do you conclude?

Small Schools	Rank	Medium Schools	Rank	Large Schools	Rank
17	5.5	13	2	35	29
21	11	20	9	26	22
14	3	30	26	17	5.5
24	19	24	19	21	11
18	7	27	23	34	28
22	14	29	24.5	22	14
19	8	31	27	29	24.5
22	14	24	19	41	30
11	1	25	21	23	16.5
23	16.5	16	4	21	11

$\Sigma X = 191$	$\Sigma \text{rank} = 99$	$\Sigma X = 239$	$\Sigma \text{rank} = 174.5$	$\Sigma X = 269$	$\Sigma \text{rank} = 191.5$
$\Sigma X^2 = 3805$		$\Sigma X^2 = 6033$		$\Sigma X^2 = 7763$	
$SS = 156.9$		$SS = 320.9$		$SS = 526.9$	

2. You have conducted an experiment to see if the type of chairs placed in a lecture hall affect attendance. You divide your lecture rooms into 3 groups and put one type of chair in each room. You then record the average number students absent each day for an entire term.

Mean number of students/lecture	Type of Chair		
	plastic	cloth	leather
	42	28	32

Source	SS	df	MS	F
Between	76	2	38	6.33
Within	72	12	6	
Total	148	14		

- a) Before data were collected you had strong reason to believe that plastic and cloth groups would differ from one another. Were you correct?
- b) After collecting the data you are curious to see if plastic and leather groups differ. If you want to use a conservative test, what do you find?

Extra question for Assignment 16 Due week of Mar 5

Your friend is interested in whether spatial memory is affected by gender and whether it changes over life span. To examine these research questions, your friend conducted a study, in which male and female participants of three age groups (age 20, 30, and 40) performed a spatial memory task. Thirty mazes of various complexities were shown to participants. The solution to each maze was then presented for 30 seconds for participants to memorize. Afterwards, the same thirty mazes were shown again and participants had to indicate their solutions. The following table shows the average number of mazes that each participant in the various groups had failed to solve.

	20 year	30 year	40 year
Female	7	10	14
Male	11	12	14.5

After analyzing the data, your friend concluded that there was an interaction effect between gender and age on spatial memory performance ($F(2, 54) = 4.72, p < .05$). However, he/she was not sure about how to interpret the results.

- Fill the missing values in the following table, based on the above information provided
- How many female and how many male participants were there in the study? How many 20-, 30- and 40-year-olds? (assume an equal number of participants in each group)
- Plot the means to demonstrate how spatial memory is related to gender and age.
- Based on what you have learned from the class, help to explain these results to your friend.

Extra question for Assignment 17 Due week of Mar 19

- Blood types occur in the following proportions: O 45%, A 40%, B 11%, AB 4%. You think that your small town does not conform to these proportions. You test everyone and find that 102 people have O, 94 have A, 25 have B, and 29 have AB. Does your town differ from the general population?
- A study by Butler and Fosko (2010) examined the incidence of skin cancer based on the side of the face on which it occurred. They did not include in the article the type of analysis they used but did report that in a group of 557 males, there were significantly (i.e. $p < .05$) more skin cancers on the left side of the face (301) than on the right side (256). Perform your own hypothesis test using the most appropriate test you have learned in this course. What do you conclude? Do you agree with their conclusion? Provide statistical evidence for your opinion.
- You want to examine if the number of errors made by people when placed under pressure depends on whether or not they are introverts or extroverts and whether they are perfectionists or not. You select 100 people and categorize them as introverted (yes/no) and perfectionist (yes/no). You then see how many errors they make on a mildly difficult timed task.
 - What is the appropriate hypothesis test?
 - Why?
 - How might you increase your power in this situation?
 - Would you do a 1 or 2 tailed test? Why?
 - Are you more concerned about a type I or type II error? Why?
 - What are the IV(s) and DV(s)?

Extra questions for Assignment 18 Due week of Mar 26

1. You want to compare higher priced Hunda cars with the lower priced Hyunday cars in terms of customer satisfaction. You select 20 people, give them each a car to use for 6 months, then ask them to rate how much they like their car. Half the group gets Hundas and half get Hyundays. The ratings from each person are shown below. Higher scores are better. Raw data in **bold** and ranked data in regular font. What do you conclude? (10 marks)

	Hunda	(Rank)	Hyunday	(Rank)	difference	(Rank)	
	67	(20)	14	(5)	53	(10)	
	39	(17)	16	(7)	23	(7)	
	15	(6)	17	(8)	-2	(1.5)	
	21	(11.5)	11	(3)	10	(4.5)	
	22	(13)	12	(4)	10	(4.5)	
	7	(1)	18	(9)	-11	(6)	
	56	(19)	10	(2)	46	(9)	
	45	(18)	20	(10)	25	(8)	
	23	(14)	21	(11.5)	2	(1.5)	
	31	(16)	27	(15)	4	(3)	
Totals	ΣX	326	135.5	166	74.5	160	55
	ΣX^2	13860		3000		6424	
	s	18.9514		5.2111		20.7204	

2. You have a theory that people will drive faster with loud music playing. You measure the average speed during two one-hour trips for 9 people. Once they drive with soft classical music and then again with loud rock music. In examining the data you notice that some people have very similar scores between the two type of music and others have very different scores creating a somewhat bimodal distribution. What do you conclude?

Soft music	rank	Loud music	Rank	Difference	rank of Difference
75	2	94	16	19	9
79	5	86	11	7	4
85	10	84	9	-1	2
74	1	92	15	18	8
83	8	96	18	13	6
77	3	78	4	1	2
80	6	95	17	15	7
82	7	90	14	8	5
89	<u>13</u>	88	<u>12</u>	-1	<u>2</u>

$\Sigma x = 724$	$\Sigma \text{rank} = 55$	$\Sigma x = 803$	$\Sigma \text{rank} = 116$	$\Sigma \text{diff} = 79$	$\Sigma \text{rank} = 45$
$\Sigma x^2 = 58430$	$\Sigma \text{rank}^2 = 457$	$\Sigma x^2 = 71921$	$\Sigma \text{rank}^2 = 1652$	$\Sigma \text{diff}^2 = 1195$	$\Sigma \text{rank}^2 = 283$
$s = 4.851$	$s = 3.887$	$s = 5.869$	$s = 4.428$	$s = 7.918$	$s = 2.693$
$ss = 188.222$	$ss = 120.889$	$ss = 275.556$	$ss = 156.889$	$ss = 501.556$	$ss = 58$

3. You want to determine if the amount of damage done by rioters differs based on the sport involved (baseball, hockey, soccer). You gather data from thirty sports riots (10 from each sport) and record the amount of damage done (in units of 100,000 dollars). What do you conclude?

	Baseball	rank	Hockey	rank	Soccer	Rank
	8	2	28	19	36	25
	11	5	19	10	39	27
	4	1	23	14	43	29
	20	11	24	15	34	23
	15	8	27	18	10	4
	21	12	22	13	26	17
	9	3	25	16	40	28
	14	7	33	22	48	30
	13	6	32	21	37	26
	18	<u>9</u>	35	<u>24</u>	30	<u>20</u>
Mean	13.3	6.4	26.8	17.2	34.3	22.9
$\sum X^2$	2037	534	7426	3132	12771	5789
SS	268.1	124.4	243.6	173.6	1006.1	544.9

4. You want to study whether the level of education affects the level of anxiety. You select 20 undergraduate, 20 masters level, and 20 PhD level students and give them a standard test of anxiety. Because your university only has undergraduate programs, you recruit the graduate level students (MA PhD) from another university. In examining the data you get the following information.

	Undergraduate	Masters	PhD
Mean anxiety	23.6	26.4	24.6
SD	3.8	8.1	6.5

- What is the appropriate hypothesis test? Why?
- What is the IV?
- What is the DV?
- What is the biggest problem and how would you fix it?

Pick the Test assignment Due week of April 2

For each of the following you should decide

- a) What test would you use?
- b) Why would you use this test?

Also, I may ask any of the following (or maybe even something else).

- i) What are H_0 and H_1
- ii) I.V and D.V.
- iii) one or two tails
- iv) what alpha
- v) find a problem and fix it *
- vi) are you more worried about type I or type II error *
- vii) how might you increase your power *

*Note: not all these apply to all questions (i.e. not every question has a problem that needs fixing or concerns over type I or type II error) so you do NOT need to try and find these in every story, but hopefully when these things are an issue it will be noticeable.

The answers will be posted on Sakai. Please DO NOT look at any of them until you have tried all the questions, otherwise I have wasted a lot of time. Even if you do not intend to notice the answers it would be almost impossible not to notice the next answer and that will ruin the benefit these sample questions are intended to provide. You WILL NOT have time to cover all questions in seminar. Your TA will discuss a selection of them; however, all 11 questions from old exams will hopefully be covered.

1. You wish to test the hypothesis that introverted people earn less money than extroverted people. You sample 27 people from your graduating class and ask them how much money they make and also give them a test to determine how introverted they are. This test of introversion yields a score from 0 to 100 with 0 being not introverted at all (i.e. extroverted) and 100 being very introverted.
2. There are 2 washing machines in your apartment building and you think that the time it takes to wash your clothes varies depending on which machine you use. You decide to test this and spend one afternoon in your laundry room. You record the time it takes to wash one load each time a person does their laundry and end up with the following data. Machine 1 was used 14 times and the mean time for 1 wash was 22.1 minutes with a standard deviation of 2.2 minutes. Machine 2 was used 17 times and took an average of 21.0 minutes per wash with a standard deviation of 1.6 minutes.
3. You have developed a new treatment for Alzheimer's and wish to test it. You give your treatment to 15 patients with suspected Alzheimer's disease and a placebo to 15 other patients with suspected Alzheimer's disease. Your treatment is inexpensive, and has few side effects. You give each person a memory test after 3 months of treatment. Scores on this test are based on number of items remembered from a list after a delay of 1 hour.
4. You wonder if changing the format on a statistics test will change the average mark on the test. You randomly select half the class and give them the standard test. The other half receives the test with the new format. You then compare the marks for each half. In analyzing the data you notice that the group that got the standard test has a normal distribution but the new format has created a bimodal distribution in that half of the class.
5. You wonder which gas station has better service Petro Canada or Shell. Over a 10 day period you ask 30 people to visit the Petro Canada and the Shell station. Each person purchases exactly \$10 worth of gas at one station then drives across the road and gets \$10 at the other station. You then record the time it takes for each person to be served.

6. You want to see if Rec and Leisure students get summer jobs faster than other university students. You find out from the student placement service that the average university student gets a summer job in 4 weeks with a variance of 3 weeks. The average Rec and Leisure student gets a job in 3.6 weeks with a variance of 4.2 weeks.
7. You want to know if major in university and tolerance of ambiguity are related. You choose 60 people (20 science majors, 20 humanities majors and 20 phys ed majors) and give them a test which measures their tolerance for ambiguity. You then separate them into low, moderate and high tolerance groups.
8. You wonder if the amount of time it takes a person to learn a new language is related to their age. You ask an instructor at an ESL (English as a second language) school to record the age of 40 new students and how long it took for them to become functionally literate.
9. You work for a manufacturer of fake finger nails. Your boss is interested in knowing if a new procedure can reduce the costs of making these nails. You randomly select the operating costs for 10 days at your plant and compare them to the cost for 10 days randomly selected from another plant that has switched to the new system. The old system had an average daily cost of \$5400 with a variance of 120. The new system had an average daily cost of \$5210 with a variance of 730.
10. You wonder if capital punishment has an effect on the number of murders committed. You obtain data from 23 states that have re-instated capital punishment. Your data list the ranking of each state with regard to number of murders per 100 people for the year prior to re-instating capital punishment and again 3 years later.
11. Denver Colorado claims that it has a significantly thinner population than the rest of the country (this is true I saw it in an ad). If the average person in the U.S. has 23% body fat and the average person in Denver has 18% body fat (st dev 5%). Is their claim true?
12. You want to know which type of discipline works best on problem children. You select 45 children who have been identified as having behavior problems and select 15 for your control group, 15 to get positive reinforcement and 15 to get negative reinforcement. After 6 months you measure the number of behavioral problems each child exhibits in one week and calculate averages for each group. In analyzing your data you notice that all three groups have slightly different variances (control, 23.3; positive reinforcement, 21.1; negative reinforcement, 19.9).
13. You think that the number of foreign cars on the road has changed over the last 10 years. You find out that in 1992 a sample of 100 people showed that 25 drove Japanese cars, 58 drove North American cars and 17 drove European cars. A sample collected this year had 31 driving Japanese cars, 51 driving North American cars and 18 driving European cars.
14. You think that Brock students are more active than other universities in terms of extracurricular activities. The average student at a Canadian university is involved in 3.5 extracurricular activities. The average Brock student is involved in 3.9 with a st dev of 2.1 activities.
15. You have three groups of students (biology majors, history majors and english majors). You think that these groups will differ on a measure of logical reasoning. You also have a theory that the type of school they go to may affect this measure so half of each group are from small primarily undergraduate universities and half are from large universities.

16. You want to test and see if there is a relationship between favorite type of dog and political affiliation. You ask 25 conservative, 25 liberal, 25 reform and 25 NDP supporters if they have a large medium or small dog.
17. The average number of books owned by a professor is 543 with a st dev of 124. The professors in your department own an average of 576 books each with a st dev of 112. Do they own significantly more books than average?
18. You wish to determine if there is a difference in the efficiency of three types of furnaces. You select 5 from manufacturer A, 5 from manufacturer B, and 5 from manufacturer C. You ask your assistant to measure how efficient each furnace was but he did not understand your directions and only reported the data to you in terms of most efficient to least efficient across all groups.
19. You want to know if there is a difference in the grade given out by faculty based on whether or not they have tenure. You obtain the records of 7 professors from the years prior to and the year after they receive tenure. While entering the data into your computer you notice that the marks follow a very typical pattern for university grades (lots of relatively high marks with a small minority of very low grades).

Those were the “warm up” I strongly suggest that you also try the practice exams I put on Sakai as well for more practice on pick the test questions. Remember, I will ALWAYS ask for the correct test for the situation, the reasons and then c) will be some subset of

IV and DV

Ho and Hi

tails and justify

Alpha and justify

Problem and how do you fix it (note marks are mostly for the fix)

Worry about type I or Type II error and WHY (note, marks are most for the why)

Here are some questions from old final exams.

1. You wish to compare different techniques for treating mild depression. Sixty undergraduate students are randomly selected from the student counseling centre and randomly assigned to one of three treatment conditions; cognitive restructuring, assertiveness training, and an exercise/nutrition program. After 10 weeks of treatment they are assessed using the Beck Depression Inventory. Those on the cognitive restructuring program had a mean score of 27.86 with a standard deviation of 3.74, those who received assertiveness training had a mean score of 32.63 with a standard deviation of 5.21, and the exercise/nutrition group had a mean score of 14.39 with a standard deviation of 3.61.

- a) Indicate the most appropriate statistical test for this situation. Be VERY specific!! (2 marks)
- b) Indicate why that particular test is the most appropriate. Be VERY specific!! (2 marks)
- c) Is this a study or an experiment? WHY? (2 marks)

2. You have a hypothesis that being well rested is the key to athletic performance. To test this hypothesis you ask all 57 speed skaters who competed in the 5,000 m race at the recent World Championships whether they got more sleep than usual, less sleep than usual, or their typical amount of sleep the night before their event, and what place they finished.

- a) Indicate the most appropriate statistical test for this situation. Be VERY specific!! (2 marks)
- b) Indicate why that particular test is the most appropriate. Be VERY specific!! (2 marks)
- c) What is the easiest and best way to increase your power in this experiment? (2 marks)

3. Recent research suggests that receiving an apology after being exposed to rude or hurtful behaviour tends to increase blood pressure in men and decrease blood pressure for women.

You wish to test to see if this applies to more common situations as well. To test this you select 20 men and 20 women and while they are being screened for high blood pressure ‘accidentally’ drop a tray of metal instruments causing a loud startling noise and then apologize to them for the disruption. You then record their blood pressure immediately after the apology.

- a) Indicate the most appropriate statistical test for this situation. Be VERY specific!! (2 marks)
- b) Indicate why that particular test is the most appropriate. Be VERY specific!! (2 marks)
- c) What is the biggest problem and how would you fix it? (2 marks)

4. You wish to determine if the height of a person affects how they are perceived by others. You ask 35 people to look at full length pictures of several people and give each person an “honesty score”. In other words how honest do you think this person is on a scale of 1-100? Within the group of pictures is one tall and one short person you selected for your experiment (the other pictures are used as distracters to mask your hypothesis and those scores are not used in the analysis). You record the “honesty scores” for both the tall and short people from each of your 35 participants. In examining the data you find that indeed taller people are seen as more honest. The average rating for tall people is 74 (variance = 7) but for short people it is only 67 (variance = 30).

- a) Indicate the most appropriate statistical test for this situation. Be VERY specific!!
- b) Indicate why that particular test is the most appropriate. Be VERY specific!!
- c) What are the independent and dependent variables?

5. You are studying the school performance of children. You are interested to know if level of exercise is related to performance in school. You select 60 children at the grade 5 level and ask the parents how many hours each child spends doing physical activity each day on average and then collect information on each child's grades in school.

- a) Indicate the most appropriate statistical test for this situation. Be VERY specific!!
- b) Indicate why that particular test is the most appropriate. Be VERY specific!!
- c) What are the null and alternative hypotheses?

6. You wish to test a new medication to treat colon cancer (the second leading cause of cancer deaths according to the commercials on television lately). This medication has proven to be quite effective in preliminary experiments, and the side effects have been minimal. You are also interested if the effectiveness of this medication differs for males and females. You randomly select 40 patients (20 males and 20 females) who have been diagnosed with colon cancer. You use the new medication on half of the males and half of the females and the old medication on the remainder. Two weeks later, you measure how much the size of the tumor has been reduced (expressed as a percent, i.e. 75% would mean it is now only one quarter as big as it was initially).

- a) Indicate the most appropriate statistical test for this situation. Be VERY specific!!
- b) Indicate why that particular test is the most appropriate. Be VERY specific!!
- c) Are you more concerned about a type I or type II error? Why?

7. You have a hypothesis that whether or not a convicted criminal gets a jail sentence may depend on their race. You review the cases of 300 males all convicted of armed robbery and record if they were Caucasian or a visible minority and if he received a jail sentence, probation or was released.

- a) Indicate the most appropriate statistical test for this situation. Be VERY specific!!
- b) Indicate why that particular test is the most appropriate. Be VERY specific!!
- c) Is this a study or an experiment. WHY?

8. You wish to test the famous finding that the wording used by lawyers in asking questions can affect the answers given. You show 16 people a video of a car accident. You then ask half of the people the following question "How fast would you estimate the car was traveling when it *contacted* the other vehicle". The other people are asked "How fast would you estimate the car was traveling when it *smashed into* the other vehicle". People are asked to rate the speed on the following scale. (circle the best response)

1	2	3	4	5	6
Much below speed limit	Slightly below speed limit	At speed limit	Slightly over speed limit	Much over speed limit	Very much over speed limit

- a) Indicate the most appropriate statistical test for this situation. Be VERY specific!!
- b) Indicate why that particular test is the most appropriate. Be VERY specific!!
- c) What is the easiest and best way to increase your power in this experiment?

9. You hear that a report that university students are less depressed than other individuals their age. You administer the Beck Depression Inventory to 25 students from your statistics class (all students are 21) and find that their mean score is 18.2 (st dev = 8.8). You then collect data from an age matched group of young people (again all 21 years old) who are applying for jobs at a local job fair. Their mean score on the Depression scale is 26.1 (st dev = 14.3).

a) Indicate the most appropriate statistical test for this situation. Be VERY specific!! (2 marks)

b) Indicate why that particular test is the most appropriate. Be VERY specific!! (2 marks)

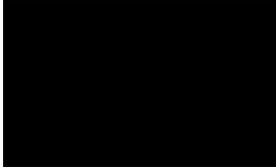
c) What is the biggest problem with this experiment and how would you fix it? (2 marks)

10. Here is an example of a “pick the test” type question.

You believe that happiness can be affected by type of job. You select 200 people and give each person a questionnaire and use this information to divide them into the following types based on their job: self-employed, management, labourer, and unemployed. You ask each person to rate their happiness on a scale of 1-100. You would perform a One-Way ANOVA on this data.

What ONE change would you have to make in order for the correct answer to be TWO-way ANOVA. Answer in ONLY 1-2 sentences (I will NOT read any more than 2 sentences), but use a specific example of the change you would make (2 marks).

11. You MUST make up a pick the test question and provide the answer. Please write this out on a separate piece of paper and give it to your TA at the seminar. Be certain to put your name on your question



Faculty of Social Sciences

Department of Psychology

Course Number: PSYC 2P01

Term/Year/Duration: Fall/Winter (D1) 2017

Course Title: Roadmap to Careers in Psychology

Instructor Name: Drew Dane, Tanya Martini
Email: adane@brocku.ca; tmartini@brocku.ca
Contact: See course Sakai site for office hours.

Course Calendar Description:

Career exploration and applications in psychology and related fields. Seminar, online activities, 3 hours per week.

Course Prerequisites (if any):

PSYC 1F90. Note: students are expected to register during their second year of study. Must be completed before registering in required year 4 courses.

Course Goals and Learning Outcomes

This course is intended to further develop students' understanding of the skills and resources that are necessary to successfully prepare for a career in a psychology-related field. The course has been designed around the Career Development Model that is used by Brock's Centre for Co-op, Career, and Experiential Education (CCEE). The model has four parts that correspond to our broad goals in this course:

- **Know Yourself:** Identify your strengths, skills, and interests. In PSYC 2P01 you will:
 - use online tools that will help you to understand your strengths and skills, and how those might connect to potential careers of interest
 - think carefully about career-related skills, and the competencies that underlie them (e.g., what employers really mean when they're asking for someone with communication, teamwork, or leadership skills)
 - recognize how your learning experiences (both inside and outside the classroom) have helped to develop your career-related knowledge and skills, as well as your core values
 - recognize where your knowledge or skill set might be lacking (given the career path you may have set for yourself), and what activities you might undertake to fill those gaps
- **Discover Possibilities:** Do research related to job titles, companies and professional organizations. In PSYC 2P01 you will:
 - learn about the kinds of questions that you should be asking about potential careers, as well as websites and other resources that will provide you with the answers that you need

- K discover how to effectively carry out an informational interview with a professional who is currently working in a field of interest to you
- K **Experience More**: Gain career-relevant experience through your coursework, volunteering, paid work and extracurricular activities. In PSYC 2P01 you will:
 - K learn about external certifications you can pursue to capitalize on your involvement outside of the classroom (e.g., Brock's Campus-wide Co-curriculum; Duke of Edinburgh Leadership Award)
 - K participate in a 40-hour community volunteer experience at an organization whose work is related to your preferred career path
- K **Activate your Plan**: Market yourself effectively in a variety of settings, including both online and face-to-face environments. In PSYC 2P01 you will:
 - K practice communicating about your skill set to people in a variety of settings (e.g., at a job fair, in an interview) accurately and
 - K learn to use different media (e.g., social media sites such as LinkedIn) effectively to convey

In terms of learning outcomes, we believe that at the conclusion of the course you will be able to:

- K critically consider, reflect on, and integrate what you have learned from significant experiences (course-based, work-related, extracurricular) and formulate an overarching statement that describes yourself as a learner
- K effectively communicate about your transferrable career-relevant skills, both orally and in writing
- K identify appropriate resources for a job search, and have a clear sense of the information that is relevant when performing such a search

K

Evaluation Components

In this course, you'll be evaluated on your participation in the seminars (which will include the completion of homework assignments for seminar), as well as the work that you complete for each of the online modules. Links to the information about each module and seminar can be found in the tabs on the left side of Sakai. Due dates are outlined in the Course Timeline (below).

<u>Assignment</u>	<u>Mark Value</u>
Pre-course Assignments	3%
Seminar Participation (8 seminars)	12%
On-line Module 1: Self-Assessment	5%
On-line Module 2: Interview Stream Practice	5%
On-line Module 3: Career Assessment	5%
On-line Module 4: Career Exploration	5%
Online Module 5: Volunteer Opportunity Worksheet	5%
Online Module 6a: Resume/Cover Letter (Draft)	5%
Online Module 6b: Resume/Cover Letter (Final)	5%
Online Module 7: Interview Questions	5%
Online Module 8a: Interview Stream	5%
Online Module 8 b: Peer Evaluation of Interviews	5%
Online Module 9a: LinkedIn Profile (Draft)	5%
Online Module 9b: LinkedIn Profile (Final)	5%
Online Module 10: Informational Interview	5%
Final Reflection Paper on Volunteer Experience	20%

Late Submission Policy:

The penalties for late submission of assigned coursework is 5% per day. See Medical Exemption Policy and the medical health certificate at <http://www.brocku.ca/health-services/policies/exemption>

Important dates: (check the section on sessional or important dates in the relevant online University calendar at <http://brocku.ca/webcal/>)

January 19, 2018 is the date for withdrawal from the course without academic penalty.

November 30, 2017 is the latest possible date you will be notified of 15% of your course grade.

October 9-13, 2017, and February 19-23, 2018 are the scheduled reading week(s).

April 9, 2018 is set aside to make up the Good Friday (March 30, 2018) holiday.

December 6, 2017, and April 10 and 11, 2018 are set aside for designated reading days (these may be used to cover classes missed because of adverse weather).

There is no scheduled exam in this course.

Academic Policies

Academic Integrity:

Statement for undergraduate courses

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.

Plagiarism software:

If plagiarism software is used (Turnitin.com), a statement to that effect must be included on the outline including an option to opt out.

Sample statement regarding Turnitin.com

This course may use Turnitin.com, phrase-matching software. If you object to uploading your assignments to Turnitin.com for any reason, please notify the instructor to discuss alternative submissions.

Intellectual Property Notice:

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

Academic Accommodation:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Student Accessibility Services in the Student Development Centre (4th floor Schmon Tower, ex. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

Academic Accommodation due to Religious Obligations:

Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements.

Medical Exemption Policy:

The University will accommodate students whose studies become interrupted, or who may be unable to complete academic work, due to an incapacitating medical condition. In these situations, the student must complete the Brock University Student Medical Certificate or [Brock University Student Health Services Medical Certificate](#) (or in case of a concussion, the Brock University Student Health Services Medical Concussion Certificate) and include any relevant medical documentation to

support his/her request for academic accommodation based on medical grounds. The University may, at its discretion, request more detailed documentation in certain cases.

PSYC 2P01 Week at a Glance: Course Timeline

<u>Week of</u>	<u>What's happening</u>	<u>What's Due</u>	<u>What's Coming Up</u>
September 10-16	In Class Seminar 1: Orientation	Pre-Course Assignments Due Sept. 15 at 11:55 pm	
September 17-23	Work on Online Module 1: Self-Assessment		Online Module 1 due Sept. 24 at 11:55 pm
September 24-30	In Class Seminar 2: What Are Employers Looking For?	Online Module 1 due Sept. 24 at 11:55 pm	Online Module 2 due Oct. 6 at 11:55 pm
October 1-7		Online Module 2 due Oct. 6 at 11:55 pm	
October 8-16	READING WEEK		
October 15-21	In Class Seminar 3: Professional Communication		Work on Online Module 3
October 22-28	Work on Online Module 3		Online Module 3 due Oct. 29 at 11:55 pm
October 29-November 4	Work on Online Module 4	Online Module 3 due Oct. 29 at 11:55 pm	Online Module 4 due Nov. 5 at 11:55 pm
November 5-11	Work on Online Module 5	Online Module 4 due Nov. 5 at 11:55 pm	Online Module 5 due Nov. 12 at 11:55 pm
November 12-18	Work on Online Module 6: Resume and Cover Letter	Online Module 5 due Nov. 12 at 11:55 pm	Have resume and cover letter reviewed by Career Services by Nov. 19; Draft due in class Nov. 27-Dec. 1
November 19-25	Work on draft of cover letter and resume (due in class Nov. 27-Dec. 1)	Have resume and cover letter reviewed by Career Services by Nov. 19	Bring draft of cover letter and resume to class next week
November 26-December 2	In Class Seminar 4: Creating a Resume and Cover Letter	Bring draft of cover letter and resume to class	Cover letter and resume are due Dec. 8 at 11:55 pm
December 3-9		Resume and cover letter are due Dec. 8 at 11:55 pm	Module 7: Interview Questions due Jan. 7 at 11:55 pm; Revised cover letter and resume due Jan. 14

January 7-13	In Class Seminar 5: Wacky and Common Interview Questions	Module 7 due Jan. 7 at 11:55 pm	Revised cover letter and resume due Jan. 14; Work on Online Module 8: Interview Stream
January 14-20	Work on Online Module 8: Interview Stream	Revised cover letter and resume due Jan. 14	Interview must be sent to peers on/before Jan. 21
January 21-27	Work on peer reviews of interviews		Peer reviews of the interviews due Jan. 28 at 11:55 pm
January 28-February 3	In Class Seminar 6: Peer Review and Retakes of Interview Stream	Peer reviews of the interviews due Jan. 28 at 11:55 pm	
February 4-10	Work on Online Module 9: LinkedIn Profile		Draft of LinkedIn profile due Feb. 11 at 11:55 pm
February 11-17	In Class Seminar 7: Building Relationships; Continue working on LinkedIn Profile Assignment	Draft of LinkedIn profile due Feb. 11 at 11:55 pm	Receive feedback on LinkedIn profile by Feb. 25
February 18-24	READING WEEK		
February 25-March 3	Work on Online Module 10: Informational Interview Assignment		Online Module 10 due Mar. 4 at 11:55 pm; LinkedIn profile due March 11
March 4-10	In Class Seminar 8: Teamwork and Conflict Resolution in the Workplace	Online Module 10 due Mar. 4 at 11:55 pm	LinkedIn profile due March 11
March 11-17		LinkedIn profile due March 11	

PSYC 2P12: Lifespan Development

Fostering an understanding of human development across the lifespan

OVERVIEW

“Only the curious will learn and only the resolute will overcome the obstacles to learning. The quest quotient has always excited me more than the intelligence quotient.” E.S. Wilson

Through readings, films, activities, and discussion, this course will introduce you to development across the lifespan. Topics include developmental theories and methods, physical growth, perception, cognition, and socio-emotional development.

OBJECTIVES

“Teachers open the door, but you must enter by yourself.” Chinese Proverb

CONTENT OBJECTIVES: That students

1. become familiar with developmental patterns across the lifespan.
2. understand the processes underlying human development.
3. become familiar with the wide range of theoretical perspectives and methodological approaches represented by this field of psychology.
4. consider the implications of evidence from research in lifespan development for daily life

You will have the opportunity to develop many skills in this course; please read page 11 of this outline for more details.

INSTRUCTOR

Dr. Cathy Mondloch

MC B320; x5111

E-mail: via **Sakai** only!

Office Hours: By appointment (or just drop by!)

Please Note: I will check e-mail on Sakai twice each week. I will not answer complex questions via e-mail, but will address such questions during class time. Please address e-mails to Dr. Cathy Mondloch. (It is a bad habit to send e-mails that begin with ‘Hi There’!) My phone does work! Please feel free to contact me that way. **E-mail sent to my Brock account will not be answered.**

TEACHING ASSISTANTS

Taylor Heffer – Students with surnames Aa - Br
Sarah Henderson – Students with surnames Bu - Dj
Stephanie Rooke – Students with surnames Do - Ha
Alison O'Connor – Students with surnames He - Ka
Paige O'Neil – Students with surnames Kr - Ni
Nivetha Prabakaran – Students with surnames - No - Se
Lydia Lavis – Students with surnames Si - Z

The teaching assistants and I adopt a team-based approach to supporting and assessing your learning. Please consult with your TA regarding questions relating to course assignments and grading; contact the course coordinator if an issue about grading cannot be resolved. **Please e-mail your TA via Sakai ONLY.**

Our class is very large and we do not have seminars. To balance the workload among TAs and to help you to develop a relationship with one person I have assigned students to TAs based on surnames. Please do not e-mail all TAs when you have a question or concern; only e-mail the TA to whom you've been assigned. If you e-mail all TAs or the wrong TA, we will assume that you've done so in error and you will not get a response. Your assignments (but not your tests) will be marked by your TA.

PLEASE NOTE. Office hours are 'by appointment'. This reflects the reality that many students do not use office hours and that student schedules vary (i.e., no hour works for everyone). We encourage students to set up appointments! Note that TAs will attend most lectures and so will be easy to find.

COURSE COORDINATOR: Alison O'Connor

Please contact the course coordinator (not the instructor) regarding matters associated with the day-to-day administration of the course. For example, notify the course coordinator about any illnesses or family emergencies that might cause you to miss an examination or an assignment deadline, about examination timetable conflicts, about questions regarding Sakai or Connect, or about grade postings on Isaak/Sakai. **For very personal issues, contact the professor.**

TEXT: Santrock (2017). *Essentials of Life-span Development (5th edition)*. McGraw Hill.

You have two options for the text this year:

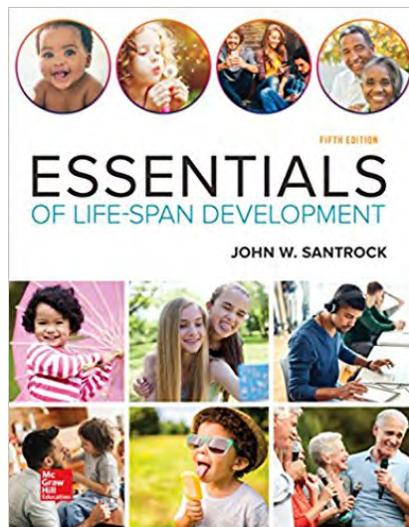
1) You may purchase a paperback version of the text. Purchasing a paperback version of the text gives you access to *Connect*. *Connect* includes an on-line version of the text (this can be downloaded) and numerous learning activities that will help you to prepare for class and enhance your understanding of course content; some of these activities will be directly reflected in your course grade.

Procedure: Go to the bookstore and purchase the text (\$159.95). Inside the book you will find a *Connect* code.

2) You may simply purchase a code for *Connect*. This option gives you access to the ebook and to all on-line learning resources. It is a less expensive option but only select this option if you think you can learn the content well without a paper copy on which to make notes etc.

Procedure: Go to the bookstore and purchase a *Connect* code (\$99.00). If you decide at a later date (i.e., after registration) that you would like a hard copy you may order a loose-leaf version of the text for an additional \$30.00. That book will be delivered to the address of your choice.

Note. Occasionally, additional readings will be posted on Sakai.



Note: This text was carefully selected. It is ‘lighter’ than many Lifespan Development texts, yet captures the essence of the field. If you contemplate people you know (perhaps a niece, your own child, a younger sibling, a parent, and elderly neighbour) as you read it will be that much more enriching.

IMPORTANT

COURSE INFORMATION MAY BE UPDATED REGULARLY TO ENHANCE FLEXIBILITY. IT IS YOUR RESPONSIBILITY TO CHECK SAKAI AND CONNECT REGULARLY.

Sakai is a course management system that has gained support and interest from Brock faculty, staff, and students. The course outline, assignments, lecture outlines, and marks will be posted on Sakai.

Date by which notification of a minimum of 15% of course grade will be received by students: **October 30, 2018**

Last date for withdrawal from course without academic penalty: **November 6, 2018**

ACADEMIC INTEGRITY

Because academic integrity is vital to the well-being of the university community, Brock University takes academic misconduct very seriously. Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties. The penalties for academic misconduct can be very severe. A grade of zero may be given for the assignment or even for the course, and a second offence may result in suspension from the University. Students are urged to read the section of the Brock University Undergraduate Calendar that pertains to academic misconduct. Students are also reminded that the Student Development Centre (Schmon Tower, Room 400) offers free workshops on writing and study skills and on avoiding plagiarism. *You have already paid for these courses so I recommend that you take one or more of them to foster excellent study and writing skills.* For more information on academic integrity please visit <http://www.psyc.brocku.ca/undergrad/misconduct.htm>. "I didn't know" is not an excuse.

Tip: If you do not understand something that you read, ask for help! Do not let confusion lead to plagiarism.

Tip: Changing one or two words in a sentence is *not* paraphrasing. You should paraphrase paragraphs or pages, not individual sentences.

Tip: Even if you write in your own words, you must cite the source!

POLICY ON PERSONAL ELECTRONIC DEVICES

We have been allotted 3 hours per week in which to focus attentively, in collaboration, on learning. It is imperative that we listen to each other and concentrate on the task at hand. Personal electronic devices can disrupt this process, for the user, for nearby students and for the instructor. I do not arrive to class with detailed lecture notes. I am always well prepared but try to keep class lively and adapt our discussion based on my sense of how well students are understanding the material. Unexpected beeps, ring tones, and attractive WEB pages distract us all; students who are engaged in non-course related activities disrupt the instructor.

To foster our learning environment, you are permitted to bring necessary personal devices (e.g., laptops, iPads) to lecture, but they must only serve class needs (i.e., for taking class notes). The goal of this policy is to keep our class in the "foreground." If you ever appear to be "backgrounding" the class, you will be asked to put your personal device away immediately. Examples of "backgrounding" the class include: answering or making a cell phone call; texting or IMing; checking or writing e-mail; surfing the web; wearing headphones; logging into MySpace, Facebook, your SHU blog, or other social network; reading an ebook or any printed matter not related to class content (e.g. a magazine); and handheld gaming. Please set your cell phones to "silent" mode before class begins. I reserve the right to ban electronic devices entirely if I feel they are distracting you or your classmates from proper study or if they are distracting me from my job. **STUDENTS WHO REALLY WANT TO 'SURF' DURING CLASS ARE ASKED TO SIT IN THE BACK THREE ROWS.** Earbuds are not allowed in class.

*Science is fun. Science is curiosity. We all have natural curiosity.
Science is a process of investigating. It's posing questions and coming
up with a method. It's delving in.*

*Sally Ride
1st American woman in space*

COURSE REQUIREMENTS

• Completing SmartBook	10%	See <i>Connect</i> Calendar
• On-line Quizzes	20%	See <i>Connect</i> Calendar
• In-Class Test #1	10%	October 15
• In-Class Test #2	10%	November 21
• Final Exam	20%	Scheduled by Registrar's Office
• Media Assignment	10%	Due October 31
• Essay	20%	Due Dec 3
Research Participation Bonus	2%	By November 28th

You may earn up to 2% bonus marks by completing 2 hours of research participation. Participation in research can be a very meaningful experience and helps bring research to life. At least one hour of research participation must involve an in-lab experience (i.e., no more than one hour may involve on-line participation).

LATE PENALTY: 5% per day. A mark of **ZERO** will be entered one week after each assignment was due unless you have made **prior** arrangement with the course coordinator.

MISSED TESTS: Please review Brock University's policy on missed tests carefully: <http://www.brocku.ca/health-services/policies/exemption>. If you are ill on the day of a test, you must obtain documentation as outlined and contact the course coordinator PRIOR to the test. Failure to do so will likely result in a grade of zero. It is the student's responsibility to arrange for a make-up test.

****Note.** Dates of *SmartBook* and On-line Quizzes might be adjusted as we move through the course. Dates will not be moved up, but if we get behind we will push the date back to make sure that you've had an opportunity to learn the material prior to being tested.

A few details:

Connect SmartBook: Passively reading a textbook has minimal educational value; I am not a chemist, but I am able to read and highlight a chemistry textbook. That does not mean that I have understood or learned the content. Likewise, if you simply read and highlight the text, you have no way of knowing how much you understood. SmartBook provides an opportunity to interactively assess your comprehension of the text *prior to class*. To complete a segment you must answer a predetermined number of questions accurately. Marking of the SmartBook is as follows: complete/incomplete. There is no credit for a partially completed segment (i.e., for answering 10 of 12 questions correctly). Completing SmartBook is worth 10% of your final mark. Your mark out of 10 will be based on the proportion of segments completed. Because SmartBook is designed to assess your understanding of basic content prior to the material being covered in class and to help you manage your time, there will be no extensions granted for completion. Its value is significantly reduced if you complete the SmartBook late. Likewise, because I will assume that you have read the material and gained a basic understanding of it prior to class, I'll assume some basic knowledge when preparing lectures. So, plan ahead. To help you manage unexpected events (e.g., illness, family emergencies) I will allow you to miss two (2) Smartbook segments without penalty. No further adjustments will be made.

On-line Quizzes: These quizzes are designed to help you assess your basic understanding of content covered in your textbook and in lecture. There will be one quiz for each chapter covered in the course. You have two (2) attempts at each quiz. These quizzes are collectively worth 20% of your final mark. Each quiz will remain available for full credit for 24 hours; marks for quizzes taken at a later date will be deducted 10% per day. Material in this course is inherently cumulative; it is essential that you understand the principles discussed in one chapter (e.g., cognitive development during infancy) in order to participate in class discussions in subsequent chapters (e.g., cognitive development during childhood). Thus, with the exception of very extenuating circumstances, due dates will not be adjusted. **However, to accommodate a host of circumstances (illness, family emergencies, stress, etc) each student is allowed to drop two quizzes from their mark. If you find yourself falling behind, contact the course coordinator immediately.**

Tests: Each test will comprise 4 questions of which you must answer three. Your answers should be thoughtful, clear, and concise (no more than 150 words). These tests will take only 30 – 40 minutes; class will resume afterwards. You may bring one **3 x 5 index card** to each test; you may write whatever words/phrases you think will be helpful on that card.

Test #1: Chapters 11, 12, 1, 2

Test #2: Chapters 3, 4, 5, 6, 8

Final Exam:

Part A: Chapters 9, 10, 15, 16 (same format as tests)

Part B: Short-Answer/Essay Questions that require integration of course material

You may bring one **3 x 5 index card** to the final exam; you may write whatever you think will be helpful on that card.

Research is formalized curiosity. It is poking and prying with a purpose.

*Zora Neale Hurston
Civil Rights Activist*

Media Assignment: You must find a media article that addresses an issue related to lifespan development and provide thoughtful commentary. (Please see separate posting for details.)

Essay: You will have an opportunity to consider the rationale of a current public policy that is related to psychological development. After reading relevant peer-review journal articles you will evaluate that policy and provide an argument to either keep or change the current policy. You will first write a formal essay (4 to 6 paragraphs) and then translate your argument for public consumption. (Please see separate posting for details.)

Both the media assignment and the essay are to be submitted via Sakai. All assignments will automatically be submitted to turnitin.com. *You do not need to turn in a hard copy of either assignment!*

*We keep moving forward, opening new doors, and doing new things,
because we're curious and curiosity keeps leading us down new paths.*

Walt Disney

Course Map

Please arrive to class on time and be prepared to start. If you arrive late, please take a seat towards the back of the classroom. Films, etc., are timed quite precisely and so late arrivals will be disruptive. Also note that we will have several short guest presentations throughout the term; these are key course components so class attendance is a must.

September 5 **Introduction** to Topics, Issues, and Methods
Chapter 1: pp. 1 – 16 (The Lifespan Perspective & The Nature of Development)

September 10 - 12 Where (most of) you are now: **Early Adulthood—Physical and Cognitive Development**
Chapter 11: Read pp. 299 – 318

Theories and Methods in Lifespan Development
Chapter 1: Read pp. 17 – 33

September 10: A representative from McGraw Hill will introduce you to **Connect**
September 12: Guest Presentation: *Your brain on sleep deprivation* (Dr. Kimberly Cote)

September 17 - 19 Where (most of) you are now: **Early Adulthood—Socioemotional Development**
Chapter 12: Read pp. 319-335

Documentary: *Us & Them* (Krista Loughton, 2016)
This film delves into addiction & homelessness. The vast majority of this film will be viewed on September 17th.

Ted Talk: *Why 30 is not the new 20* (Dr. Meg Jay)

In-class activity:
Using early adulthood as a launching pad: looking forwards & backwards

September 24 - 26 According to *Dr. Maté*, if there is a single cause of homelessness/addiction it is childhood trauma. According to Erikson's theory, each life stage is characterized by a particular crisis that must be solved. Well-being in early adulthood is impacted by earlier life stages. Now that you have some understanding of individual differences in young adults, let's go back to the beginning: gestation & infancy.

The roots of development: **Biological Beginnings**
Chapter 2: Read pp. 35 – 49; 63 – 72

Documentary: *The Ghost in Our Genes*

October 1 – 3 Development During Infancy: **Infant Cognition**
Chapter 3: Read pp. 75 – 83; 89 – 110

Documentary: *The Baby's Brain: Wider than the Sky* (from *The Secret Life of the Brain*)

October 8 - 10

***** THANKSGIVING/ READING WEEK *****

October 15 - 17

Test #1 on October 15

Development During Infancy: Setting up Relationships for Life?

Chapter 4: Read pp. 113 – 136

Assignment: Listen to the following Podcast (25 minutes)--

<https://podcast-a.akamaihd.net/mp3/podcasts/quirksaio-P4Zfi1Uh-20180622.mp3>

October 22 - 24

Finish Social Development During Infancy

In-class activities:

How does poverty get under the skin?

Does morality emerge during infancy? Are babies inherently 'good'?

Guest Presentation (22nd):

Valuable lessons from research involving animals (Dr. Cheryl McCormick)

Development During Early Childhood: Children's Thinking

Chapter 5: Read pp. 144 – 163

Oct 29 – 31

Children's Thinking: Specific Domains of Cognitive Development

Recognizing faces

Telling lies

Guest Presentation: *Interviewing children in the legal system (Dr. Angela Evans)*

Development During Early Childhood: Socioemotional Development

Chapter 6: Read pp. 165 – 192

November 5 – 7

Development During Early Childhood: Socioemotional Development

Chapter 6: Read pp. 165 – 192

An Animal Model of Social Development: Stephen Suomi's work with Uptight Monkeys

Development During Middle Childhood: Socioemotional Development

Chapter 8: Read pp. 222 – 251

November 12 - 14 **Development During Middle Childhood: Socioemotional Development**
Chapter 8: Read pp. 222 – 251

Documentary: It's a Girl's World
Classroom Activity: Designing Playgrounds

Development During Adolescence:
Chapter 9: Read pp. 253 – 272

November 19 - 21 **Test #2 on November 21**

Development During Adolescence:
Chapter 10: Read pp. 277 - 298
Guest Presentation: Risk-taking during adolescence (Dr. Elizabeth Shulman)

November 26 - 28 **Development During Late Adulthood**
Chapter 15: Read pp. 369 – 380; 384 - 396
Chapter 16: Read pp. 397 - 412
Guest Presentation: The Development of Prospective Memory (Dr. Caitlin Mahy)
Guest Presentation: Well-being Across the Lifespan (Dr. Michael Busseri)

December 3 Course Evaluations & Wrapping Up Content

Collectively, the courses that you take during your undergraduate program will provide you with an opportunity to develop numerous skills, a subset of which will be the focus of any one course. I have indicated some of the skills that PSYC 2P12 is designed to foster and assess as well as the context(s) in which that development and assessment should occur. Of course, your active participation in all course components is necessary if you are to take advantage of these learning opportunities.

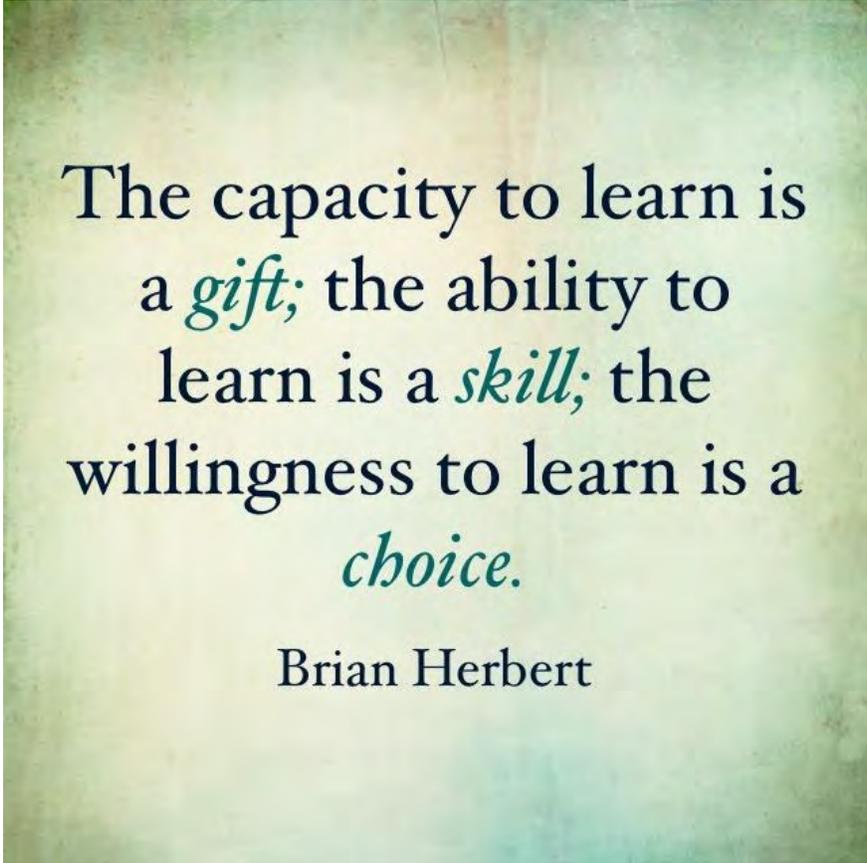
Skill	Course Component			
	Class Meetings	SmartBook	Tests	Written Assignments
Communication Skills:				
-Critical reading of text & primary sources	X	X	X	X
-Active listening	X	X	X	
-Engaging in group discussion	X			
-Writing effective summary of scientific articles	X		X	X
Critical Thinking:				
-Identifying questions, problems, or gaps in what we know	X		X	X
-Identifying information needed to address questions, problems, or gaps in what we know	X		X	X
-Evaluating, analyzing, synthesizing, or critiquing information	X		X	X
-Integrating findings across sub-areas	X	X	X	X
-Comparing and contrasting different points of view	X		X	X
Self-Management Skills:				
-Time-management	X	X	X	X
-Coping with stress	X	X	X	
-Working independently		X	X	X
-Responding appropriately to constructive criticism			X	X
-Studying effectively	X	X	X	
-Effective note-taking	X		X	X
Developing/Applying Psychological Knowledge Base:				
-Describing key concepts, theories in developmental psychology	X	X	X	X
-Applying findings, theories, concepts in developmental psychology to understand typical and atypical development across the lifespan	X	X	X	X
-Applying findings, theories, concepts in developmental psychology to help solve social issues/problems, inform policy, etc.	X	X	X	X
-Applying scientific knowledge in developmental psychology to be an informed consumer of research	X		X	X
Research Skills:				
-Understanding methods in developmental psychology	X	X	X	X
-Understanding visual displays of information (e.g., graphs/figures, tables)	X	X	X	X

Other Notes from the Psychology Department

Department Shredding: All essays, tests and exams that are not picked up by students will be shredded. Items will be held for twelve months. Note that final exams will not be returned to students.

Handing in Assignments: All assignments are to be submitted via Sakai. Paper copies will not be accepted.

NOTE: The Psychology Department at Brock University will NOT retain historical copies of Course Outlines. We urge you to retain this course outline for your future reference.



The capacity to learn is
a *gift*; the ability to
learn is a *skill*; the
willingness to learn is a
choice.

Brian Herbert

**BROCK UNIVERSITY
DEPARTMENT OF PSYCHOLOGY
Fall/Winter 2019/2020**

PSYCHOLOGY 2P15—ABNORMAL PSYCHOLOGY

Lectures: Fridays, 8:00am to 10:00am, STH204 (South Block, formerly AS204)

Seminars:

- Seminar 1: Wednesday, 8:00pm to 9:00pm, MCD301**
- Seminar 2: Friday, 4:00pm to 5:00pm, MCD301**
- Seminar 3: Wednesday, 5:00pm to 6:00pm, MCD304**
- Seminar 4: Monday, 5:00pm to 6:00pm, MCD300**
- Seminar 5: Tuesday, 4:00pm to 5:00pm, MCC304**
- Seminar 6: Thursday, 2:00pm to 3:00pm, MCD304**
- Seminar 7: Tuesday, 11:00am to 12:00pm, MCG310**
- Seminar 8: Monday, 8:00am to 9:00am, MCG310**
- Seminar 9: Friday, 10:00am to 11:00am, MCD300**

Contact Information

Instructor: Andrew Dane
Office: MC-B311
Telephone: 905-688-5550, ext. 4805
E-mail: adane@brocku.ca
Office Hours: Fridays, 10am to 12pm, or by appointment

Course Coordinator: Mirna Batinic (mb11dc@brocku.ca)

Teaching Assistants:

Mirna Batinic (mb11dc@brocku.ca)
Hannah McDowell (hm18zq@brocku.ca)
Nivetha Prabakaran (nprabakaran@brocku.ca)
Hannah Shahid (hs18fz@brocku.ca)

Course Objectives

Students will gain knowledge and skills in the following areas:

- 1) Classification, diagnosis, and assessment of mental disorders
- 2) Etiological theories and research about the causes of mental disorders
- 3) Pharmacological and psychosocial treatment approaches for mental disorders
- 4) Application of diagnostic criteria as well as etiological and treatment models to clinical case studies
- 5) Oral and written communication, critical thinking, and teamwork skills.

Course Evaluation

Course Evaluation

1) Test 1 (October 11 th)	20%
2) Final Exam	25%
3) Written Case Formulation (due November 15 th , 7:30 am)	25%
4) Seminar Case Presentation	20%
5) Seminar Participation	10%

Required Textbooks

The required texts for this course are the Barlow et al. (2019) textbook, whose chapters you will be use as readings for lectures and your written assignment, and the Barlow and Brown (2017) casebook, which includes clinical case studies that you will use for discussions in your seminars.

These required texts are available in the Brock Campus Store. Please note that the textbook and casebook have been priced in a bundle. See the bundle information below to make sure you purchase the bundle at the discounted price, rather than paying for each item individually at a higher cost.

Barlow, D.H., Durand, V.M., Hoffman, and Lalumiere (2019). *Abnormal psychology: An integrative approach, Fifth Canadian edition*. Toronto, Ontario, Canada: Nelson.

Brown, T. A., & Barlow, D. H. (2017). *Casebook in abnormal psychology* (5th ed). United States: Cengage Learning.

Bundle ISBN: 0176853553

Title: KIT: ABNORMAL PSYCH 5CE + CASEBOOK ABNR PSYCH

Author: BARLOW/DURAND/LALUMIERE

Components: 0176657185 (Barlow text) + 130597171X (Brown Casebook)

Lecture Topics and Readings

Date	Topic	Readings
September 6	Concepts and History of Abnormal Behaviour	Barlow, Durand, Hoffman & Lalumiere (2018), Chapter 1
September 13	Biological and Psychosocial Perspectives on Psychopathology	Barlow, Durand, Hoffman & Lalumiere (2018), Chapter 2

September 20	Classification and Diagnosis of Mental Disorders	Barlow, Durand, Hoffman & Lalumiere (2018),Chapter 3
September 27	Assessment and Research Methods	Barlow, Durand, Hoffman & Lalumiere (2018),Chapter 4
October 4	Anxiety, Trauma-Related, and Obsessive-Compulsive Disorders	Barlow, Durand, Hoffman & Lalumiere (2018),Chapter 5
October 11	Test 1	
Fall Reading Week	No lecture	
October 25	Anxiety, Trauma-Related, and Obsessive-Compulsive Disorders	Barlow, Durand, Hoffman & Lalumiere (2018),Chapter 5
November 1	Mood Disorders	Barlow, Durand, Hoffman & Lalumiere (2018),Chapter 7
November 8	Mood Disorders	Barlow, Durand, Hoffman & Lalumiere (2018),Chapter 7
November 15	Schizophrenia; Written Case Formulation Due	Barlow, Durand, Hoffman & Lalumiere (2018),Chapter 13
November 22	Eating Disorders	Barlow, Durand, Hoffman & Lalumiere (2018),Chapter 8
November 29	Substance Use Disorders	Barlow, Durand, Hoffman & Lalumiere (2018), Chapter 11

Seminar Topics and Readings

Date	Topic	Readings
September 4 th to 6 th	No Seminars	
September 9 th to 13 th	Organizational Meeting	
September 16 th to 20 th	Physical Abuse of Adult	Brown & Barlow (2017),

	(Domestic Violence)	Case #7
September 23 rd to 27 th	Generalized Anxiety Disorder	Brown & Barlow (2017), Case #1
September 30 th to October 4 th	Panic Disorder	Brown & Barlow (2017), Case # 2
October 7 th to October 11 th	Post-Traumatic Stress Disorder	Brown & Barlow (2017), Case # 4
Fall Reading Week	No Seminars	
October 21 st to 25 th	Obsessive-Compulsive Disorder	Brown & Barlow (2017), Case #5
October 28 th to November 1 st	Major Depression	Brown & Barlow (2017), Case #9
November 4 th to November 8 th	Bipolar Disorder	Brown & Barlow (2017), Case #10
November 11 th to November 15 th	Schizophrenia	Brown & Barlow (2017), Case # 16
November 18 th to November 22 nd	Bulimia Disorder	Brown & Barlow (2017), Case # 11
November 25 th to 29 th	Alcohol Use Disorder	Brown & Barlow (2017), Case #14
December 2 nd and 3 rd	No Seminars	

Course Communications

Please contact the **course coordinator** about the following issues:

- To report extenuating circumstances that prevented you from submitting or completing an assignment by the due date, or attending seminar. Send a scan or picture of appropriate documentation (e.g., medical note) to the course coordinator to get approval for waived late penalties, make-up tests, or extensions. See Documenting Illnesses or Personal Emergencies, in the Academic Policies section below, for further information.
- To schedule the day and time of a make-up test with the course coordinator, if you have received permission to write one.

- To request specific course accommodations (e.g., extensions on assignments) that have been pre-approved by Student Accessibility Services.
- To ask questions about Gradebook or turnitin.com
- To get approval to switch seminar sections with another student, when you have a legitimate scheduling conflict (e.g., overlapping courses)

If you have questions about lecture material, readings, or how to complete assignments, **please contact the instructor**. Brief, straightforward questions may be addressed by email, whereas complex questions should be discussed in person, during office hours or by appointment.

Please **contact your TA** with questions about seminar assignments or marks on assignments.

ISAAK/SAKAI

The SAKAI course site includes menu links (on the left side) for the following features or tools:

- 1) **Assignment Instructions Menu Links** (Seminar Case Presentation, Seminar Participation, Written Case Formulation, Mid-Term, and Final Exam). Click these menu links to access instructions regarding the content, format and submission of the assignments.
- 2) **Assignments**. Use this tool to submit your written case formulation assignment and answers to weekly seminar consultation questions. The evaluation of your written case formulation assignment will be returned here as well. I have provided links to submit your assignment using this tool within the instructions for each assignment (see above). By submitting your written case formulation using this tool, your assignment will automatically be reviewed by turnitin.com. See details about the assignments below in the syllabus, and under the relevant menu key in SAKAI. Once it has been submitted and marked, your TA or instructor will attach a document with feedback and grading of this assignment. The status of the assignment in the assignment list will change to “returned” when it has been graded.
- 3) **Gradebook**. Grades for each of your assignments will be posted throughout the course to Gradebook. Following the exam, your final grade, as well your marks for each component of the final grade, will be posted.
- 4) **Syllabus**. You can access the syllabus or course outline here.
- 5) **Announcements**. Use this tool to check for any course announcements from the instructor or from the TAs.
- 6) **Lecture Slides**. I will post the lecture slides under this link prior to each lecture.

Assignments

Mid-term (Test 1)

Mid-term tests will be based on lectures and lecture readings. If appropriate documentation is provided, make-up tests will be scheduled for students who were absent due to a personal or medical emergency.

Final Exam

The exam will be written during the Exam period, as scheduled by the Registrar's office.

Written Case Formulation (Due November 15th, 7:30am)

For this assignment, you will watch a video of a clinical interview with an individual who has experienced a mental disorder, and write a 5-6 page case formulation describing the presenting problem (i.e., symptoms) and applying etiological/causal models from the textbook to this particular case to explain how the disorder may have developed. You can choose one of several videos to write a case formulation on a disorder that is of interest to you.

The case formulation will be approximately five to six pages in length, double-spaced. I have provided detailed instructions about the written case formulation, under the menu link for this assignment in SAKAI, including evaluation criteria.

Your case formulation will be **due before class on November 15th, 2019, by 7:30am**. Please **submit your case formulation using the Assignments tool in SAKAI**. Click on the link for the written case formulation assignment, browse for your saved Word document, and then click submit. Please be sure to keep a copy of this assignment for your records. Once it has been submitted and marked, your TA will attach a document with feedback and an evaluation of this assignment. The status of the assignment in the assignment list will change to "returned" when it has been graded.

There is a penalty of 5% per day for late case formulations. Late penalties will be applied unless you have appropriate documentation indicating that an extension is required due to illness, personal emergency, or an approved academic accommodation. See the section of the course outline (below) on "Documenting Illnesses or Personal Emergencies" for further details.

Your assignment will automatically be uploaded to Turnitin.com, phrase-matching software that compares your essay for similarity with other essays and articles, including papers posted on other websites. If you object to uploading your assignments to Turnitin.com for any reason, please notify the instructor to discuss alternative submissions

Seminar Presentation

Each week, (usually two) students will lead seminar discussions about the case study assigned in the seminar schedule (see above). In the first week of seminar (second week of the term; there is no seminar the first week), you will choose a case study topic to present, usually with a partner. The discussions will be about diagnostic decisions and treatment plans, similar to the conversations that clinical practitioners have about clinical issues in case conferences with their colleagues.

Presenters may choose which seminar activities would enable them to lead the best discussion, including small-group activities or whole-group discussions. Non-presenting students are expected to read the case studies in order to participate in seminar discussions and earn participation marks (see below).

Please see the menu link for the Seminar Presentation in SAKAI for important details about the format and evaluation criteria for this assignment.

Seminar Participation

Each week in which there is a seminar presentation (see schedule above), the participation of non-presenting students will be marked with respect to attendance, submitting an answer to a consultation question prior to seminar (to your TA), and participation in in-class seminar discussions. **Please see the Seminar Participation menu link in SAKAI for important details about submitting answers to consultation questions each week, and criteria for evaluating participation.**

Non-presenting students must submit answers to consultation questions, using the assignment tool in SAKAI, prior to the meeting of their seminar section each week.

Academic Policies

Documenting Illnesses or Personal Emergencies:

If you have a medical problem or a personal emergency that prevents you from completing or submitting an assignment by the due date, please provide appropriate documentation (e.g., medical note) by emailing a picture or scan of your note. For further details on medical notes, see the Medical Exemption Policy and the medical health certificate at <http://www.brocku.ca/health-services/policies/exemption>.

Email the TAs regarding Video Case Study Diagnoses, Video Case Formulations or Casebook Treatment Consultations, and email the instructor in regard to the essay or the exam. The instructor or a TA will then contact you with an appropriate accommodation.

The University will accommodate students whose studies become interrupted, or who may be unable to complete academic work, due to an incapacitating medical condition. In

these situations, the student must complete the Brock University Student Medical Certificate or Brock University Student Health Services Medical Certificate (or in case of a concussion, the Brock University Student Health Services Medical Concussion Certificate) and include any relevant medical documentation to support his/her request for academic accommodation based on medical grounds. The University may, at its discretion, request more detailed documentation in certain cases.

Academic Integrity:

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.

Because academic integrity is vital to the well-being of the university community, Brock University takes academic misconduct very seriously. Academic misconduct includes plagiarism, which involves presenting the words and ideas of another person as if they were your own, without citing appropriate references or indicating that it is a quotation. Other forms of cheating, such as using crib notes or electronic devices (e.g., smart phones) during a test, fabricating data for a lab assignment, or working with a classmate on an independent assignment, will also be penalized. The penalties for academic misconduct can be very severe. A grade of zero may be given for the assignment or even for the course, and a second offense may result in suspension from the University.

Students are urged to read the section of the Brock University Undergraduate Calendar that pertains to academic misconduct. Students are also reminded that the Student Development Centre (Schmon Tower, Room 400) offers free workshops on writing and study skills, and on avoiding plagiarism.

Course Withdrawal:

Please note that the final date for course withdrawal without academic penalty, or to change from credit to audit status, is November 4th, 2019.

Intellectual Property Notice:

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

Academic Accommodation:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Services for Students with Disabilities in the Student Development Centre (4th floor Schmon Tower, ex. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

Academic Accommodation due to Religious Obligations:

Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements.

Brock University
Department of Psychology
Psychology 2P20 –Cognition
Fall 2017

Professor: Karen Arnell, PhD

Office: MC B333

Phone extension: 3225

Email: karnell@brocku.ca (do not use the Sakai email for Karen or TAs)

Office hours: Tues. 12:30-1:30, Wed. 11:30-12:30, or by appointment

Teaching Assistants:

Andrew Chung	MCB420	ext. 5872	ac12fn@brocku.ca	office hrs: Wed12-1, Thurs 3-4
Brent Pitchford	MCB420	ext. 5872	bp11lj@brocku.ca	office hrs: Tues 12-1, Thurs 10-11
Dawn Ryan	PL615	ext. 3034	dr16yd@brocku.ca	office hrs: Wed 1-2, Thurs 10-11

Class Format: There will be two hours of lecture and one hour of lab per week.

Lecture: Tuesdays 10:00 – 12:00 AS204

Lab: lab 1	M	7:00 – 8:00pm	PL309	Andrew
lab 2	M	4:00 – 5:00pm	PL309	Dawn
lab 3	T	8:00 – 9:00pm	PL309	Andrew
lab 4	M	3:00 – 4:00pm	PL309	Dawn
lab 5	M	11:00 – 12:00am	PL309	Brent
lab 6	M	10:00 – 11:00am	PL309	Brent

* labs will begin Monday Sept. 18th 2017

Please note:

- PSYC 1F90 (Introduction to psychology) is a prerequisite for this course
- Course notes for each lecture class (but not for labs) will be accessible through Sakai. These notes are outlines intended for your use in class, and do not take the place of class attendance. Review questions, assignments, and other links may also be available through Sakai. Items will be added throughout the semester.
- The last date for withdrawal from this course without academic penalty is Nov. 7th 2017. You will have received approximately 40% of your class grade by this date.

Required Materials:

1) Text: Eysenck, M. W. (2012). Fundamentals of Cognition. (2nd edition). New York, Psychology Press Ltd. (\$74.25, some now in the Brock bookstore)

2) Lab experiment code: CogLab 5th edition 6-month instant access code. \$59.75+tax.

- You can purchase the e-pin registration code through the Brock bookstore.
- Do not buy used access codes as they cannot be reused.
- If you already have a new or used CogLab 2.0 on a CD then you can use that instead (the experiments are the same).
- See file on Sakai titled "instructions for getting started with CogLab5" to register in our class CogLab once you have the e-pin.

Course Description:

The course introduces students to the study of cognition. Topics include attention, memory, object recognition, executive functioning, laterality, and judgment and decision making. Lectures will present empirical and theoretical information on normal and disordered cognitive processing, and their applications. Labs will focus on running classic experiments, and deciphering the pattern of results.

Grading System:

Midterm test	Oct. 24 th 2017	30%
Final Exam	TBA by Registrar, Dec. 7 - 20	35%
Poster & presentation	(see below)	15%
Lab Assignments	(see below)	20% combined

- There are no grades given for participation or attendance per se. However, given that much of the material presented in lectures and labs will not be available in the readings, attendance is strongly encouraged for your own success.

Tests/Exams:

- Tests and exams will consist mostly of short paragraph questions where answers of 2-8 sentences would be appropriate. There will be a few true/false questions, but no multiple choice questions.
- Material for tests and exams will come from the readings, lectures, and labs. The final exam will not be cumulative except that basic concepts learned earlier in the course will continue to be relevant. Be warned that material presented in lectures and labs will frequently **not** be available in the readings, and will be used on tests and exams.
- Students unable to write a test/exam for legitimate reasons will need to write a make-up exam. It is the student's responsibility to provide written documentation that their absence from a test or exam was legitimate according to the standards set by Brock University.

Laboratory Assignments:

- There will be 4 assignments (3 from labs, 1 from the poster presentations) worth 5% each.
- Lab assignments will be based on experiments carried out in the lab sections. Details of each assignment will be given in the lab on the day the assignment is handed out.
- Late assignments will be penalized 10% per day, and should be submitted using the Psychology Department drop box across from Kirsti Van Dorsser's office (MCB 328).
- There will be a poster creation/presentation worth 15% of your grade in the course. You and a partner will need to create a poster based on an existing journal article on individual differences in cognition, and present the poster during the last lab class (week of Dec 4th). However, posters will be due to your TA during your lab the week of Nov 27th. Approximately half of the grade for this assignment will come from the poster and the other half from your presentation of the poster. More details will be given in lab in October.
- There will be no electronic plagiarism detection system used in this class.

- Academic misconduct is a serious offense. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, 'Academic Misconduct', in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at brocku.ca/webcal to view a fuller description of prohibited actions, and the procedures and penalties.
- Please note that while it is OK to work with one or more students from the class on assignments, each assignment must be written-up individually in your own words. Assignments where the wording is too similar to that of another student will be reported to the University as a case of potential academic misconduct.
- The Student Development Centre on campus can assist you with developing skills to avoid plagiarism. Visit <http://www.brocku.ca/learning-services> for a list of services and workshops that are offered.

Tentative Lecture Topic Schedule:

Date	Lecture Readings	Topic(s)
Week 1 Tues. Sept 12 th	Eysenck Chapter 1	Introduction to course What is cognitive psychology?
Week 2 Tues. Sept. 19 th	Eysenck Chapter 2	Object recognition Disorders of recognition
Week 3 Tues. Sept. 26 th	Sakai reading "Face Processing: The Interplay of Nature and Nurture"	Face processing: Normal & disordered
Week 4 Tues. Oct. 3 rd	Eysenck Chapter 3	Attention part 1
Tues. Oct. 10 th	none	No class – Reading Week
Week 5 Tues. Oct. 17 th	Dr. Masud Husain's Scholarpedia article: http://www.scholarpedia.org/article/Hemineglect	Attention part 2 Attention Disorders
Week 6 Tues. Oct. 24 th	none – midterm test	Midterm test
Week 7 Tues. Oct. 31 st	Eysenck Chapter 4	Review midterm Memory part 1
Week 8 Tues. Nov. 7 th	Eysenck Chapter 5 & 6	Memory Memory disorders
Week 9 Tues. Nov. 14 th	Sakai reading "Hemispheric Specialization"	Laterality
Week 10 Tues. Nov. 21 st	Sakai reading "Disorders of thinking"	Executive Functioning
Week 11 Tues. Nov. 28 th	Eysenck Chapter 11	Judgment & Decision Making
Week 12 Tues. Dec. 5 th	Eysenck Chapter 12	Emotion and Cognition

Tentative Lab Topic Schedule:

Week	Materials Needed	Topic(s)
Week 1 Sept. 11 th & Sept. 12 th	No labs	No labs
Week 2 Sept. 18 th & Sept. 19 th	CogLab access	Mental Rotation
Week 3 Sept. 25 th & Sept. 26 th	CogLab access	Stroop Assignment #1 handed-out
Week 4 Oct. 2 nd & Oct. 3 rd	CogLab access	Visual Search Assignment #1 due
Oct. 9 th & Oct. 10 th	No labs – Reading week	No labs – Reading week
Week 5 Oct. 16 th & Oct. 17 th	CogLab access, Sakai reading “Nature of attention”	Spatial Cueing Assignment #2 handed-out
Week 6 Oct. 23 rd & Oct. 24 th	Read & bring to lab, Sakai article “ <i>Driven to distraction</i> ”	Dual-task Attention Assignment #2 due
Week 7 Oct. 30 th & Oct. 31 st	none	Poster Instructions
Week 8 Nov. 6 th & Nov. 7 th	CogLab access	Memory Assignment #3 handed out
Week 9 Nov. 13 th & Nov. 14 th	CogLab access	Memory Assignment #3 due
Week 10 Nov. 20 th & Nov. 21 st	Read and bring Sakai article “ <i>Alcohol & the ability to inhibit behaviour</i> ”	Executive Control
Week 11 Nov. 27 th & Nov. 28 th	CogLab access	Judgement & Decision Making Poster copies due in lab
Week 12 Dec. 4 th & Dec. 5 th	In-lab poster sessions	Poster sessions

Brock University

Department of Psychology

Psychology 2P25 – Personality and Individual Differences

Course Outline Winter 2018

Description: An introduction to theory and research in personality and related individual differences.

Instructor: M. C. Ashton, room MC B323, phone ext. 3993, mashton@brocku.ca (please see email rules below)

Course Co-ordinator: Kevin MacDonald, room MC B416, phone ext. 5743, e-mail km11pv@brocku.ca

Please contact the course co-ordinator (not the instructor) regarding matters associated with the day-to-day administration of the course. For example, notify the course co-ordinator about any illnesses or family emergencies that might cause you to miss a test or exam or an assignment deadline, about examination timetable conflicts, about seminar “trades” with other students (see Seminar section below), or about questions regarding submission of the written assignment.

Class Format: Lectures (2 hours per week), seminar (1 hour per week)

Lectures: Thursday, 12:00 – 1:50, Academic South 204

Seminars: Please check your timetable for information.

Office Hour: By appointment (email the instructor to make an appointment)

Isaak/Sakai: Lecture notes will be posted each week after the lecture; study review materials may also be posted.

E-mail Correspondence Rules: The instructor will use students’ Brock e-mail addresses to make announcements to the class (via the course Sakai/Isaak site). Students are responsible for checking their Brock e-mail account regularly. Please do not send e-mail messages to the instructor about matters that are explained in the course outline or that are to be handled by the course co-ordinator. For explanations of course concepts, please ask the instructor at office hours whenever possible. In the event that you really do need to send an e-mail message to the instructor, please write a short message in full proper sentences that state your question clearly and concisely.

Prerequisite: PSYC 1F90

Restrictions: Open to PSYC (single or combined) majors until date specified in BIRT guide.

Last Date for Withdrawal without Academic Penalty: Mar. 9. Marks for the first test (worth 25% of final grade) will be available well before that date.

Textbook: Ashton, M. C. (2018). *Individual Differences and Personality* (3rd ed.). San Diego, CA: Elsevier/Academic Press. NOTE: There are important differences between the 3rd edition and the 2nd or 1st; use the 3rd edition, not the 2nd or 1st.

Evaluation:	Midterm Test (Feb. 8)	25%
	Final Exam (date TBA)	40%
	Written Assignment (due Mar. 15)	20%
	Seminar Performance	15% (5% attendance, 10% participation)

The final exam will not be cumulative except that basic concepts learned early in the course will continue to be relevant; also, the instructor may declare some topics as eligible for the final exam based on results of the midterm test. Students who are unable to write a test or exam for legitimate reasons will write a make-up test or exam of similar difficulty but possibly of different format. (“Legitimate reasons” generally means a documented illness or family emergency.)

The test and exam in this course will have a multiple-choice format. However, the multiple choice questions in this course will be somewhat different from those that you have experienced in many other courses. Many of the questions are not intended to assess recognition of isolated specific facts, but instead to assess understanding of concepts. Some of these questions will require students to read several sentences.

Learning Objectives

At the end of this course, students should be able to understand the following:

1. Concepts in psychological measurement (e.g., reliability and validity of scores, major methods of assessing personality)
2. The concept of a personality trait and the development of self- and observer report measures of personality traits
3. The issue of personality structure and the main models of personality structure, along with the dimensions of those models
4. Concepts and findings in personality development across the lifespan, including the contrast between rank-order stability and mean-level stability
5. Major theories of the biological bases of personality, and findings on the role of brain structures, neurotransmitters, and hormones
6. Methods of assessing the role of genetic and environmental variation in contributing to personality variation, along with main findings of heritability studies and limitations thereof
7. Theories of the evolutionary origins of personality variation, particularly frequency-dependent selection and fluctuating optimum levels of traits
8. Personality disorders and criticisms of current models of personality disorder
9. The role of personality in predicting life outcomes in various domains (e.g., health, school, work, marriage, friendships, crime, etc.)
10. Measurement and structure of mental abilities, along with causes and consequences of variation in mental abilities
11. Individual differences in vocational interests, and their relations with personality
12. Individual differences in religious beliefs and political attitudes, and their relations with personality
13. Individual differences in major aspects of sexuality, and their relations with personality

About Your Mark in this Course

Perhaps the most important advice for succeeding in this course is to keep up with the work. This means attending the lectures, doing the readings, attending the seminars, completing assignments on time, and studying for (and showing up for) the tests and examinations. Note that the only way to get a good mark in this course is to perform well on the course components; marks will not be awarded on the basis of how much a student wants or “needs” a good mark, or other reasons. Please keep in mind that, because your mark in this course is simply an evaluation of your performance on the course components, it is not an evaluation of your worth as a human being or even of your dedication as a student or of your intellectual ability.

About Plagiarism and Academic Misconduct

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.

One form of academic misconduct is plagiarism. If you take any text directly from a (paper or electronic) journal, book, or other source, without using quotation marks and page numbers, then this is plagiarism. If you cite any phrases, sentences, or paragraphs directly—either "word for word" or with trivial changes—then you **MUST** provide page numbers for, and quotation marks around, **ALL** of the cited text. In general, however, it is much better to paraphrase text broadly, with appropriate citation to the source of the paraphrased text, than to use direct quotations.

Another form of plagiarism is committed if you submit a written assignment that was actually prepared in whole or in part by someone else. To avoid suspicion of this form of plagiarism, you must be prepared to explain, discuss, and defend any written work that you submit in this course. Inability to do so will be interpreted as evidence that the work is not your own.

Note also that in this course you are not permitted to submit written work that you have also submitted (or are also submitting) for another course.

This course may use Turnitin.com, phrase-matching software. If you do not want to submit your paper to Turnitin.com, you are able to choose to do your project differently. Specifically, you will be asked to submit your summary notes for each of the articles cited in your paper, indicating for each point the page number in the article where you found each point, and you will be asked to provide page numbers for every citation in your paper. In addition, you will be required to meet Prof. Ashton to explain, discuss, and defend your paper in considerable detail. To choose this alternate assignment, you must make an appointment with Prof. Ashton to discuss your concerns with Turnitin.com at least 3 weeks prior to the assignment deadline.

Academic Accommodation Statement

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Services for Students with Disabilities in the Student Development Centre (4th floor Schmon Tower, ext. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

Academic Accommodation due to Religious Obligations

Brock University will accommodate students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements.

Medical Exemption Policy

The University requires that a student be medically examined in Health Services, or by an off-campus physician prior to an absence due to medical reasons from an exam, lab, test, quiz, seminar, assignment, etc. The Medical Certificate can be found here: <http://www.brocku.ca/health-services/policies/exemption>

Miscellaneous Points

- Audio or video recording of the lectures or seminars is not permitted.
- Electronic communication devices (e.g., cell phones, pagers, Blackberries, etc.) are prohibited during lectures, seminars, and examinations. Please **turn off all such devices** before the start of lectures, seminars, or exams. Use of an electronic device during an examination constitutes academic misconduct.
- One exception to the above rule about electronic communication devices involves laptop computers, which may be used during the lectures. However, students are NOT to use laptop computers during the lecture for the purposes of communication (e.g., email, instant messaging) or entertainment (e.g., games, internet). The professor has the discretion to ask any particular student(s) not to use a laptop computer during the lecture.
- Students may not ask TAs for their home phone numbers or e-mail accounts other than those provided by the TA.
- In any case of a discrepancy between a grade posted on student self-serve and the professor's records, the latter will be taken as the correct value.

Psychology 2P25 – Introduction to Personality and Individual Differences

Lecture and Reading Schedule

Date	Topic	Reading
Jan. 11	Introduction Measurement of Personality Personality Traits	Introduction Chapter 1 Chapter 2
Jan. 18	Personality Traits (continued) Personality Structure	Chapter 2 (continued) Chapter 3
Jan. 25	Personality Structure (continued) Developmental Change and Stability	Chapter 4
Feb. 1	Biological Bases	Chapter 5
Feb. 8	Midterm Test	All chapters assigned so far
Feb. 15	Research Skills Workshop Genetic and Environmental Influences	Chapter 6
Feb. 22	No Class Meeting (Reading Week)	
Mar. 1	Genetic and Environmental Influences (continued) Evolution of Personality Variation	Chapter 7
Mar. 8	Personality Disorders Personality and Life Outcomes	Chapter 8 Chapter 9
Mar. 15	Mental Abilities	Chapter 10
Mar. 22	Mental Abilities (continued) Vocational Interests	Chapter 11
Mar. 29	Sexuality	Chapter 13 (13, not 12)
Apr. 5	Religion and Politics Summary	Chapter 12 Conclusion

Note: Lecture topics in a given week may vary somewhat from above guide. The last date to withdraw without academic penalty is Mar. 9; marks for the first test (worth 25% of final grade) will be available long before that date.

Seminar Schedule

Seminars Between

Lectures on...	Scheduled Topic (subject to change)
Jan. 11 and 18	Taking a Personality Questionnaire
Jan. 18 and 25	Review of Measurement Concepts
Jan. 25 and Feb. 1	Personality Traits and Structure
Feb. 1 and 8	Review for Test 1
Feb. 8 and 15	No Seminar (follows Test #1)
Feb. 15 and Mar. 1	Biological Bases of Personality
Mar. 1 and 8	Heredity and Environment
Mar. 8 and 15	Personality Disorders
Mar. 15 and 22	Personality in Spouses
Mar. 22 and 29	Mental Abilities
Mar. 29 and Apr. 5	Vocational Interests

Seminars

Students who wish to switch seminar sections within the first three weeks of classes may do so using the on-line registration system. Note that the instructors and the course co-ordinator cannot override this system to allow students to enrol in seminar sections that are already full. However, students may “trade” seminar sections (on a permanent basis) within the first three weeks of classes, by obtaining permission of the course co-ordinator and of the teaching assistants of both of the affected sections.

During the first half of the course, seminars will review concepts in psychological measurement and will provide an introduction to personality traits and inventories. During the second half of the course, seminars will consist of discussions regarding the topics of recent lectures and textbook readings. To prepare for the seminars, students should attend all lectures and read all textbook chapters as assigned.

In discussing the seminar topics, students are encouraged to state their opinions, which may sometimes mean expressing disagreement with the opinions of others. Note, however, that it is important to be polite and civil toward others even when one disagrees with them. The seminar leader will serve as moderator of the discussion, and students should respect that role at all times.

Seminar participation marks are based on the quality (e.g., relevance, originality, logical coherence) and quantity of one’s participation, and also on adherence to the principles of civility and respect described above.

Written Assignment

Each student must complete the written assignment to be described in a later document. The written assignment is to be submitted in class on its specified due date; details about electronic submission to a plagiarism detection website will be provided later. The length requirement for the assignment will likely be between 1500 and 2000 words. The penalty for late assignments is 5% per calendar day.

Brock University, Department of Psychology
Psychology 2P30 – Fundamentals of Social Psychology

Course Outline (Jan-Apr 2018)

Description: Theory, methods and research examining the influence of others on phenomena such as cognition, the self, attitudes, group processes and communication (see Undergraduate Calendar for details). **LECTURE TIME/LOCATION:** Wednesdays 1:00 – 2:20pm, & Fridays 2:30 – 3:50pm (all in room STH 204).

Instructor: Dr. Hodson

Office: MCB 307 **Phone:** (905) 688-5550 ext. 5127

Skype address: dr.hodson (chats upon request; often available during office hours)

Isaak/Sakai: Dr. Hodson uses Isaak/Sakai as the regular means to communicate with students, make announcements, etc (not brocku.ca email). You are responsible for regularly checking the website (<https://lms.brocku.ca/portal>).

Office Hours: Wednesdays 2:30pm - 4:30pm (or by appointment); *lecture-weeks only*

Professor’s Email Address and Correspondence Rules: Dr. Hodson will only respond to emails sent through the course Isaak/Sakai site (see above). Please be patient in waiting for replies; most professors deal with hundreds of students at any given time. Please address correspondence to “Dr. Hodson” (it is unprofessional to begin emails with “Hey” or “Hey there”). *Emails pertaining to information contained in the course outline, or posted on Isaak/Sakai, will NOT be answered.*

Course Coordinator: Elliott MacDonell. **Office:** Plaza 518A; **Office Hours:** Mon 12:00pm-2:00 pm (lecture weeks only) & appts; Phone: ext 5556; **e-mail:** em10zc@brocku.ca

Please **contact the course coordinator** (not instructor) regarding matters associated with the day-to-day administration of the course. For example, notify the course coordinator about any illnesses or family emergencies that might cause you to miss an examination or an assignment deadline, about examination timetable conflicts, about questions regarding submissions to turnitin.com, or about grade postings on Isaak/Sakai. Also for help with mypsychlab.com technical questions (but ideally use their tech help). For very personal issues, contact professor.

Required Textbook (available in print and e-text)

1. Aronson, E., Wilson, T.D., Fehr, B., & Akert, R. (2017). *Social psychology* (6th Canadian edition). Toronto, Canada: Pearson (Loose-leaf)
<https://console.pearson.com/enrollment/rzdfwt> (but loose-leaf is sufficient alone)
2. Optional reading: Pinker (2014) *The Sense of Style*; <http://bit.ly/1J91tLM>

Evaluation Scheme

- | | |
|---|-----|
| 1. First mid-term test (Oct 19, 2018, in class, 2:30-3:50 pm): | 28% |
| 2. Final examination (scheduled by Registrar, TBA, http://bit.ly/1UIRKzW): | 42% |
| 3. Assignment #1 Article Summary (due Oct 3, 2018; 1:00 pm <u>in class</u>): | 10% |
| 4. Assignment #2 Essay Critique (due Nov 21, 2018; 1:00 pm <u>in class</u>): | 20% |

Last Date for Withdrawal without Academic Penalty: Nov 6, 2018 (see <https://brocku.ca/important-dates#withdrawal>). Grades from the midterm exam will be posted on Isaak/Sakai no later than Oct 30, 2018.

NOTE: you must obtain a grade of 50% on the final exam in order to pass the course.

General Regulations

All students are responsible for knowing and accepting the following regulations.

1. Tests and examinations must be written as scheduled. Failure to write on the assigned dates will result in a "0" for that test or examination, except under extreme conditions (see #3). This is the case *even if you make a mistake writing down the exam date etc.* You are responsible for knowing your exam schedule.
2. Late assignments and late submissions to Turnitin.com will be deducted at 10% per calendar day (including weekends). For Assignment #2, both the hard copy paper version AND the electronic submission to turnitin.com are due at the same time, and the late penalty applies to the last piece submitted. *No extensions* will be possible except under extreme conditions (see #3). See later section in syllabus for late penalties and instructions for submitting late papers.
3. Exceptions to the scheduled tests/exams and essay deadlines are permitted only upon presentation of a valid medical certificate or highly exceptional and unavoidable circumstances (with documentation). You are strongly advised to consult with the course coordinator *beforehand* about problems; at very minimum you must contact the coordinator *as soon as possible*. If at all possible, you are advised to visit the physician/doctor *prior to* the course deadline.
 - your physician/doctor is not the course instructor and does *not* make decisions about your deadlines etc. Rather, he/she makes a professional assessment/judgment regarding your health and may forward a judgment regarding your ability to function to the instructor/coordinator.
 - The physician must complete this form (<https://brocku.ca/registrar/wp-content/uploads/sites/45/Medical-Certificate.pdf>) as per university guidelines.

Examinations

Exams will be multiple-choice format. However, the multiple choice questions in this course may be much different in nature from those that you have experienced in other courses. Most of the questions are not intended to assess recognition of isolated specific facts. Instead, most questions on your multiple choice tests are intended to assess directly your *understanding* of the course material, and even your ability to solve problems related to that material. Of course, you will still need to learn factual material that is introduced in the course, but in order to do well on the tests you will also need to understand the meaning and importance of those facts.

The exams will not be cumulative. This means that exams cover specific material since the last exam. Exams will cover material from the lectures and textbook.

Students unable to write a scheduled exam for legitimate reasons will write a make-up exam (“Legitimate reasons” generally means a documented illness or family emergency). The make-up exam will be of similar difficulty but may differ in format (e.g., may involve short or long essay questions).

Use of electronic devices (e.g., cell/smart phones) during exam is forbidden, and will be considered a breach of academic integrity.

Academic Integrity

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one’s own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, ‘Academic Misconduct’, in the “Academic Regulations and University Polices” entry in the Undergraduate Calendar, available at <http://www.brocku.ca/webcal/2018/undergrad/areg.html#sec67> to view a fuller description of prohibited actions, and the procedures and penalties.

The university has an obligation to discipline acts of academic misconduct. This protects the integrity of your degree.

Because academic integrity is vital to the well-being and credibility of the university community, Brock University takes academic misconduct very seriously. Academic misconduct includes plagiarism, which involves presenting the words and ideas of another person as if they were your own, and other forms of cheating, such as using crib notes during a test or fabricating data for a lab assignment. The penalties for academic misconduct can be very severe. A grade of zero may be given for the assignment or even for the course, and a repeat offense may result in suspension from the University. Students are urged to read the section of the Brock University Undergraduate Calendar that pertains to academic misconduct. Students are also reminded that the Student Development Centre (Schmon Tower, Room 400) offers free workshops on writing and study skills and on avoiding plagiarism. For more information on the University’s policy on academic integrity, visit the website at: <http://www.brocku.ca/academic-integrity>. Students should be aware that this issue will be taken seriously in this course, and plagiarism in any form will be prosecuted to the fullest extent possible. You are required to keep a copy of your term paper on disk, and you must be prepared to submit an electronic copy to Turnitin.com (for possible exceptions, see below).

The Department of Psychology abides by the policies that are set by the Senate at Brock University regarding all forms of academic misconduct. For these policies, you are advised to see the current calendar in the section called “**Academic Regulations**”. Remember that the professors in the Psychology Department here at Brock encourage all of the students in each of their courses to succeed. If your life is particularly stressful and you are ever tempted to engage in Academic Misconduct to try to make your life easier (e.g., to copy an essay or parts of an

essay, or cheat on a test), you should discuss the stressors with the professor before you commit the misconduct. He or she will often be able to help or direct you to someone who can help you to make adjustments in your life that will lessen the stress and allow you to complete your work at school without engaging in academic misconduct. Remember that it is never acceptable to carry out any type of academic misconduct, regardless of the extenuating circumstances that you may be experiencing. There are many systems in place here in the department and throughout the university that act as checkpoints to ensure that those who engage in academic misconduct will be caught. ***It is not worth risking your degree and your future career by trying to beat the system.***

For more details and information on academic misconduct, please consult your Undergraduate Calendar or visit the following website: <http://www.brocku.ca/webcal/2018/undergrad/areg.html>

Please note that your course professor takes the issues of academic misconduct very seriously, and will not tolerate any form of misconduct. You are responsible for knowing the definitions of misconduct, and how to avoid misconduct. *Ignorance will not be considered grounds for excuse.*

In written assignments, you are not allowed to submit material that you have submitted previously or are submitting elsewhere. That is, you are not allowed to plagiarize from yourself. (please note that in the present 2P30 course, you will be resubmitting your work twice, but it will not be the same work; rather the assignment is to improve from the first when writing the second).

Another form of plagiarism is committed when a student submits a written assignment that was actually prepared for the student by someone else (or by yourself in another course). To avoid suspicion of this form of plagiarism, *students must be prepared to explain, discuss, and defend any written work that they submit in this course*. Inability to do so will be interpreted as evidence that the work is not the student's own.

The essay due in this course must represent YOUR independent scholarship. It is NOT a group project.

Turnitin.com (used for Assignment #2 only; not used for Assignment #1)

You must hand in a hard copy of your essay, as well as submit an identical electronic copy to [Turnitin.com](http://www.turnitin.com); failure to turn in an **identical** copy automatically results in a grade of zero and could open up discussions about academic integrity. Your essay will be compared to other essays and to articles, including papers posted on other websites. *The hard copy and the electronic copy are BOTH due on the assignment due date; if either copy is late, the full late penalty will apply.*

Any plagiarism detected will be handled according to the University procedures for handling academic misconduct. This will include reports being sent to the Psychology Department Plagiarism Officer(s) or Chair of Psychology, the Registrar of the University, and the Associate Dean of Social Sciences. For a full description of the procedures for handling academic misconduct, see the calendar.

If you do not want to submit your paper to Turnitin.com, you are able to choose to do your project differently. Specifically, you will be asked to submit your summary notes for each of the articles cited in your paper, indicating for each point the page number in the article where you found each point, and you will be asked to provide page numbers for every citation in your paper. In addition, you will be required to meet Dr. Hodson to explain, discuss, and defend your paper in considerable detail. To choose this alternate assignment, you must make an appointment with Dr. Hodson to discuss your concerns with Turnitin.com at least 2 weeks prior to the assignment deadline.

Isaak/Sakai Site

This course is on Isaak/Sakai. To access the Psyc 2P30 site, visit <https://lms.brocku.ca/portal>. You will be asked to enter a User Name and Password. Use your Brock User Name (e.g., da02ef) and your Computer Accounts Password. If you don't know your Computer Accounts Password go to the Student Self-Service area of the Registrar's Office webpage ([click here](#)). Please note that the professor for this course uses Isaak/Sakai extensively. It is your responsibility to frequently access the course website to keep updated on the course.

If you are having problems with Isaak/Sakai, you can contact the course coordinator or the Centre for Pedagogical Innovation (ext. 3933, F313A, e-mail ctl@brocku.ca; <http://www.brocku.ca/pedagogical-innovation>). Prior to doing so, please check that your web browser is accepting cookies.

Miscellaneous Points

- If you are brought in for a conversation with the professor about possible academic misconduct, you may be required to attend a plagiarism workshop before you submit subsequent assignments in the course and/or you are assigned a final course grade.
- Electronic devices are to be used only for making notes (or responding to questions posed by the instructor in class live, if relevant); **students are NOT to use electronic devices for the purposes of communication (e.g., email, instant messaging, cell phones; pagers) or entertainment (e.g., games, internet) during class or examinations.** Such activities distract those around you. If you do so, you may be asked to leave the classroom so that you do not distract or disturb other students.
- Students must respect boundaries between students and TAs. Students may not ask TAs for their home phone numbers or email accounts other than those provided by the TA, and should not ask to become “friends” on social media etc.
- During examinations, students are responsible for providing a correct student number. If a student provides an incorrect student number, the professor may not grade the paper or exam. Your student number is your official identification during your degree at Brock.
- In any case of a discrepancy between a grade posted on Isaak/Sakai and the professor's course records, the latter will be taken as the correct value.

INTELLECTUAL PROPERTY NOTICE

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

SCHEDULE OF LECTURES AND DEADLINES

note: lectures on WEDNESDAYS (1:00-2:20 pm) & FRIDAYS (2:30 – 3:50 pm)

Week #	Date	Topic/Reading	Assignment Details
1	Sept 5	Chapter 1: Introduction	
	Sept 7	Chapter 1: Introduction	
2	Sept 12	Chapter 2: Methods & Writing	
	Sept 14	Chapter 2: Methods & Writing	
3	Sept 19	Chapter 3: Social Cognition	
	Sept 21	Chapter 3: Social Cognition	
4	Sept 26	Chapter 4: Social Perception	
	Sept 28	Chapter 4: Social Perception	
5	Oct 3	Chapter 5: The Self	Due in class: Assignment #1 (Article Summary)
	Oct 5	Chapter 5: The Self	
(NA)	Oct 10,12	READING WEEK (no classes)	
6	Oct 17	Pre-midterm Q&A (optional)	In class lecture hall; not a lecture, “group” office hour
	Oct 19	MIDTERM EXAM	(exam held from 2:30 p.m. – 3:50 p.m. in class lecture hall)
7	Oct 24	Chapter 6: Attitudes & Attitude Change	Receive feedback & grade on Assignment #1 from TA
	Oct 26	Chapter 6: Attitudes & Attitude Change	

Week #	Date	Topic/Reading	Assignment Details
8	Oct 31	Chapter 7: Conformity, Compliance, & Obedience	Required: schedule meeting with TA to discuss Assignment #1 feedback and Essay strategy/outline/etc for Assignment #2. Must book appt by Oct 29 5pm; Nov 16 is last (potential) timeslot.
	Nov 2	Chapter 7: Conformity, Compliance, & Obedience	
9	Nov 7	Chapter 8: Group Processes	
	Nov 9	Chapter 8: Group Processes	
10	Nov 14	Chapter 10: Prosocial Behaviour	
	Nov 16	Chapter 10: Prosocial Behaviour	
11	Nov 21	Chapter 11: Aggression	Due in class: Assignment #2 (Essay Critique); lose 5% of assignment grade if failed to meet with TA; lose additional 5% if you brought no outline to that meeting.
	Nov 23	Chapter 11: Aggression	
12	Nov 28	Chapter 12: Prejudice	
	Nov 30	Chapter 12: Prejudice	

ASSIGNMENT #1: ARTICLE SUMMARY (see p.1 for deadline)

You are advised to make use of the many services provided by Brock. A list of these services can be found here: <http://www.brocku.ca/learning-skills>. These include free workshops, “essay zone” (online flash resource), and drop-in learning centre, among others.

Objective: summarize a journal article in *your own words (using no quotations)*. Turnitin.com is NOT required for this assignment; the goal is to let you find your own voice and get practice using it.

Target Articles (Pick ONE) (click links; if links fail, you can still access these journals yourself by visiting the Brock library website at <http://catalogue.library.brocku.ca/>. “Not being able to access files” is NO excuse for failing to complete the assignment; if you are having problems, contact your TA, the course coordinator, or ask for help at the library. *Choose this article carefully; you will be writing on this paper AGAIN for Assignment #2.*

NOTE: If you choose one of the shorter articles, you will be expected to more deeply delve into the extra papers you discuss in Assignment #2. In other words, there is no advantage to choosing a short paper, because you will be expected to discuss in more detail the other papers. If the article also contains supplemental online material, discussion of such material is optional. Suggestion: choose the paper that you are *most interested in*, and *understand the best*, NOT the shortest paper!

1. Dore, R.A., Hoffman, K.M., Lillard, A.S., & Trawalter, S. (2018). Developing cognitions about race: White 5- to 10-year-olds’ perceptions of hardship and pain. *European Journal of Social Psychology*, 48, 0121-0132.
<https://onlinelibrary.wiley.com/doi/abs/10.1002/ejsp.2323> [Access here:
<http://proxy.library.brocku.ca/login?url=https://onlinelibrary.wiley.com/doi/abs/10.1002/ejsp.2323>]
2. Itzchakov, G., Uziel, L., & Wood, W. (2018). When attitudes and habits don’t correspond: Self-control depletion increases persuasion but not behavior. *Journal of Experimental Social Psychology*, 75, 1-10. <http://dx.doi.org/10.1016/j.jesp.2017.10.011>
[Access here:
<http://proxy.library.brocku.ca/login?url=http://dx.doi.org/10.1016/j.jesp.2017.10.011>]
3. Kung, F.Y.H., Chao, M.M., Yao, D.J., Adair, W.L., Fu, J.H., & Tasa, K. (2018). Bridging racial divides: Social constructionist (vs. essentialist) beliefs facilitate trust in intergroup contexts. *Journal of Experimental Social Psychology*, 74, 121-134.
<http://dx.doi.org/10.1016/j.jesp.2017.09.008> [Access here:
<http://proxy.library.brocku.ca/login?url=http://dx.doi.org/10.1016/j.jesp.2017.09.008>]
4. Vezalli, L., Turner, R., Capozza, D., & Trifiletti, E. (2018). Does intergroup contact affect personality? A longitudinal study on the bidirectional relationship between intergroup contact and personality traits. *European Journal of Social Psychology*, 48, 159-173. <https://onlinelibrary.wiley.com/doi/abs/10.1002/ejsp.2313> [Access here:

<http://proxy.library.brocku.ca/login?url=https://onlinelibrary.wiley.com/doi/abs/10.1002/ejsp.2313>]

Requirements:

1. Essays must be typed, using 12-point font; follow APA style.
2. Length must be no less than 2 double-spaced pages of text and not more than 3 double-spaced pages of text (not including title page or references). Aim to be concise and clear.
3. In your Reference section, you will list the target article. It is likely that you will have no other references given that this particular assignment is rather unique, focusing on your ability to meaningfully summarize a single target article. You can, if you'd like, include additional references, but it is not expected/required.
4. TASK
 - a) summarize the article *in your own words*. What was it *about*?
 - b) what are the hypotheses? What type of studies did researchers conduct, and what did they find?
 - c) do NOT simply shorten the original article. Do not copy its structure or format. Rather, think of it as a whole and write a summary. If it helps, imagine yourself explaining the original article to a Psych 1F90 student *in your own words*.
5. Due at the start of class on deadline date. Late papers are penalized at 10% of assignment value per calendar day (for specifics, see the same penalties as for Assignment #2).
6. Use COVER SHEET supplied by the professor (see Isaak/Sakai, and below), in which you: (a): type in your contact details etc; (b) check off points on the checklist (regarding student contract of authenticity). Failure to follow these instructions will result in your assignment not being graded.

Write for an intelligent but naïve audience (i.e., someone smart but not an expert on this topic). Do not use quotations; everything must be in YOUR WORDS; need evidence of YOUR writing and thinking skills.

You will find a grading rubric on Sakai under “Resources”. This will help to keep you on track when writing.

Turnitin.com:

Unlike Assignment #2, **Assignment #1 is NOT submitted to turnitin.com**. You must, however, sign and attach the Statement of Academic Integrity (see Sakai website) and submit your own work. This is a serious exercise in producing a unique piece of your own work.

Feedback:

Your assigned TA will grade the Article Summary, and will provide you with written feedback on your writing (e.g., clarity, structure, comprehension, content mastery). You must subsequently arrange a face-to-face meeting with your TA to discuss the feedback and how to improve your writing. **** Keep Assignment #1 and all feedback, because you will be (a) meeting with your TA to go over the feedback in person; and (b) submitting Assignment #1, and the feedback from Assignment #1, with Assignment #2 (so that graders can evaluate problem areas to work on etc).**

ASSIGNMENT #2: ESSAY CRITIQUE (see p. 1 for deadline)

Overview: your task is to re-write Assignment #1, with additional information added (see below).

Assignment #2 Requirements

1. Essays must be typed, using 12-point font.
2. Length must be 6-7 double-spaced pages of text (not including title page and references). Aim to be concise and clear.
3. APA style must be used for citations, references, quotations, and page numbering (see the Publication Manual of the American Psychological Association, 6th edition, 2010, available at the library; for help with references and citations, you can also go to <http://www.apastyle.org/learn/faqs/index.aspx>). (or click [here for another resource](#))
4. Proofread your paper for spelling, punctuation and grammar before handing it in. Your paper will be graded on style as well as content, so it must be grammatical and coherently organized.
5. Make a hardcopy (as well as an electronic copy) of your paper. Save all of your work in several locations (e.g., computer, USB disk). This is a good professional practice.
6. Submission to turnitin.com is required unless you make alternative arrangements with professor (see above).
7. Note deadlines, with 10% per calendar day penalty. The same deadline applies to hard copy of paper and electronic submission to turnitin.com (late penalties apply to the last version submitted). Extensions are granted under exceptional circumstances only.
8. Essays are to be submitted in class on the due date (at the start of class).
 - If your essay is late, you must submit it to the Psychology Department Drop Slot (outside one of the doors leading into the Psychology department, approximately opposite the offices of Drs. Arnell and Muir). Essays are collected from the slot and stamped with the date each day just after 4:00 PM. If you miss the 4 p.m. deadline on the due date, but get it to the drop slot before 4pm on the following date, it will be considered 1-day late. If you get it to the drop slot before 4pm on the subsequent day, it will be considered 2 days late, and so on.
 - You will be penalized the per calendar-day penalty even if you cannot access the slot (because you have additional time to work on assignments).
 - You are given these deadlines on the first day of class, so plan accordingly.
 - Do not hand in a paper in seminar or under a professor's door.
9. Failure to meet with your TA in advance, to discuss your paper, will result in a 5% loss on that assignment; 5% will also be taken off if you fail to bring a 1-page outline of your ideas/writing. This outline CAN be in bullet-point form, summarizing the target article and any of your ideas. The "outline" is not a summary of what's required of you, but rather what you intend to write about etc.

10. Use COVER SHEET supplied by the professor (see Isaak/Sakai, and below), in which you: (a) type in your contact details etc; (b) check off points on the checklist (regarding [i] turnitin.com receipt; [ii] student contract of authenticity; [iii] Assignment #1 and its feedback attached).

Write for an intelligent but naïve audience (i.e., someone smart but not an expert on this topic). Do not use quotations; everything must be in YOUR WORDS; need evidence of YOUR writing and thinking skills.

Assignment #2 Instructions

- Re-read your target article from Assignment #1, and re-read your Assignment #1 submission. For Assignment #2 you will be revising your general summary, but then critiquing it and incorporating other papers to the discussion.
- You are NOT allowed to switch target papers for Assignment #2; the point of the exercise is for you to rework and improve your writing on this topic.
- RE-SUMMARIZE the article, in your own words, making improvements from your previous version. If you did very well on the original assignment, the changes to the summary of the original article may be very minimal; if you needed improvement, then the changes may be substantial. What are the main points or arguments made by the author(s)? What results are found and/or conclusions reached? (note: this part of assignment will draw on the skills you learned from Assignment #1; the grader is looking for direct *improvements* in your writing)
- Explain what you consider to be the STRENGTHS and WEAKNESSES of the research approach and/or conclusions reached by the target article author(s).
- Discuss two (2) additional readings that address issues raised in the target paper. Some of these articles will likely support the original target article, but you will be especially rewarded if you can discuss articles that oppose, challenge, or qualify the target article (or similarly oriented papers).
- Reach conclusions with regards to the overall topic (i.e., the target article and additional readings), and make suggestions regarding future research. Note that you do NOT have to plan a new study; rather, suggest avenues (i.e., topics, themes, ideas) that would be interesting to pursue.
- Use your textbook and course readings as starting points. But this is not an exercise in reiterating your textbook or course readings. Thus, these 2 readings must be journal articles and book chapters, NOT textbook readings. Do NOT refer to course lectures (because these are not accessible to a reader, whereas your goal is to write in a manner that can be checked and verified by an outside reader)
- Include a References page to document all papers referred to in your paper.

Need help *finding* relevant sources? Click here: <http://brocku.ca/library/help-lib> and see the [Psychology Research Guide](#). You can also click here (<https://brocku.ca/node/26875>) to learn about your personal librarian (who specializes in psychology).

You will find a grading rubric on Sakai under “Resources”. This will help to keep you on track when writing.

Personal Resources at Brock (and the surrounding area)

Brock University Counselling Services, Schmon Tower 400, (905) 688-5550 extension 4750, <http://www.brocku.ca/personal-counselling>

The **Student Success Center** at Brock (<https://brocku.ca/student-success-centre/>) offers services to help you. These can include workshops on time management or academic integrity. To make an appointment with a counselor, phone 905-684-6891 (<http://www.brocku.ca/student-development-centre/contact-info>). Relevant links: <https://brocku.ca/learning-services/> and <https://brocku.ca/current-students#services>

Brock also has a **Mental Health office** (<http://brockmentalhealth.ca/>); students can access additional information through these services, for example, how to recognize signs of mental distress in others (<https://brock.morefeetontheground.ca>).

Resources outside the university are also accessible through the **Niagara Health System** and its partner organizations (e.g., **Distress Centre Niagara** – 905-688-3711; **Canadian Mental Health Association Niagara** 905-641-5222).

The Brock Student Sexual Violence Support Centre (A Safer Brock) – supports and advocates for people who have experienced sexual violence. A full list of services can be found at www.ASaferBrock.org. If you or a friend needs support or have questions you can text 289-990-SAFE; 289-990-SAFE(7233).

A-Z Learning Services

A-Z Learning Services is part of Brock's Student Success Centre. Their goal is to support Brock students as they identify and work towards their personal and academic goals.

Services include:

- Workshops (APA, Notetaking, Essay Writing, Exam Prep and more!)
- Drop-In Writing and Study Skills Centre
- Drop-In Science Centre
- Online resources

Visit A-Z Learning's website for detailed information <https://brocku.ca/learning-services/>. All inquiries can be directed to learning@brocku.ca



Faculty of Social Sciences
Faculty of Mathematics and Science
Psychology
Neuroscience

Course Number: PSYC/NEUR 2P36
Term/Year/Duration: Fall/2018/D2
Course Title: Brain & Behaviour I

Instructor Name: Dawn Good, Ph.D., C.Psych.
Email: dawn.good@brocku.ca
Office Hours: Wednesdays 13:00 - 16:00
Office Location: MC B308
Contact: x 3869 (Labs - PL 621, x 3556; PL 627, x 5523)
Course Coordinator: Nick Slothouber, nslothouber@brocku.ca
Marker: Angela Dzyundzyak, adzyundzyak@brocku.ca
Liaison Librarian: Colleen MacKinnon, cmackinnon@brocku.ca

Times and Locations:

Lecture - Mondays, 12:00 - 15:00 AS 204

Labs -	#5 - Monday	12:00 - 15:00	Nick Slothouber nslothouber
	#1 - Tuesday	09:00 - 12:00	Laura Murray lm97ae
	#3 - Tuesday	19:00 - 22:00	Laura Murray lm97ae
	#2 - Thursday	19:00 - 22:00	Nick Slothouber nslothouber
	#4 - Friday	12:00 - 15:00	Caitlyn Gallant cg14xx

ALL LABS ARE IN MC B407

Note: Classes at Brock University end ten minutes ahead of the hour (or half hour) to facilitate transfer time.

Course Calendar Description:

Introduction to behavioural neuroscience, the biological aspects of behaviour also referred to as biopsychology, examines the basics of the structure and function of the nervous system in relation to behaviour, and activities of the brain from the neuron through to interrelationships among neural systems.

Biopsychology is the branch of neuroscience concerned with how the brain and the nervous system control behaviour. Biopsychology is a rapidly developing research area that includes all aspects of the structure and function of the nervous systems and involves a variety of experimental strategies aimed at improving our understanding of nervous systems, (biology) and their relationship to behaviour (psychology).

Topics include neuronal function, drugs and behaviour, brain plasticity and recovery from injury, sensation and perception, and the organization of the brain emphasizing human behaviour.

Course Prerequisites (if any):

PSYC 1F90.

Learning Objectives/Outcomes:

1. To provide foundational knowledge of neural substrates, brain, and brain-behaviour relationships.
2. To provide learning in a participation/ interactive format with participation labs, dissection labs, films, readings, presentations and case studies to encourage active exchange of ideas.
3. To enhance your interest, intrigue and understanding of the physiological, particularly neurological, basis of behaviour, function, cognitions and thought.

Required Readings or Texts:

1. Eagleman, D., & Downar, J. (2016). *Brain & behaviour: A cognitive neuroscience perspective (1st ed.)*. New York: Oxford University Press.
2. Supports for the *Eagleman & Downar* textbook - Chapter outlines, animations, flash cards, practice quizzes, glossary - <http://global.oup.com/us/companion.websites/9780195377682/stu/ch1/>
3. Weekly articles in the Resource Folder on Sakai.
4. Turning Point Clicker - bring to every class.

Course Communications:

Students are invited to contact the instructor and Course Coordinator, as well as your LD, should questions regarding the course material and/or structure arise.

In the event of class cancellations, inclement weather or other disruptions/changes to our course, expect notification via e-mail and Sakai announcement and/or access the Brock University website.

If you are going to be absent in a manner that will affect your grade (e.g., participation mark, test), contact your instructor for permission and/or pro-rating. Note, you will be asked to provide documentation (e.g., a doctor's note in the case of illness) for absences with reason.

Formal course submissions will be expected to follow APA format, unless otherwise advised. See accompanying posted documents on the course Sakai site and for additional information refer to: <http://www.apastyle.org/apa-style-help.aspx>; <http://www.plagiarism.org/article/citation-styles>

Evaluation Components and Due Dates

Evaluation Component	Grade Weight	Due Date
Examinations - midterm, final	35% (15% + 20%)	20 October, December exam
Seminar & Lecture Participation	20%	weekly
Lab Assignment	10%	16 October
Brain & Function Assignment	25%	weekly
On-line Exercises	10%	30 September
Total*	100%	
Bonus - Research Participation	2%	ongoing - up until final exam
Bonus - Lecture Notes	2%	within 1 week of lecture

*For a description of each of these components - see the *Methods of Evaluation* document

Late Submission Policy:

The penalties for late submission of assigned coursework (e.g., papers, assignments, weekly reflections) are **2%** per day, unless accompanied by documentation (for valid reasons - medical or compassionate) provided to the professor and penalties will be adjusted as deemed appropriate. See Medical Exemption Policy and the medical health certificate at <http://www.brocku.ca/health-services/policies/exemption>

Relationship between attendance and grades:

Students are expected to attend all classes and must submit all assignments in order to pass this course. Note that your final grade includes Seminar participation and Lecture participation, so attendance is factored into your grade.

Important dates: (check the section on sessional or important dates in the relevant online University calendar at <http://brocku.ca/webcal/>)

18 September is the date when the Registration System closes. Changes to your program made after these dates must be done through a [Course Add/Withdrawal form](#).

06 November is the date for withdrawal from the course without academic penalty.

30 October is the date you will have received at least 15% of your final course grade since you will have completed a midterm test (15%), the on-line assignments (10%), as well as participated in article discussions and lectures for more than half of the term (10%). In addition, some of you would have completed your facilitations (20%).

08 - 12 October is the scheduled reading week.

05 & 06 December are set aside as a designated reading days (may be used to cover classes missed because of adverse weather).

07 - 20 December are set aside for the formal examination period.

Sequence and Dates of focus/activities/readings

Week/Module/Class Dates	Focus/topic	Readings	Seminar Activities
1 - 05 September	Orientation & Introduction - Mind vs. Body Organization of the Brain	Chap. 1 Chap. 2	Meet 'n Greet Organizational Meeting
2 - 12 September	Biopsychology & Neuron Physiology	Chap. 3	Mind over Matter - What is Consciousness?
3 - 19 September	Neuron Physiology continued	Chap. 3	Nerve Conduction & Support Cells
24 - 30 September	No Lecture ** FINALIZE On-line assignments **		
4 - 03 October	Conduction	Chap. 3	Brain Organization
9 to 12 October	** READING WEEK **		

5 - 17 October	Neurotransmitters and Drugs Neuroplasticity	Chap. 3 Chap. 4	TBI & Concussion Plasticity in the NS
6 - 20 October	** MIDTERM TEST ** TH 247 **		
7 - 24 October	Sensory Systems	Chap. 5	Visual Systems
8 - 31 October	Mysteries of the Mind Vision & Optical Illusions	Chap. 5	Optical Illusions
9 - 07 November	Audition & Vestibular Function	Chap. 6	Audition & Melody
10 - 14 November	Somatosensory & Sensorimotor Systems	Chap. 6,7	Touch & Pain
11 - 21 November	Chemical Systems	Chap. 6	Taste & Olfaction
12 - 28 November	Organization of the Mind: The Stream of Consciousness	Chap. 8	Limits of the Mind Examination Prep

Academic Policies

Academic Integrity:

Statement for undergraduate courses

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.

Academic misconduct includes plagiarism, which involves presenting the words and ideas of another person as if they were your own, and other forms of cheating, such as using crib notes during a test or fabricating data for a lab assignment. The penalties for academic misconduct can be very severe. A grade of zero may be given for the assignment or even for the course, and a second offense may result in suspension from the University.

Students are particularly warned of the following challenges: quoting without using quotation marks (you will need to not only cite the reference, but also the page number and use quotes), changing words 'around' is insufficient to consider the work your own - neither is it considered a quote so you need to cite the reference, working with classmates on projects intended to be independent (even though joint discussion and coordination is promoted and encouraged, any final document must be completed and written independently and with your own words), information/materials from the internet or in 'point form' must still be referenced - and this needs to be remembered particularly when completing the brain & function assignment.

Students are urged to read the section of the Brock University Undergraduate Calendar that pertains to academic misconduct, or for a more 'user-friendly' version take a look at the handout on Sakai for this course or the Psychology webpage identified in the following address.
(<http://www.psyc.brocku.ca/undergrad/misconduct.htm>)

Students are also reminded that the Student Development Centre (Schmon Tower, Room 400) offers free workshops on writing, study skills and on avoiding plagiarism.

You must complete and submit with ALL written submissions the Academic Integrity pledge that is available on the course website & on the Social Science website (http://brocku.ca/webfm_send/4713).

Use of any electronic device (including cell phones) during examinations will be considered a breach of academic integrity.

If you have any doubts or concerns about your work, please approach your LD and/or myself as instructor for guidance.

Plagiarism software:

Note: your written work will be subject to an electronic plagiarism detection system known as Turnitin.com and, in its stead, an additional assignment will be required.

Intellectual Property Notice:

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

Academic Accommodation:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Student Accessibility Services in the Student Development Centre (4th floor Schmon Tower, ex. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

Academic Accommodation due to Religious Obligations:

Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements.

Medical Exemption Policy:

The University will accommodate students whose studies become interrupted, or who may be unable to complete academic work, due to an incapacitating medical condition. In these situations, the student must complete the Brock University Student Medical Certificate or [Brock University Student Health Services Medical Certificate](#) (or in case of a concussion, the Brock University Student Health Services Medical Concussion Certificate) and include any relevant medical documentation to support his/her request for academic accommodation based on medical grounds. The University may, at its discretion, request more detailed documentation in certain cases.



Faculty of Social Sciences

Department of Psychology

Course Number: PSYC 2P49
Term/Year/Duration: Fall/2018/D2
Course Title: Perception

Instructor Name: Stephen Emrich, PhD
Email: semrich@brocku.ca
Office Location: Mackenzie Chown B 336
Teaching Assistants: Holly Lockhart (hl10ze@brocku.ca)
Kristen Baker (kb09gi@brocku.ca)
Emily Davis (ed11zq@brocku.ca)
Liaison Librarian: Colleen Mackinnon (cmackinnon@brocku.ca)

Times and Locations:

Lecture: Mondays, 11:00 -1:30 STH (Academic South) 203

Seminars: Bi-weekly (see below)

Note: Classes at Brock University end ten minutes ahead of the hour or half hour to facilitate transfer time.

Course Calendar Description:

Introduction to human perception emphasizing visual and auditory perception, including theory and applications to neurophysiology, speech recognition and development. Integration of smell, taste, balance and time perception to demonstrate the biological and cognitive bases of perception.

Course Prerequisites: PSYC 1F90

Learning Objectives/Outcomes:

By the completion of this course, students should be able to demonstrate the following:

- *An introductory-level understanding of the steps and processes in human perception, including the relationship between physical stimulus, sensory receptors, neural activity and perceptual experience.*

- K *The ability to read, understand and critically analyze scientific articles on the topic of perception.*
- K *The ability to independently find original research articles relating to perception, understand the main findings of the articles and their relationship to perception, and summarize the main findings of the original research.*

Required Texts:

Yantis, S. & Abrams, R.A. Sensation and Perception 2nd ed. (2016). Worth Publishers.

Course Communications:

Note: All correspondence from students to the instructor or TAs should occur direct via email (i.e., NOT through Sakai). Typically, students should expect to receive a response with In the event of class cancellations, inclement weather, and other issues, notices will be sent out via Sakai as well as email.

Evaluation Components and Due Dates

Evaluation Component	Grade Weight	Due Date
Lab Reports & Participation	20	See schedule
“News Article”/Comic	15	November 30
Quizzes	10	See Schedule
Midterm Exam	25	October 22
Final Exam	30	T.B.D. by registrar
Total	100%	

Late Submission Policy:

The penalties for late submission of assigned coursework (e.g., papers, assignments, weekly reflections) are **5%** per day, unless accompanied by medical documentation. See Medical Exemption Policy and the medical health certificate at <http://www.brocku.ca/health-services/policies/exemption>

Relationship between attendance and grades:

Students are expected to attend all classes and must submit all assignments in order to pass this course. Attendance will be taken during Seminars #1 - 4, which will account for 10% of your grade on the corresponding assignment.

Important dates: (check the section on sessional or important dates in the relevant online University calendar at <http://brocku.ca/webcal/>)

November 6th is the date for withdrawal from the course without academic penalty.

October 30th is the date you will be notified of 15% of your course grade

October 8th - 12th is the scheduled reading week.

December 5-6th is set aside for designated reading days (these may be used to cover classes missed because of adverse weather).

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Sequence and Dates of Topics and Readings

Consider outlining a schedule or pathway for students as they experience the course. Include dates of key evaluation components, reading weeks, and/or scheduled exam periods.

Example:

Week	Date	Topic	Chapters
1	September 10	Intro & Methods	1
2	September 17	Light and Eyes	2
3	September 24	Cortical Processing	3
4	October 1		
5	October 8	Reading Week	
	October 15	Color Vision	5
6	October 22	Midterm	
7	October 29	Object Recognition & Face Perception	4
8	November 5	Binocular Vision	6
9	November 12	Motion Perception	7
10	November 19	Attention & Awareness	9
11	November 26	Sound & Ears	10
12	December 3	Auditory Scenes/Speech/Music	11/12

Seminars:

Seminar #	Day	Time	Location	Schedule	TA
1	Friday	12:00 - 13:00	MC C 300	A	Emily Davis
2	Friday	12:00 - 13:00	MC C 300	B	Emily Davis
3	Wednesday	15:00 - 16:00	MC D 300	A	Holly Lockhart
4	Wednesday	15:00 - 16:00	MC D 300	B	Holly Lockhart
5	Tuesday	17:00 - 18:00	MC C 304	A	Kristen Baker
6	Tuesday	17:00 - 18:00	MC C 304	B	Kristen Baker

Seminar Schedule:

Week	Schedule A	Schedule B
1	September 17-21	September 24 - 28
2	October 1 - October 5	October 15 - 19
3	October 22 - 26	October 29 - November 2
4	November 5 - 9	November 12 - 16
5	November 19 - 23	November 26 - 30

Seminar Schedule:

Seminar Week	Topic	Assignments	Readings
1	Receptive Fields	Lab Report #1 Handed Out	No
2	PubMed/Google Scholar tutorial	Reading Assignment due	Drew et al (2013) NPR Article
3	Stereograms and Rivalry Final Assignment instructions handed out	Lab Report #1 due Lab Report #2 handed out	No
4	Motion Perception and Eye Movements	Lab Report #2 due Lab Report #3 handed out	No
5	Final Assignment Review	Assignment #3 due	No

Tests/Exams:

- K Tests and exams will consist of a mixture of multiple choice and short-answer questions.
- K Tests and exams will cover both the required readings and lecture material, **with heavy emphasis on material covered in lecture.**
- K The final exam **will** be cumulative. The majority of questions will focus on new material (i.e., material taught after the midterm), with some questions focusing on integrating previously-tested material with new material.
- K Students who are unable to write a test/exam for legitimate reasons will be required to write a make-up exam. It is the student's responsibility to provide evidence that their absence from a test or exam was legitimate according to the standards set by Brock University (please see the Undergraduate Calendar for more information).
- K **If a student misses a midterm/final exam and cannot provide proper medical documentation for the absence, the student will receive a grade of zero (0) on the midterm/exam.**

Seminar/lab/reading assignments:

- K There will be 4 seminar assignments worth 5% each.
- K Three assignments will be based on lab demonstrations/experiments to be carried out in the seminar sections. Details of each assignment will be given in the seminar on the day the assignment is handed out.
- K There will also be one reading assignment, worth 5%. The assignment will be based on a journal article as well as a news report of the article, both to be posted to Sakai. The reading assignment will assess your understanding of the article, as well as your ability to summarize the findings in your own words.
- K For all lab assignments and reading assignments, up to 2 marks will be assigned based on attendance during the corresponding seminar.

Quizzes:

- K Weekly quizzes will be posted to Sakai following each lecture (with the exception of the lectures immediately prior to the midterm and final exam). The quizzes must be completed before 8:00 am on the morning of the following lecture. Quizzes will be taken up from 9:30-10:00 during each lecture. Only the grades from the best 5 quizzes will be used in calculation of the final grade (10% of grade). No make-ups will be allowed for missed quizzes (a grade of 0 will be assigned).

News article/comic assignment:

- K There will be a news article/comic assignment worth 15% of your grade. The assignment will be to summarize, either in the form of a “news article”, or in a comic, the findings of an original research article related to perception. **The article must be approved in writing by your TA by seminar 4 (see schedule). Failure to have your article approved by this date will result in an automatic 10% penalty on the assignment.** More details will be provided during seminar week 3.

Bonus Assignment:

Students will have the option of receiving up to a **2% bonus grade:**

- K Students can participate in TWO hours of Brock-associated psychology experiments. Typically, this will involve two one-hour experiments or one two-hour experiment. Only 1 (one-hour) of these credits may be obtained through on-line participation. The student will receive 1% for each experimental hour. Forms will be provided on Sakai that must be completed by the experimenter, and submitted to your TA or professor. If participating in on-line experiments, be sure to acquire proof of participation, as well as the duration of the experiments. If you would like an alternative bonus assignment, you must discuss this with Prof. Emrich prior to the final class of the term.

Academic Policies

Academic Integrity:

Statement for undergraduate courses

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Plagiarism software:

This course may use Turnitin.com, phrase-matching software. If you object to uploading your assignments to Turnitin.com for any reason, please notify the instructor to discuss alternative submissions.

Intellectual Property Notice:

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Academic Accommodation:

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Academic Accommodation due to Religious Obligations:

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deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements.

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Faculty of Social Sciences
 Department of Psychology

Course Number: PSYC 3F40
 Term/Year/Duration: 2017-18
 Course Title: Psychological Research

Instructor Name: M. C. Ashton (fall term); S. Emrich (winter term)
 Email: mashton@brocku.ca; semrich@brocku.ca
 Office Location: B323 (Ashton); B336 (Emrich)
 Contact: office hours TBA; phone x3993 (Ashton), x6181 (Emrich)
 Teaching Assistants: Christine Salahub (cs13aj@brocku.ca)
 Liaison Librarian: Colleen MacKinnon

Times and Locations:

Tuesday 9:00 am - 12:00 noon, Thistle 259

Note: Classes at Brock University end ten minutes ahead of the hour or half hour to facilitate transfer time.

Course Calendar Description:

Research methods emphasizing correlational and experimental designs and associated analyses (regression and ANOVA). Development of the student's capacity to evaluate scientific literature, generate testable hypotheses, gather and analyze data and report results in a manuscript.

Course Prerequisites:

Restriction: open to all (single or combined) UR majors with a minimum 77 percent major average and a minimum of 8.0 overall credits and 3.0 credits above PSYC 1F90.

Prerequisite(s): PSYC 1F90 and PSYC 2F23.

Corequisite(s): PSYC 3P39.

Note: psychology majors with a minimum 70 percent major average and a minimum of 8.0 overall credits may register. Contact the Department.

Completion of this course will replace previous assigned grade and credit obtained in PSYC 3P30, PSYC 3P41 and PSYC 3P42.

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Learning Objectives/Outcomes:

At the end of this course, students should be able to understand and to apply their knowledge of...

the key features of science[the scientific method, differences between science and pseudoscience[and ethics in scientific research;η

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the main features of good writing and the elements of a research article in psychology;η

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the main quantitative concepts in psychological research, including (among others) levels of measurement, correlations[other effect sizes[reliability and validity, null hypothesis significance testing, statistical power[and confidence intervals;ηη

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the various basic research designs in psychology[including descriptive, correlational[and experimental research[as well as the main kinds of psychological data;ηη

the basic practical aspects of research in psychology, including conducting literature reviews[research ethics[research proposals, data collection and analysis, and presentations.

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Required Readings or Texts:

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Leary[M. R. (2017). Introduction to behavioral research methods (7th ed.) Hoboken, NJ: Pearson.
Note: This book will be used heavily in the fall term. It is only sold as an “e-book”, but you can optionally buy an accompanying loose-leaf hard copy of the book.

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Northey[M. [& Timney, B. (2015). Making Sense in Psychology: A student’s guide to research and writing (2nd ed.). Don Mills, ON: Oxford University Press.
Note: This book will be used heavily in the winter term.

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Also recommended is a copy of the 6th edition of the Publication Manual of the American Psychological Association. You had a copy of this book for PSYC 1F90.

Course Communications:

The instructors will communicate with the class via email. Students may use email to contact their instructor with questions not addressed by the course outline. For explanations of course content outside of class hours[students should visit office hours or make an appointment.

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Evaluation Components and Due Dates

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Evaluation Componentη	Grade Weightη	Due Dateη
Correlational Study Article	10%	Oct. 24η
Experiment Article	10%	Nov. 7η
Problem Set	10%	Nov. 7η
Fall Midterm Test	12%	Nov. 14η
December Exam	8%	TBA
REBη	5%	Feb. 6
Winter Midterm Quiz	5%	Feb. 27
Introduction & Methods Draft	10%	Feb. 27
Data Analysisη	5%	Mar. 13η
Mini-thesis write-upη	15%	! pr. 3η
Poster Presentationη	10%	! pr. 10η
Totalη	100%	η

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Late Submission Policy:η

The penalties for late submission of assigned coursework (e.g., papers, assignments, weekly reflections) are 5% per day (including weekends and holidays as well as other days) unless accompanied by medical documentation. η see Medical Exemption Policy and the medical health certificate at <http://www.brocku.ca/health-services/policies/exemption>

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Relationship between attendance and grades:

Attendance records will not be taken but attendance at all lectures is strongly encouraged. η

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Important dates: η check the section on sessional or important dates in the relevant online University calendar at <http://brocku.ca/webcal/>)

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January 19, 2018 is the date for withdrawal from the course without academic penalty. η

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January 12, 2018 is the date by which you will be notified of at least 15% of your course grade. η

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October 9 to 13, 2017, and February 19 to 23, 2018 are the scheduled reading week(s).

April 9, 2018 is set aside for a makeup day due to a holiday. η

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December 6, 2017, and April 10 and 11, 2018 are set aside for designated reading days (these may be used to cover classes missed because of adverse weather). η

December 7 to 19, 2017, and April 12 to 25, 2018 are set aside for normal examination periods. η

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Academic Integrity:

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This course may use Turnitin.com phrase-matching software. If you object to uploading your assignments to Turnitin.com for any reason, please notify the instructor to discuss alternative submissions.

Intellectual Property Notice:

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Academic Accommodation:

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Academic Accommodation due to Religious Obligations:

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Medical Exemption Policy η

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Sequence and Dates of topics/events and readings

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Note: List is approximate and subject to changes.η

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Date	Topic / event	Readings
Sept. 12	Basics of Science, Scientific Method, & Scientific Ethics Writing (Basic and Scientific)	Leary 1, 2, 16 (can also refer to APA manual chapters 1 & 2, plus punctuation section of 3)
Sept. 19	Measurement	Leary 2, 3, 4
Sept. 26	Null Hypothesis Significance Tests and Effect Sizes	Leary 11 and 6.4, 6.5, 6.6 (see also effect size handout)
Oct. 3	Descriptive and Correlational Research	Leary 5, 6, 7, 8
Oct. 10	Reading Week; No Lecture	
Oct. 17	Simple Experiments	Leary: 9 (but skip 9.3.2 and 9.3.3) 10-intro and 10.1 12-intro, 12.1 to 12.4 (except 12.4.5)
Oct. 24	Two-Way and Repeated Measures Experiments	Leary: 9.3.2, 9.3.3 10.2, 10.3, 10.4 12.4.5, 12.6

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Oct. 31	Quasi-experiments and Single-N experiments	Leary 13, 14
Nov. 7	Catch-up and Review	
Nov. 14	Midterm test	
Nov. 21	Avoiding data-handling errors	
Nov. 28	Replication crisis in psychology	
Dec. 5	Pseudoscience and science	
Jan. 9	Preparing to do a thesis; mini-thesis introduction	Northey 8
Jan. 16	Literature review; Reference managers/management	Northey 2, 3
Jan. 23	Ethics, REB	Northey 5
Jan. 30	Data collection I	
Feb. 6	Data collection II	
Feb. 13	Data handling; Data analysis; faculty presentations	
Feb. 20	Reading Week; No Lecture	
Feb. 27	Midterm test; Data analysis II	
Mar. 6	Data presentation; Data analysis III	Northey 7
Mar. 13	Graduate school, careers	
Mar. 20	Clinical research/careers	
Mar. 27	Presentations & posters	Northey 9
Apr. 3	Presentation Day	

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Brock University
Department of Psychology
PSYC 3P05 – Advanced Perception
Winter 2014/2015

Professor: Stephen Emrich, PhD

Office: Mackenzie Chown B 336

Phone extension: 6181

email: semrich@brocku.ca

Office hours: by appointment.

Teaching Assistant:

Name	email	Office Hours	Office
Kevin MacDonald	km11pv@brocku.ca	By appointment	MCB 417

Description: Historical and contemporary issues in perception, emphasizing the visual system. Different approaches to perception, such as cognitive, neuropsychology, and applied, with an emphasis on cognitive neuroscience.

Course Format: There will be two hours of lecture and one hour of lab (seminar) each week (with the exception of no seminar during the first week).

Lecture: Wednesdays 17:00 – 19:00 AS 217

Required Materials:

Readings: Sakai Readings.

Objectives:

By the completion of this course, students should be able to demonstrate the following:

- A comprehensive understanding of various aspects of visual perception, the brain regions and mechanisms that mediate these processes, and the tools and techniques used to assess this relationship.
- The ability to read, understand, critically analyze, and communicate (both orally and in writing) the main purpose and findings of scientific articles relating to the cognitive neuroscience of visual perception.
- The ability to assess controversies in the cognitive neuroscience of vision by independently finding original research articles relating to these debates, and by communicating how the findings of this article speak to a current debate in the field.

Notes:

- The last date to withdrawal from this course without academic penalty is **March 6th, 2014**
- PSYC 1F90 (Introduction to psychology) and PSYC 2P49 are prerequisites for this course.
- Course notes for each lecture will be accessible through Isaak. These notes will typically be made available before 9:00 pm the night before lecture (i.e., Tuesday). **Lecture**

slides and content may change from the original slides. Updated lecture notes will be made available if modifications are made.

- All questions/inquiries about course content must be emailed/posted at least 12 hours before the midterm/final exam or they will not be answered by the TAs/professor.

****NOTE**** Readings for this course will be available via Sakai.

Tentative Lecture Schedule and Readings

Week	Date	Topic	Readings
1	January 7	Intro, Anatomy & Methods	Postle Ch 3
2	January 14	Early Vision	Enns Ch 3
3	January 21	Object Recognition	Goodale Chs 1 - 2
4	January 28	Face Perception	Harris Ch 12
5	February 4	Perception for Action	Goodale Chs 3, 6
6	February 11	Midterm!	
	February 18	Reading Week (no class)	
7	February 25	Attention	Farah Ch 8
8	March 4	Time, Iconic Memory, Short-Term Memory I	Enns Ch 6
9	March 11	Short-Term Memory II, Long-Term Memory	Postle Ch 13
10	March 18	Emotion & Perception	Harris Ch 13
11	March 25	Imagery, Dreaming	Farah Ch 9
12	April 1	Consciousness	Koch 16, 19

*Schedule and readings are subject to change ** Additional readings will be required for some of the seminars (see below)

Evaluation:

Method	Date	% of Final Grade
Seminar Presentation	(see below)	15
Seminar Participation	(see below)	10
Final Paper	April 1	20
Midterm Exam	February 10 (in class)	25
Final Exam	TBD by Registrar	30

Tests/Exams:

- Tests and exams will consist of a mixture of multiple-choice, short-answer and long-answer questions.
- Tests and exams will primarily cover material from lectures. The readings are meant as a way to augment the lectures, and in some cases, provide additional details.
- The final exam **will** be cumulative. The majority of questions will focus on new material (i.e., material taught after the midterm).
- Students who are unable to write a test/exam for legitimate reasons will be required to write a make-up exam. It is the student's responsibility to provide evidence that their

absence from a test or exam was legitimate according to the standards set by Brock University (i.e., **documental medical or compassionate grounds**; please see the Undergraduate Calendar for more information).

- A make-up mid-term exam must be written within seven days of the scheduled midterm. If a medical illness prevents the student from writing the make-up within this period, **no make-up will be written and the final exam will be worth 55% of the grade**. If a student cannot write the exam within one week at the time designated by Dr. Emrich (for reasons other than scheduling conflicts **with other classes**), **a grade of zero (0) will be given for the midterm**.
- **If a student misses a midterm/final exam and cannot provide proper medical documentation for the absence, the student will receive a grade of zero (0) on the midterm/exam.**

Seminars:

Seminar #	Day	Time	Location
1	Thursday	1:00 – 2:00 pm	MCA 323

Seminar Schedule:

Seminar Date	Topic	Presentation Readings
January 8	No labs	
January 15	Presentation skills (no presenters)	See below
January 22	Low Level Vision	See below
January 29	Object Recognition	See below
February 5	Face Perception	See below
February 12	Perception for Action	See below
February 19	Reading week	
February 26	Attention	See below
March 5	Memory	See below
March 12	Emotion	See below
March 19	Imagery/Dreaming	See below
March 26	Consciousness	See below
April 2	Make-up week #1	none

Seminar Presentations (15%)

- Each student will sign up to give a **10 – 15 minute presentation** on one of the selected readings for each week.

- The goal of the presentation will be to briefly, and concisely as possible, describe the purpose, methods, and results of a recent paper in the field of visual cognitive neuroscience related to a topic discussed in class.
- Presentations will be graded using the following criteria:
 - Ability of the presenter to provide adequate background into the topic
 - Ability to communicate the specific aims of the experiment(s)
 - Ability to clearly communicate the methods of the experiment(s)
 - Ability to clearly communicate the main findings of the experiment(s)
 - Ability to clearly communicate the overall take-home message of the study
 - Presentation style (enthusiasm, clarity, not reading from slides, etc.)
- After each presentation, the presenter will answer 2 – 3 questions from the seminar audience. After all presentations are complete, a broader discussion about the papers and their relationship to course content will take place.
- Participation schedule will be determined either via Sakai or with a sign-up sheet on a first-come first-serve basis. Where possible, there must be at least one presentation each week.
- Students **MUST** meet with Professor Emrich at least 2 days prior to the scheduled presentation (ideally 1 week) to discuss the article. Failing to meet with Professor Emrich will result in an immediate 5% penalty applied to the presentation grade.
- Students **MUST** also send finalized PowerPoint slides to the TA by **midnight the night before the presentation**. Failing to send these slides on time will also result in 5% penalty applied to the presentation grade.

Participation (10%)

- A grade of up-to 10% will be assigned by the TA for participation in seminar discussions. This grade will be a combination of both attendance and participation.
- Attendance will be tracked for each seminar, and used in calculation of the participation grade.
- Students are not required to talk every day in order to receive participation grades. However, being engaged in other student's presentations and having some evidence of frequent participation would be necessary.
- Discussion should make it clear that you have come to seminar prepared, with at least one of the articles read, and able to integrate it with course material.

Paper (20%)

- Students will write a paper on a controversy related to issues discussed in class/readings/presentations.
- The purpose of the paper will be to find a “controversial” topic in visual perception, and find an original research article that speaks to that controversy. The paper should clearly and concisely describe:
 - Background related to the topic (can be taken from lecture material, readings, or other sources)
 - The purpose of the study (how it fits in with the “controversy”)
 - The methods, and results of the study
 - How the findings speak to the controversy

- **A proposal for future testable directions.** That is, the student must include a short proposal for how open questions might be tested in the future. These proposals need not be detailed (i.e., they don't need to have elaborately detailed methods or proposed results); however, they should draw on the topics and methods discussed in class and seminars.
- An example of a poor proposal would be:
 - "Future studies should examine the same question using fMRI instead of EEG."
- An example of a good proposal would be:
 - "One way to resolve the issue of whether emotional expressions are processed in the amygdala or in sensory cortex would be to use pattern classification/MVPA to decode different expressions from these different areas...by examining fear and disgust for example....I predict that classification performance would be better in...."
- Examples of controversies that will be touched on in the course include (but are not limited to):
 - "Is object recognition modular or distributed"?
 - "Is face expertise learned or innate"?
 - "Is VSTM a flexible resource or discrete slots?"
 - "Does video-game training improve attentional performance"?
- There may be other topics not covered in the course that will be suitable. The critical factor when picking an article will be to find one in which it is clear there are two potential explanations, and that the paper clearly speaks to testing these different explanations.
- In order to address the controversy, the student must cite at least 2 other articles when outlining the controversy in the paper, each of which takes a different side of the controversy.
- The primary article should be found by the student (e.g., using PubMed, Google Scholar, etc.) and should have been published in **2012 or later**. Additional articles may come from any year.
- **All articles must be approved by Dr. Emrich.** There is no deadline for when they must be approved by. If a paper is written about an article that is not approved by Dr. Emrich, **the paper will receive a 20% penalty.**
- The final paper should be 6 – 8 pages long. The paper should follow proper APA citation style.
- Papers will be submitted to Turnitin.com prior to being considered submitted.
- A full grading scheme will be posted to Sakai.

Late Submissions Policy:

- All written assignments that are not received by the due date will receive a **10%-per-day late penalty**. Late assignments should be submitted into the Psychology Department drop box.
- Students who do not attend seminar on their scheduled presentation day will **automatically receive a grade of 0**, unless documentation can be provided for medical or compassionate grounds. Students who do miss their presentation due to a documented medical illness **will present in the next seminar in which there is**

sufficient time for additional presentations. If scheduling cannot accommodate presentations prior to this date, missed presentations will be given in the final seminar of the term (April 2)

Turnitin.com Policy:

Students will be required to submit their final paper to Turnitin.com before the paper is considered submitted.

Students who choose not to submit their papers to Turnitin.com must submit at least two draft copies prior to submitting the final assignment. If you will not be submitting your essay to Turnitin.com, you must inform the instructor and your TA no later than February 1.

Guideline on Academic Integrity:

******Because academic integrity is vital to the well-being of the university community, Brock University takes academic misconduct very seriously. Academic misconduct includes plagiarism, which involves presenting the words and ideas of another person as if they were your own, and other forms of cheating, such as using crib notes during a test or fabricating data for a lab assignment. The penalties for academic misconduct can be very severe. A grade of zero may be given for the assignment or even for the course, and a second offence may result in suspension from the University. Students are urged to read the section of the Brock University Undergraduate Calendar that pertains to academic misconduct. Students are also reminded that the Student Development Centre (Schmon Tower, Room 400) offers free workshops on writing and study skills and on avoiding plagiarism. For more information on the University's policy on academic integrity, visit the website at:

<http://www.brocku.ca/academic-integrity>. ******

*****NOTE*****

All students will be required to hand in a Brock Academic Integrity document for the seminar assignments, as well as a Department of Psychology academic integrity form prior to handing in the final poster assignment.

Academic Accommodation for Students with Disabilities:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Services for Students with Disabilities in the Student Development Centre (4th floor Schmon Tower, ex. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

Academic Accommodation due to Religious Obligations:

Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event.

Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements. Such requests should be made during the first two weeks of any given academic term, or as soon as possible after a need for accommodation is known to exist (i.e., posting of the examination schedule), but in no case later than second-last week of classes in that term.

Presentation Readings:

Low-Level Perception (January 22nd):

Murray, S. O., Boyaci, H., & Kersten, D. (2006). The representation of perceived angular size in human primary visual cortex. *Nature Neuroscience*, 9(3), 429-434.

Kveraga, K., Boshyan, J., & Bar, M. (2007). Magnocellular projections as the trigger of top-down facilitation in recognition. *The Journal of Neuroscience*, 27(48), 13232-13240.

Object Recognition (January 29th):

Sanguinetti, J. L., Allen, J. J., & Peterson, M. A. (2013). The Ground Side of an Object Perceived as Shapeless yet Processed for Semantics. *Psychological Science*, 0956797613502814.

Peelen, M. V., Fei-Fei, L., & Kastner, S. (2009). Neural mechanisms of rapid natural scene categorization in human visual cortex. *Nature*, 460(7251), 94-97.

Face Perception (February 5th):

Brosch, T., Bar-David, E., & Phelps, E. A. (2013). Implicit race bias decreases the similarity of neural representations of black and white faces. *Psychological Science*, 24(2), 160-166.

Adams, W. J., Gray, K. L., Garner, M., & Graf, E. W. (2010). High-level face adaptation without awareness. *Psychological Science*, 21(2), 205-210.

Perception for Action (February 12th):

Chan, D., Peterson, M. A., Barense, M. D., & Pratt, J. (2013). How action influences object perception. *Frontiers in Psychology*, 4.

Singhal, A., Monaco, S., Kaufman, L. D., & Culham, J. C. (2013). Human fMRI Reveals That Delayed Action Re-Recruits Visual Perception. *PloS one*, 8(9), e73629.

Attention (February 26th):

Hsieh, P. J., Colas, J. T., & Kanwisher, N. (2011). Pop-Out Without Awareness Unseen Feature Singletons Capture Attention Only When Top-Down Attention Is Available. *Psychological Science*, 22(9), 1220-1226.

Zhao, J., Al-Aidroos, N., & Turk-Browne, N. B. (2013). Attention is spontaneously biased toward regularities. *Psychological Science*, 24(5), 667-677.

Memory (March 5th):

Emrich, S. M., Riggall, A. C., LaRocque, J. J., & Postle, B. R. (2013). Distributed patterns of activity in sensory cortex reflect the precision of multiple items maintained in visual short-term memory. *The Journal of Neuroscience*, 33(15), 6516-6523.

Alvarez, G. A., Brady, T. F., Konkle, T. A., Gill, J., & Oliva, A. (2013). Visual Long-Term Memory Has the Same Limit on Fidelity as Visual Working Memory. *Psychological Science*, 24(6), 981-90.

Emotion (March 12th):

Stout, D. M., Shackman, A. J., & Larson, C. L. (2013). Failure to filter: anxious individuals show inefficient gating of threat from working memory. *Frontiers in human neuroscience*, 7.

Lee, D. H., Susskind, J. M., & Anderson, A. K. (2013). Social Transmission of the Sensory Benefits of Eye Widening in Fear Expressions. *Psychological Science*, 24(6), 957-965.

Imagery/Dreaming (March 19st):

Laeng, B., & Sulutvedt, U. (2013). The Eye Pupil Adjusts to Imaginary Light. *Psychological Science*, 0956797613503556.

Prime, D. J., & Jolicoeur, P. (2010). Mental rotation requires visual short-term memory: Evidence from human electric cortical activity. *Journal of Cognitive Neuroscience*, 22(11), 2437-2446.

Consciousness: (March 26th):

Gayet, S., Paffen, C. L., & Van der Stigchel, S. (2013). Information matching the content of visual working memory is prioritized for conscious access. *Psychological Science*, 24(12), 2472-2480.

Kouider, S., Stahlhut, C., Gelskov, S. V., Barbosa, L. S., Dutat, M., de Gardelle, V., ... & Dehaene-Lambertz, G. (2013). A Neural Marker of Perceptual Consciousness in Infants. *Science*, 340(6130), 376-380.



FACULTY OF SOCIAL SCIENCES

Department of Psychology

Course Number: PSYC 3P06/NEUR 3P06
Term/Year/Duration: Winter/2017-2018/D3
Course Title: Introduction to Cognitive Neuroscience

Instructor Name: Stephen M. Emrich, Ph.D.
Email: semrich@brocku.ca
Office Location: MC B 336 Click here to enter text.
Teaching Assistants: Holly Lockhart (holly.lockhart2@brocku.ca) MCB 420
Kari Lustig (kari.lustig@brocku.ca) MCB 417
Liaison Librarian: Colleen MacKinnon (cmackinnon@brocku.ca)

Times and Locations:

Lecture: Wednesday, 17:00 - 19:00 TH 259

SEM 1: Thursday, 15:00 - 16:00, PL411, TA: Holly Lockhart (holly.lockhart2@brocku.ca)

SEM 2: Wednesday, 19:00 - 20:00, MCD 304, TA: Holly Lockhart (holly.lockart2@brocku.ca)

SEM 3: Monday, 9:00 - 10:00, MCG 310, TA: Kari Lustig (kari.lustig@brocku.ca)

Note: Classes at Brock University end ten minutes ahead of the hour or half hour to facilitate transfer time.

Course Calendar Description:

Neural basis of human cognition, emphasizing contemporary methods in cognitive neuroscience. Methodology (e.g. neuroimaging), perception, memory, language, emotion, executive functions and social cognition.

Course Prerequisites (if any):

Restriction: open to PSYC (single or combined) NEUR, SPLS majors and PSYC minors until the date specified in the Registration guide. Students must have a minimum of 8.0 overall credits and 1.0 PSYC credit above PSYC 1F90.

Prerequisite(s): PSYC 1F90; one of PSYC 2P20, 2P35, 2P36, 2P49 or permission of the instructor.

Learning Objectives/Outcomes:

By the completion of this course, students should be able to demonstrate the following:

- A comprehensive understanding of various topics of cognitive neuroscience (e.g., attention, perception. etc.), the brain regions and mechanisms that mediate these processes, and the tools and techniques used to assess this relationship.
- The ability to read, understand, critically analyze, and communicate (both orally and in writing) the main purpose and findings of scientific articles relating to cognitive neuroscience.

- The ability to assess controversies in cognitive neuroscience by independently finding original research articles relating to these debates, and by communicating how the findings of the articles speak to a current debate in the field.

Required Readings or Texts:

Required text:

Gazzaniga, Ivry & Mangun (2014) Cognitive Neuroscience. 4th ed. Norton, New York.

Course Communications:

*Note: All communication about the course will be sent by the instructor or TAs via Sakai and copied to your corresponding Brock email address. All communication to the TAs or instructor should be submitted via email directly (i.e., **NOT through Sakai**). Typically responses should be expected within 2 working days.*

Evaluation Components and Due Dates

Evaluation Component	Grade Weight	Due Date
Seminar Presentation	20	(see below)
Seminar Participation	10	(see below)
Research Paper	20	April 4
Midterm Exam	25	February 14
Final Exam	25	T.B.D. by registrar's office
Total	100%	

Late Submission Policy:

The penalties for late submission of assigned coursework (e.g., papers, assignments, weekly reflections) are **5%** per day, unless accompanied by medical documentation. See Medical Exemption Policy and the medical health certificate at <http://www.brocku.ca/health-services/policies/exemption>. Medical documentation must be provided within 48 hours of the assigned coursework if it is possible to do so.

Important dates: (check the section on sessional or important dates in the relevant online University calendar at <http://brocku.ca/webcal/>)

MAR 9 is the date for withdrawal from the course without academic penalty.

FEB 28 is the date you will be notified of 15% of your course grade (Note: this date should be at least one week before the date for withdrawal listed above).

FEB 19-23 is the scheduled reading week.

APR 10-11 are set aside for designated reading days (these may be used to cover classes missed because of adverse weather).

Sequence and Dates of lectures and readings

Tentative Lecture Schedule and Readings:

Week	Date	Topic	Readings
1	January 10	i. Intro ii. History iii. Nervous system	Chs 1 - 2
2	January 17	iv. Nervous system (cont) v. Methods	Ch 3
3	January 24	vi. Hemispheric specialization	Ch 4
4	January 31	vii. Object recognition	Ch 6
5	February 7	viii. Attention	Ch 7
6	February 14	Midterm exam!	
	February 21	Reading Week	
7	February 28	ix. Memory I (Sensory, short-term, working)	Postle Ch 13 (on Sakai)
8	March 7	x. Memory II (Long-term)	Ch 9
9	March 14	xi. Emotion	Ch 10
10	March 21	xii. Higher Cognition	Ch 12
11	March 28	xiii. Social Cognition	Ch 13
12	April 4	xiv. Consciousness	Ch 14

Seminar Schedule:

Seminar Week (start)	Topic	Textbook Highlights	Presentation Readings
January 8	No labs		
January 15	Presentation skills (no presenters)		TBD
January 22	Hemispheric specialization, EEG	pp 98 - 102 pp 144 - 145	Yamaguchi, S., Yamagata, S., & Kobayashi, S. (2000). Cerebral asymmetry of the “top-down” allocation of attention to global and local features. <i>Journal of Neuroscience</i> , 20(9), RC72-RC72.
January 29	Object recognition, fMRI, repetition suppression	pp 107 - 110 pp 232 - 234 pp 231 - 232	Kourtzi, Z., & Kanwisher, N. (2001). Representation of perceived object shape by the human lateral occipital complex. <i>Science</i> , 293(5534), 1506-1509.
February 5	Attention, visual search, EEG	pp 297 - 304 pp 98 - 102	Woodman, G. F., & Luck, S. J. (1999). Electrophysiological measurement of rapid shifts of attention during visual search. <i>Nature</i> , 400(6747), 867-869.
February 12	Face perception, repetition suppression, fMRI	pp 246 - 258 pp 107 - 110	Yovel, G., & Kanwisher, N. (2005). The neural basis of the behavioral face-inversion effect. <i>Current Biology</i> , 15(24), 2256-2262.
February 19	Reading week		
February 26	Short-term/working memory, fMRI, “mind reading”	Postle pp 382-386 Postle pp 365-375 pp 261 - 268	Emrich, S. M., Riggall, A. C., LaRocque, J. J., & Postle, B. R. (2013). Distributed patterns of activity in sensory cortex reflect the precision of multiple items maintained in visual short-term memory. <i>The Journal of Neuroscience</i> , 33(15), 6516-6523.
March 5	Long-term memory, fMRI	pp 394 - 402 pp 107 - 110	Barense, M. D., Bussey, T. J., Lee, A. C., Rogers, T. T., Davies, R. R., Saksida, L. M., ... & Graham, K. S. (2005). Functional specialization in the human medial temporal lobe. <i>Journal of Neuroscience</i> , 25(44), 10239-10246.

March 12	Emotion, TMS, EEG	pp 449 - 454 pp 454 - 463 pp 98 - 102 pp 88 - 89	Lapate, R. C., Samaha, J., Rokers, B., Hamzah, H., Postle, B. R., & Davidson, R. J. (2017). Inhibition of Lateral Prefrontal Cortex Produces Emotionally Biased First Impressions: A Transcranial Magnetic Stimulation and Electroencephalography Study. <i>Psychological Science</i> , 0956797617699837.
March 19	Cognitive control, EEG, fMRI	pp 550-555 pp 98 - 102 pp 107 - 110	Iannaccone, R., Hauser, T. U., Staempfli, P., Walitza, S., Brandeis, D., & Brem, S. (2015). Conflict monitoring and error processing: new insights from simultaneous EEG-fMRI. <i>Neuroimage</i> , 105, 395-407.
March 26	Social cognition, fMRI, face perception	pp 575 - 580 pp 107 - 110 pp 248 - 261	Van Bavel, J. J., Packer, D. J., & Cunningham, W. A. (2011). Modulation of the fusiform face area following minimal exposure to motivationally relevant faces: evidence of in-group enhancement (not out-group disregard). <i>Journal of Cognitive Neuroscience</i> , 23(11), 3343-3354.
April 2	Consciousness, fMRI,	pp 618 - 619 pp 107 - 110	Soon, C. S., Brass, M., Heinze, H. J., & Haynes, J. D. (2008). Unconscious determinants of free decisions in the human brain. <i>Nature neuroscience</i> , 11(5), 543-545.

Seminar Presentations (15%)

- Students will, in pairs, sign up to give a **25 - 30 minute presentation** and a **10 - 15 minute discussion** on a selected readings for each week.
- The goal of the presentation will be twofold:
 1. To review the relevant sections of the course and textbook that relate to the assigned reading
 2. To clearly and concisely as possible, describe the purpose, methods, and results of the assigned reading, and to lead the class in discussion.
- Presentations will be graded using the following criteria:
 - Ability of the presenter(s) to provide adequate background into the topic based on the relevant textbook sections and lecture materials
 - Ability to communicate the specific aims, methods, and main findings of the experiment(s)

- Ability to relate the take-home message of the experiments to the course topics, and to guide the seminar in a discussion of these points
 - Presentation style (enthusiasm, clarity, not reading from slides, etc.)
- Presentation schedule will be determined in the seminar first week. Where possible, there must be at least one presentation each week.
- Students are **STRONGLY ENCOURAGED** to meet with Professor Emrich at least 2 days prior to the scheduled presentation (ideally 1 week) to discuss the article.
- Students **MUST** also send finalized PowerPoint slides to the TA **12 hours before the presentation**. Failing to send these slides on time will result in 5% penalty applied to the presentation grade.
- Course readings will be considered testable material. Thus, it is the presenter's job to ensure that students understand the reading. However, the readings will also be placed on Sakai.
- As part of the grade for the presentation, each group will be required to come up with **two questions** (one 5-mark short-answer, one 1-mark multiple choice) that may be used on the midterm and final exams. The full list of questions will be provided to students prior to the exams.
- Failure to attend seminar for your scheduled presentation will result in a grade of 0. If a medical certificate is provided, alternative arrangements for a presentation will be made through Dr. Emrich, with a penalty of -20% automatically applied to the presentation grade.

Participation (10%)

- A grade of up-to 10% will be assigned by the TA for participation in seminar discussions/presentations. This grade will be a combination of both attendance and participation.
- Attendance will be tracked for each seminar, and used in calculation of the participation grade.
- Participation will be graded out of 3. A mark of 1/3 is for attendance without participation or with disruptive participation. A mark of 2/3 will reflect minimal participation and/or engagement. A mark of 3/3 will reflect excellent participation and engagement with the presentation and discussion.
- Students are not required to talk every week in order to receive participation grades. However, being engaged in other student's presentations and having some evidence of meaningful participation would be necessary.

Research Paper (20%)

- Students will write a paper on a controversy related to issues discussed in class/readings/presentations.
- The purpose of the paper will be to find a controversy in cognitive neuroscience, and find an original research article that speaks to that controversy. The paper should clearly and concisely describe:
 - Background related to the topic (can be taken from lecture material, readings, or other sources)
 - The purpose of the study (how it fits in with the "controversy")
 - The methods, and results of the study
 - How the findings speak to the controversy
 - **A proposal for future testable directions.** That is, the student must include a short proposal for how open questions might be tested in the future. These proposals need not be detailed (i.e., they don't need to have elaborately detailed methods or proposed results); however, they should draw on the topics and methods discussed in class and seminars.
- An example of a poor proposal would be:
 - "Future studies should examine the same question using fMRI instead of EEG."

- An example of a good proposal would be:
 - “One way to resolve the issue of whether emotional expressions are processed in the amygdala or in sensory cortex would be to use pattern classification/MVPA to decode different expressions from these different areas...by examining fear and disgust for example....I predict that classification performance would be better in....”
- Examples of controversies that may be touched on in the course include (but are not limited to):
 - “Is object recognition modular or distributed?”
 - “Is face expertise learned or innate?”
 - “Is VSTM a flexible resource or discrete slots?”
 - “Is the anterior temporal lobe involved in long-term memory or not?”
 - “Are conflict monitoring and error processing mediated by the same neural process?”
- There may be other topics not covered in the course that will be suitable. The critical factor when picking an article will be to find one in which it is clear there are two potential explanations, and that the paper clearly speaks to testing these different explanations.
- In order to address the controversy, the student must cite at least 2 other articles when outlining the controversy in the paper, each of which takes a different side of the controversy.
- The primary article should be found by the student (e.g., using PubMed, Google Scholar, etc.) and should have been published in **2014 or later and cannot be one of the readings assigned from seminar**. Additional articles may come from any year and may include the assigned readings.
- **All articles must be approved by your T.A.. All articles must be sent to your TA for approval by March 19th**. If the article is not approved on time **the paper grade will receive a 10% penalty**. If a paper is written about an article that is not approved by your T.A., **the paper will receive a grade of 0**.
- The final paper should be 6 - 8 pages long, not including title page and references. The paper should follow proper APA citation style.
- Papers will be submitted to Turnitin.com prior to being considered submitted.
- A full grading scheme will be posted to Sakai.
- A bonus of 5% of the assignment grade will be given to students who submit the paper **one week early** (i.e., March 26th)

Midterm and Final exams (20% each)

- A midterm exam will be held in class on February 14th. A final exam will be scheduled by the registrar’s office during the final exam period.
- Exams will feature a combination of multiple-choice, short-answer, and long-answer questions.
- The final exam will be cumulative, although the vast majority of the tested material will come from topics covered after the midterm.
- Lecture materials, textbook readings, and seminar readings are all considered testable material.

Bonus Experiment Participation

- Students can earn up to 2% bonus on their final grade for participation in 2 credits (i.e., hours) of experiments in the Psychology department.
- Students should use SONA to find studies, and students **MUST** indicate through SONA that the credits are to be assigned to PSYC 3P06.
- A maximum of 1 credit can be obtained through participation in on-line experiments.

- An alternative assignment commensurate in time can be arranged through Dr. Emrich.

Academic Policies

Academic Integrity:

Statement for undergraduate courses

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.

Plagiarism software:

This course will use Turnitin.com, phrase-matching software. If you object to uploading your assignments to Turnitin.com for any reason, please notify the instructor to discuss alternative submissions.

Intellectual Property Notice:

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

Academic Accommodation:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Student Accessibility Services in the Student Development Centre (4th floor Schmon Tower, ex. 3240). **You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.**

Academic Accommodation due to Religious Obligations:

Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements.

Medical Exemption Policy:

The University will accommodate students whose studies become interrupted, or who may be unable to complete academic work, due to an incapacitating medical condition. In these situations, the student must complete the Brock University Student Medical Certificate or [Brock University Student Health Services Medical Certificate](#) (or in case of a concussion, the Brock University Student Health Services Medical Concussion Certificate) and include any relevant medical documentation to

support his/her request for academic accommodation based on medical grounds. The University may, at its discretion, request more detailed documentation in certain cases.

Restrictions: Open to PSYCK single or combined majors and PSYCK minors until date specified in Registration Guide. After that date, open to PSYCK single or combined majors and PSYCK minors until date specified in Registration Guide. Students must have a minimum of 18 overall credits for 19 PSYCK credits above PSYCK 49. Not open to PSYCK single or combined majors. Prerequisite: PSYCK 49 and P^ /k

OBJECTIVES

By the end of this course, you should be able to:

- ✓ Identify major features of adolescent development
- ✓ Distinguish between different domains of development e.g., physical, psychosocial, cognitive and understand how development in a given domain proceeds and is affected by development in another
- ✓ Gain a nuanced understanding of how context factors e.g., culture, poverty affect adolescent development
- ✓ Analyze, evaluate, and interpret research findings related to adolescent development
- ✓ Bring identified theory and evidence to bear on issues/dilemmas related to adolescents

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ASSESSMENT

Grades will be based on the following:

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Percentage	Assessment
5%	Weekly chapter outlines
5%	Learning modules/controversies/special topic
5%	Written assignment
10%	In-lecture quizzes/assignments
10%	Chapter quizzes/open-book
5%	Participation

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Extra credit

You can earn up to a 5% bonus for completing 10 hours of research participation. You must submit the original consent form to your advisor by the final seminar. Forms must be submitted in seminar; do NOT use the drop box. Make sure you keep a copy for your personal records. At least one hour of research participation must involve an in-lab experience, i.e., not more than one hour of in-lab participation.

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Grading scheme

In accordance with Brock University policy, grades will be awarded as follows:

B9 to 89

Reserved for students where work of outstanding quality that provides clear evidence of rare talent for the subject and of an original and/or incisive mind.

B8 to 89

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awarded for excellent, accurate work link 0" 0 evidence of k certain 0+ " for and k
omprehension of the subject k clearly perceptible. kk

6 k k' k o k 9 kk

Indicates competent work that shows a sound grasp of the course goals without
being distinguished. k k % k o k 9 kk

Represents work of adequate quality 0" 0 suffers from incompleteness or inac - ~ + 7/kk
9 k k 5' k o k 9 kk

Given where the minimum requirements of k course are barely satisfied. kk
4 k k 9 k o k 9 kk

Means that minimum requirements have not been met and no credit + been given for the
course. kk

Grade k" 0 0 be calculated to k decimal places prior to the submission of the final, whole number course
grade. Rounding up and down k" 0 0 be based on mathematical convention only. k For example, k grade of k
89.8 k" 0 0 be rounded to 89.5 where as k grade of 89.5 k" 0 0 be rounded up to 90 in the final course grade. kkk
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Assi o" ~ 0! k

W ~ # ly chap ~, ou ~ li 0 ~! k k

Due date: Start of seminar each week (before the topic is covered in lecture)

Prior to each weekly seminar, you k" 0 0 produce k ha d Sw i ~ 0 outline of the chapter due in the
upcoming lecture. k These are intended to help students engage more deeply and thoughtfully with the text. kk
It k" required that the outlines include k" major topic headings k the ones printed in red in the text and k
summarized on the first page of each chapter > k For each heading, the student must write—in k" for her
own words k the main point or points of that section > k 0" k should assist with learning to k
distinguish between the central k" 0+ " and the details presented to support it. k In addition, each outline
should include k items total > that are k combination of k something that stood out k partic- 0+ 0 k
interesting or surprising: k connections between material presented in the text and other things, k- 0 k
current events or material you learned from another course; and questions about the material in that
section. k k least two items must be questions—these k" 0 0 be addressed in seminar. k The design of the
outline k" up to you. k k + 7 be colorful and artistic or not > but the writing must be legible and the five k
0 items + must be clearly marked so the grader can spot them easily. kkk
kk

Bring the original version of the outline to seminar, but ! u % ' i ~ elec ~ o 0 ic copie! k ans or photographs > k
of the outlines k" k # F # 8 prior to the start of seminar. k Outlines k" 0 0 be graded on k" -point scale. k Late
outlines k" 0 0 not be accepted and k" 0 0 receive k grade of zero, however the lowest outline grade k" 0 0 be
dropped. kk

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Lea 0 i 0 w module! k k

Due date for final version: April 16, 11:59pm

& + 0 In the term, groups of roughly k students k" 0 0 form in seminar and work together throughout the
term to produce k web-based learning module about k spec". k controversy relevant to adolescents. k k + 0 k
member k" 0 0 be primarily responsible for representing k target audience, k- 0 k adolescents, k parents, k
educators, or policy-makers. k The modules k" 0 0 be designed to provide consumers with evidence-based k
information to permit k deep understanding of the relevant considerations. k Development of the module k
:" 0 0 require you to take information learned in the course and apply it to k real-world issue, k consider k

multiple perspectives on the topic and work with a team to convey the information to the public in an easy-to-understand and appealing manner. Drafts of the module's core components of the seminar throughout the term, including a formal presentation, so that the teams can receive constructive feedback. The final modules in Powerpoint format will be turned in at the end of the term. Additional details about the requirements will be fleshed out in seminar discussions. The best modules will be incorporated into a real website meant to educate the public about adolescent development. **By your material used, it will be cited and you will include it on your "H"-!H/kk**

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Write a 500-word

Due March 27, 2018 at 11:59pm Draft due in seminar Week 9

For the written assignment, students will choose one of the following options:

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1. Write a 500-word empirical journal article or a 500-word research paper published in a scientific journal for a non-scientific audience. A list of journal article options will be provided. If you prefer to base your written assignment on a journal article not included on that list, you must receive approval from the course instructor at least a week in advance of the first draft due in seminar.

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2. Write a 500-word policy position paper based on a dilemma raised in the textbook or lecture. A list of options will be provided. The dilemma cannot be the same as one you are currently working on in your learning module group.

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3. Critically evaluate a media report about an empirical finding related to adolescence. A list of media report options will be provided. If you prefer to base your written assignment on a media report not included on that list, you must receive approval from the course instructor at least a week in advance of the first draft due in seminar.

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4. Critically evaluate a non-scientific media report related to adolescence based on empirical evidence and scientific theories covered in the course. A list of media report options will be provided. If you prefer to base your written assignment on a media report not included on that list, you must receive approval from the course instructor at least a week in advance of the first draft due in seminar.

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Written assignments are to be between 5 and 8 pages, double-spaced, not including references. They should be composed in Times New Roman 12-point font. References do not count toward the paper length and will be single-spaced. No overpage is required. Otherwise, APA formatting should be adhered to.

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Do not plagiarize and do not submit material originally written for other courses. See section below on academic integrity. Quoting more than a short phrase is prohibited. Do not use quotations where you could have substituted your own words. Here are examples of acceptable and unacceptable uses of quotation:

Acceptable The author described the incident following to youthfull indiscretion, and suggests she believes that developmental phenomenon counts for the perpetrator's behavior.

Unacceptable The study looked at the effects of being observed on adolescents and

adults' risk-taking behavior and found that the effect of the peer manipulation was greater for the adolescent than for the adult subsample.

Drafts due in seminar Week 9. Drafts will be peer-reviewed by other students in seminar with guidance from the teaching assistant. Additional details about the parameters for each assignment option will be provided and students are responsible for reviewing the requirements carefully.

In-lecture Quizzes and Assignments

In some of the lectures, there will be short quizzes for assignments. Students will not be given advance notice of the assignments. In most cases, these will be graded for completion rather than content. Make-ups will not be offered for missed quizzes/assignments, however the lowest grade will be dropped.

Chapter Quizzes

Due date: Mondays at 1pm (before the topic is covered in lecture)

For each chapter, students will complete a 15-minute quiz on the material covered in the textbook. These are open-book, untimed quizzes comprised mostly or entirely of multiple choice questions. They are intended to help students ensure that they are reading carefully. Make-ups will not be offered for missed quizzes, and late quizzes will receive a grade of zero, however the lowest grade will be dropped.

Participation

Participation grades will be assigned at the end of the term and will be based mainly on engagement in seminar discussions, though attendance at office hours will also be taken into account.

Course Policies and Expectations

Attendance and Participation

Attendance and participation in both seminar and lecture are expected. The lectures are meant to complement and supplement the readings, not to serve as a substitute for reading. Readings should be completed before the seminar in the week for which they are assigned, and you should come to seminar and lecture prepared to engage in discussion. If the instructor's retention, versions of the lecture slides will be posted after the lecture.

Missed Lecture or Seminar

If you are unable to attend lecture, please do the following: If possible, get a copy of the lecture notes from a friend or classmate. Study the chapter associated with the lecture you missed. After reading and studying the chapter, check the questions from the outline posted on the website and make sure you can answer most of them. If there are any questions that you can't answer, you have any questions about anything you read in the chapter or in the notes, please come see me during office hours and we would be happy to go over any material you have questions about. If you are unable to attend seminar, you must still turn in an outline on time to receive a grade other than zero.

Grading

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Make-ups

Therek°° be no make-up quizzes or assignments. However, in recognition that everyone has a busy week here and there, the lowest gradek°° be dropped from each of the following assignment categories: Chapter outlines, in-lecture quizzes/assignments, chapter quizzes.

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Late assignments

For the written assignment and the learning module, therek°° be a late penalty of \$ 1 per #/7# grade of zerok°° be entered one week after each assignment unless you have made prior arrangement with the instructor or teaching assistant. Other assignmentsk°° not be accepted late: youk°° receive a grade of zero after the deadline.

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Incompletes and Changes in Enrolment

Incompletesk°° not be given in this course except under extremely rarek°° umstances that require documentation and adherence to university policies. Itk°° your responsibility to check the undergraduate calendar to determine university polic7s surrounding enrolment. Go to <http://brock.ca/webc+tofindmoreinformation>.

YK The last #/7 to withdraw without filing a Course # dd/Withdrawal formk°° k°° a° ua, y 19, 2018/kk

YK The last #/7 to withdraw from the course without academic penaltyk°° Ma, ch () 2018/kkkk

YK In accordance with university polic7s youk°° have been notified of at least \$ 5 of your course gradek°° Ma, ch 2, 2018/kk°° k°° include grades based on chapter outlines, quizzes, and in-c°+ assignments.

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Class etiquette

Please be courteous to others and arrive onk°° time. Latek°° 3°° Early departures, cell phones, andk°° quiet conversations are distracting and interfere with other students' right to learn. Silence cell phones and other electronic devices during lecture and seminar. Laptopsk°° be used for note-taking, however, thisk°° not recommended. Taking notesk°° hand results in better retention of information than does taking notes on a laptop; see <http://www.scientificamerican.com/article/a-learning-secret-don-t-take-notes-with-a-laptop/>. Using laptops for other mobile devices for other purposes during class/seminar e.g., web surfing, k soc°+ media>k not permitted.k°°+° time should be time to focus on learning. Reserve the right to bank laptops andk°°!°+° devices from lecture and/or seminar. If feel they are becomingk°°- 0 ofk°° distraction.

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Teaching philosophy

dolescencek°° k°°+° inating topic and I hope youk°° find this course enjoyablek°° wellk°° informative. There are no exams, but that does not mean the course won't be challenging. The assignments are intended to facilitate engagement with and mastery of the course material and to fosterk°°° relevantk°° occupationalk°°- essk°° more generally, k°°- 0k°° critical analysis, writingk°°°° sknowledge translation, k provision andk°°- eptance of constructive feedback? Time management, and teamwork. The assignments require you to apply what you have learned. I have 10°° standards, and your gradesk°°° reflect that. I encourage you to take advantage of office hours and the many resources available to you on campus to assist with your time-management, analytical, and writingk°°°° sk°° these are essentialk°°- ess both in the course andk°° most likely> in your career.

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Fairness

I believe in being fair to all students. If you are asking for an exception or for an advantage that other students are not receiving, I cannot give it to you, because that would be unfair to other students. **I will not make special allowances for one student, unless I can make the same allowance for ALL my students**. I know emergencies and extenuating circumstances arise and I can reasonably accommodate those situations with verifiable documentation if provided.

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TIPS FOR SUCCESS

1/Attend lecture and seminar and pay attention. *Your education—immerse yourself in it.*

2/Read when you are alert and can really process the material: use your chapter outlines to help ensure that you are identifying the key points.

3/Plan ahead—leaving assignments to the last minute causes undue stress and potentially lead to other problems.

4/ASK QUESTIONS. After class, in office hours, etc. If you have a question, chances are you are not the only one. Be brave and speak up.

5/Memorizing is not the same as learning. To really master the course content, you need to think deeply about it and apply what you have learned. The best way to know you've mastered the material is to try to teach this information to someone else.

6/For written assignments, read your sentences out loud. Does the language sound natural; Does each sentence follow logically from the prior one; Bigger words aren't better. Papers written well in everyday language are better than those that try to be fancy.

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Contacting the professor

Channel your written communication with the professor through email or messages. Follow work-related business hours before following up. It is unlikely to respond during weekends and holidays. Before asking me a question, be sure that the answer is not provided in the "Other Announcements" or "Resources" I have already provided. Re-read your communication before hitting send to make sure it's clear. I encourage you to come to my office hours if you have a question that requires more than a brief response.

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GENERAL ACADEMIC POLICIES FOR BROCK UNIVERSITY

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Academic Integrity:

Statement for undergraduate courses: Academic misconduct is a serious offence! The principle of academic integrity particularly of doing one's own work, documenting properly including use of quotation marks, appropriate paraphrasing and referencing/citation, collaborating appropriately and avoiding misrepresentation is a core principle in university study! Students are urged to consult Section 4 "Academic Misconduct" in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions and the procedures and penalties! The penalties for academic misconduct are severe & don't risk it! Please note that the Student Development Centre offers free workshops on writing and study skills and on avoiding plagiarism!

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Plagiarism software:

Written assignments are to be submitted via ' @ ' and will automatically be submitted to turnitin.com! If you have a principled objection to your paper being submitted this way, contact the instructor at least * business days prior to the due date to arrange an alternative!

Intellectual Property Notice:

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. Student who publicly posts or sells instructor's work without the instructor's express consent may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct and may also face adverse legal consequences for infringement of intellectual property rights!

Academic Accommodation:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Student Accessibility Services in the Student Development Centre (3rd floor, Schmon Tower 4ex. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments!

Academic Accommodation due to Religious Obligations:

Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test, assignment, deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor for alternative dates and/or means of satisfying requirements!

Medical Exemption Policy

The University will accommodate students whose studies become interrupted or who may be unable to complete academic work due to an incapacitating medical condition. In these situations, the student must complete the [Brock University Student Medical Certificate](#) or in case of a concussion, the Brock University Student Health Services Medical Concussion Certificate and include any relevant medical documentation to support his/her request for academic accommodation based on medical grounds. The University may, at its discretion, request more detailed documentation in certain cases!

SCHEDULE*

Week	Date	Topic	Reading
Week 1	Jan: 1-8	Introduction to Psychology	Textbook: Introduction to Psychology
Week 2	Jan: 15-22	Biological Psychology	Textbook: Biological Psychology
Week 3	Jan: 29 - Feb: 5	Cognitive Psychology	Textbook: Cognitive Psychology
Week 4	Feb: 12-19	Social Psychology	Textbook: Social Psychology
Week 5	Feb: 26 - Mar: 5	Family Psychology	Textbook: Family Psychology
Week 6	Mar: 12-19	Peer, Group, and Organizational Psychology	Textbook: Peer, Group, and Organizational Psychology
Week 7	Mar: 26 - Apr: 2	Health Psychology	Textbook: Health Psychology

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; +case notek thatk the schedule is subject to change. k Any changes to the syllabus or other class requirements will be announced in k class/seminar and posted on the class website. k ly oul miss the announcement, k it is your responsibility to check the website for updated k information. k

**Two chapters and chapter outlines will be due in sem nar in k weeks k and k 0. k Plan your time accordingly. k k

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SUMMAR|w~ DUE DATESw~

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A' ignm~ntk	Due dat~ vk
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Faculty of Social Science

Department of Psychology

Course Number: PSYC 3P19
Term/Year: Winter 2018
Course Title: Psychology of Aging

Instructor Name: Dr. Karen Campbell
Email: karen.campbell@brocku.ca
Office Location: MC B317
Office Hours: By appointment
Contact: 905-688-5550 ext. 4281
Teaching Assistants: Dawn Ryan (dr16yd@brocku.ca) and Alison O'Connor (ad10ux@brocku.ca)
Liaison Librarian: Colleen McKinnon (cmackinnon@brocku.ca)

Times and Locations:

Lecture: Mondays 2:00-3:50 pm, AS217

Seminars: Seminar 1: Mondays 6:00-7:00 pm, EA305 (TA: Dawn)
Seminar 2: Mondays 5:00-6:00 pm, MC C300 (TA: Dawn)
Seminar 3: Tuesdays 11:00-12:00 pm, MC J209 (TA: Alison)
Seminar 4: Mondays 11:00-12:00 pm, MC C300 (TA: Alison)

Course Calendar Description:

This course is intended to extend students' understanding of lifespan development to the later years of life. Theories and methods of lifespan development as applied to the special issues that emerge during late adulthood; how biological, cognitive, and social factors interact as individuals cope with the tasks of later years.

Course Prerequisites (if any):

PSYC 1F90; PSYC 2P12 or CHYS 2P10

Learning Objectives/Outcomes:

This course is intended to extend student's understanding of lifespan development in the later years by building on pre-requisite course content. By the end of the course, students will be able to:

1. *Demonstrate understanding of major theories and methods of aging research.*
2. *Identify the main biological, cognitive, and social changes that occur in older adulthood.*
3. *Evaluate popular media portrayals of research on aging.*
4. *Formulate a research question in writing about a topic of interest to you in the area of aging, described the current state of the literature on the topic, and design a study to address your research question.*
5. *Engage in debate and discussion on various topics in the field of aging.*

Required Readings or Texts:

Erber, J. T. (2013). *Aging and Older Adulthood* (3rd edition). Wiley-Blackwell.

The library has purchased an e-book version of the text that allows up to 3 students to access it at a time. I will provide a link to the book when I receive it.

Journal articles will be assigned for many of the seminars. These journal articles will be posted on Sakai under Resources/Week #/Seminar/. Links are provided to the library site, which will require login to the library if you are off campus.

Course Communications:

Students will be emailed via Sakai in the event of class cancellations, inclement weather, and other issues. I will also send weekly updates about what you will need to do to prepare for seminar. Students are expected to check their email every few days in order to stay up to date with the course. If I need to get in touch with you, I will also use your brock email address so please check it regularly.

Evaluation Components and Due Dates

Evaluation Component			Grade Weight	Due Date
<i>Course Participation</i>	15%	Lecture	5%	
		Seminar	10%	
<i>Writing</i>	40%	Media Paper	15%	Mon. February 5 th at 5 pm
		Research Proposal	25%	Mon. April 2 nd at 5 pm
<i>Exams</i>	45%	Midterm Exam	22.5%	Mon. Feb 26 th in class
		Final Exam	22.5%	TBD (Exam Period)
Total			100%	
Bonus	2%	Research participation		

Evaluation Components:

Media Paper (15%):

Have you ever read a headline such as “New cure for Aging” or “Cognitive training prevents age-related memory decline”? The popular media has massive amounts of information about aging. Some of the articles do a pretty good job of describing the latest research findings and others really mislead the reader about the true results of research studies.

This paper will require you to find a popular article (magazine, newspaper, online article, etc.) and critique it. You will need to find a popular article that describes **aging research** found in a peer-reviewed journal article. The purpose of this assignment is to become a critical reader of popular media. You will be asked to critique the paper on a number of areas such as: accuracy of the description of results, was the study only correlation when the popular article made it seem like it was an experiment, did they describe the methods accurately, etc.? A rubric will be given to you

closer to the time when it is due. The media paper should be 3-4 pages in length and should be submitted on Sakai along with the research article and a link to the corresponding popular media article by **5 pm Monday, February 5th**. One point (out of 15) will be removed if you do not provide the research and media articles.

Midterm Exam (22.5%):

The midterm will be around 35 multiple-choice questions and 3 short answer questions (out of a choice of 5 short answer questions). It will cover content from the start of the semester until week 6, including lectures, readings from the textbook, journal articles, and readings/activities in seminar. This midterm will take place at our normal lecture time, in class from **2 to 3:50 pm on Monday, February 26th**. Students will have a full 2 hours to complete the midterm. ****Note: there will be a question from the syllabus, so please read it carefully.****

Research Proposal Final Paper (25%):

This will be a 6 to 8 page research proposal paper on a topic in aging that is of interest to you. You will first choose an understudied area or an unanswered question in the aging literature. You will need to do research on this topic to identify areas that have not been studied. Based on this research, you will create a research proposal describing the past literature, rationale for your proposed study, and include a description of the methods (study design, participants, procedures), expected results, and future directions for your proposal. You will need to cite at least **8 peer-reviewed research articles** in the introduction of your paper to ensure you have provided sufficient background for your research proposal.

In order to ensure that you do not need to change your topic several times, please put some time into research so you produce a well thought out research proposal. Please submit about half a page description of the topic for your final paper outlining the main idea for the research proposal and main method you will be proposing. I will provide written feedback on your proposal so you can take my comments/suggestions into consideration in your final research proposal. The aim of this approval is to ensure research proposals are appropriate and on the right track. Please submit this paper topic on Sakai by 5 pm on Monday, March 5th. Students will receive 2% of their final course grade for submitting a topic and will automatically be deducted 2% of the final course grade if they fail to submit a paper topic. An electronic copy of the final research proposal paper must be submitted on Sakai by **5 pm on Monday, April 2nd**.

Final Exam (22.5%): This will be around 35 multiple choice questions and 3 short answer questions (out of a choice of 5 questions) and will cover the content from after reading week to the end of term. Similar to the midterm, it will cover lecture, readings from the textbook, assigned journal articles, and material covered in seminar. The final exam will be in the final exam period (April 12th to April 25th) with the exact date of the final exam to be determined by the University. Please plan accordingly.

Lecture Participation (5%): Participation in lecture will be assessed by participation in activities, posting responses to questions posed on Sakai, and submitting written responses to questions posed in class.

Seminar Participation (10%): This portion of your final mark is based on your participation in activities and discussion in the Seminar portion of this course.

Research Participation Bonus (2%): You can earn up to 2% in bonus marks by participating in a Psychology research study (1% per hour of participation, only 1 hour of which can be completed online). Ideally, the study should relate to aging, cognition, or social psychology - critical topics to be covered in this class. Further details to be provided.

Late Submission Policy:

The penalties for late submission of assigned coursework are **10% per day**, unless accompanied by medical documentation. See Medical Exemption Policy and the medical health certificate at <https://brocku.ca/registrar/toolkit/forms/>. For other types of emergencies, please contact me.

Relationship between attendance and grades:

Students are expected to attend all lectures and seminars and 15% of the final mark will depend on this participation.

Important dates: (check the section on sessional or important dates in the relevant online University calendar at <http://brocku.ca/webcal/>)

Friday, March 9th is the date for withdrawal from the course without academic penalty.

Monday, February 26th is the date you will be notified of 15% of your course grade.

Monday, February 19th to Friday, February 23rd is the scheduled reading week.

Monday, April 9th is set aside as a makeup day for March 30 (Good Friday) classes (Friday schedule).

Tuesday, April 10th and Wednesday, April 11th are set aside for designated reading days (these may be used to cover classes missed because of adverse weather).

Thursday, April 12th to Wednesday, April 25th is set aside as the formal examination period.

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Academic Integrity:

Statement for undergraduate courses

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.

This course will use Turnitin.com, phrase-matching software for both paper assignments. If you object to uploading your assignments to Turnitin.com for any reason, please notify the instructor to discuss alternative forms of submissions.

Intellectual Property Notice:

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

Academic Accommodation:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Student Accessibility Services in the Student Development Centre (4th floor Schmon Tower, ex. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

Academic Accommodation due to Religious Obligations:

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We will use Sakai for this course. The Media Paper, Research Proposal Topic, and Research Proposal must be submitted via Sakai. Electronic Microsoft word or PDF files can be uploaded and no paper copy is required for submission. I will send weekly emails from Sakai and this will be my primary form of communication with you outside of lectures. Your marks will be updated on Sakai and I will email you when marks are posted for midterms and papers. Required readings (as links to the library webpage), lecture notes, supplementary material, study questions, and readings for seminars will be posted on the course site each week.

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There will be a lot of reading in this course both from the textbook and from journal articles for seminar. Try to keep up with it as best you can, as it will be too much material to catch up on before the midterm and final exam. Please try to complete readings from the textbook before lecture, or at the very least have skimmed the chapters we are covering.

Seminar Format

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Email Policies

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- K Please address me as Dr. Campbell or Professor Campbell
- K Please sign your email with your **FULL NAME**. The email addresses at Brock are not very clear, so I will not respond to your email unless it has this information, as I won't be able to figure out whom I am speaking with.
- K You can expect me to respond to email within 48 hours. The one exception to this rule is the 24-hour period prior to the midterm or final exam, in which I will **NOT** respond to any emails regarding questions about the midterm/exam. Please ask your questions early.
- K If a question will take me more than 5 minutes to answer via email, I will ask you to meet with me so we can discuss it in person.
- K Please check your email every few days for course updates. This will be the primary way I will contact you in case of a problem or issue.

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Sequence and Dates

Week (Date)	Lecture Topic	Assessments	Lecture Readings	Seminar Topic & Readings
1 (Jan 8)	Course Overview & Introduction to Aging		Text: Chapter 1	<i>No Seminar</i>
2 (Jan 15)	Theory and Methods in studying Aging		Text: Chapter 2	<i>Introductions & Expectations</i>
3 (Jan 22)	Biological Aging and Health		Text: Chapter 3	<i>Aging Stereotypes: Film & Discussion RR: Levy (2003)</i>
4 (Jan 29)	Cognition & Memory		Text: Chapter 4 & 5	<i>Cognitive Decline & Compensation: Discussion RR: Cabeza et al. (2002)</i>
5 (Feb 5)	Intellectual Functioning	DUE: Media Papers 5 pm on Sakai	Text: Chapter 6	<i>The Stability of Intelligence From Age 11 to Age 90 RR: Deary et al. (2013)</i>
6 (Feb 12)	Cognition in Everyday Life		Text: Chapter 7	<i>Inhibitory Control: Discussion RR: Darowski et al. (2008)</i>
7 (Feb 19)	Reading Week- No Class			<i>No Seminar</i>
8 (Feb 26)	Midterm Exam	MIDTERM EXAM in class		<i>No Seminar</i>
9 (Mar 5)	Personality & Coping	DUE: Research Proposal TOPIC 5pm	Text: Chapter 8	<i>Aging in the Gay Community: Film & Discussion</i>
10 (Mar 12)	Employment, Retirement, Living Arrangements		<i>Text: Chapter 10</i>	<i>Seniors and Driving: Debate RR: Rindalducci et al. (2001)</i>
11 (Mar 19)	Mental Health		Text: Chapter 11	<i>The Elder Project: Film</i>
12 (Mar 26)	Social Interaction Guest Lecture by Alison O'Connor		Text: Chapter 9	<i>Aging and Happiness: Discussion & Activity RR: Carstensen et al. (2000)</i>
13 (Apr 2)	Coping with Death, Dying, Bereavement, and Aging in the Future	DUE: RESEARCH PROPOSALS 5 pm	Text: Chapter 12 & 13	<i>Review Session for Final Exam</i>



Faculty of Social Science

Department of Psychology

Course Number: PSYC 3P20
Term/Year: Winter 2021
Course Title: Human Memory

Instructor Name: Dr. Karen Campbell
Email: karen.campbell@brocku.ca
Office Location: MC B317
Office Hours: **Thursdays at 10am through Teams**
Contact: 905-688-5550 ext. 4281
Teaching Assistants: **Tiago Guardia de Souza e Silva (tg17ba@brocku.ca) and Nathalie Gauthier (nathalie.gauthier2@brocku.ca)**
Liaison Librarian: Ian Gordon (igordon@brocku.ca)

Times and Locations:

Lecture: Mondays 9:00-11:00 am, **Posted under Lessons/Week# on Sakai**

Seminars: Seminar 2: Tuesdays 12:00-1:00 pm, **on Teams (TA: Nathalie)**

Seminar 3: Fridays 2:00-3:00 pm, **on Teams (TA: Tiago)**

Course Calendar Description:

Current theories and research on human memory from cognitive psychology and cognitive neuroscience. Encoding, storing, and retrieving memories in different time scales and/or systems of memory (e.g., short-term memory, working memory, long-term memory, prospective memory).

Course Prerequisites:

PSYC 1F90 and PSYC 2P20

Learning Objectives/Outcomes:

This course is intended to extend students' understanding of lifespan development in the later years by building on existing knowledge of developmental psychology. By the end of the course, students will be able to:

1. *Demonstrate understanding of classic and current issues in human memory, including both behavioural and neuropsychological approaches to data and theory.*
2. *Explain the different stages and forms of memory, and how these different types of memory are carried out in the brain.*
3. *Summarize and discuss the findings from a recent study on human memory in plain language.*
4. *Engage in debate and discussion on various topics in the field of memory.*

5.K Formulate a research question in writing about a topic of interest to you related to memory, describe the current state of the literature on the topic, and design a study to address your research question.

Required Readings or Texts:

Radvansky, Gabriel A. (2017). Human Memory, 3rd Edition. New York, NY: Routledge.

Journal articles and videos will be assigned for some seminars. These journal articles will be posted on Sakai under **Lessons/Week #**. Links are provided to the library site, which will require login to the library if you are off campus.

Course Communications:

Students will be emailed via Sakai with reminders about assignments and various announcements (e.g., in the event of class cancellations, inclement weather, and other issues). Students are expected to check their email every few days in order to stay up to date with the course. If I need to get in touch with you, I will also use your brock email address so please check it regularly.

Evaluation Components and Due Dates

Evaluation Componen			Grade Weight	Due Date
Course Participation	10%	Seminar	10%	
Writing/Oral	45%	Data blitz presentation	15%	Weeks 4 & 5
		Research proposal	25%	Mon. March 29 th at 5pm
Exams	45%	Midterm Exam	25%	Mon. Feb 22 nd , on Sakai
		Final Exam	25%	TBD (Exam Period)
Total			100%	

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Evaluation Components:

Data Blitz Presentation with a partner (15%): Presentations will be given in pairs during seminar in Weeks 4 and 5. Each presentation (8 mins max) will summarize a new and exciting finding in the field of human memory. One person will introduce the topic and describe the methodology used, while the other person will present the results and discuss the implications. Presentations should consist of no more than 8 PowerPoint slides - this is an exercise in brevity. Topics and further discussion of the presentations will be given in seminar during Week 2.

Midterm Exam (25%): The midterm will be a “take-home” exam administered through Sakai and be open-book. It will consist of 5 short answer questions and cover content from the start of the semester until week 7, including lectures, readings from the textbook, journal articles, and readings/activities in seminar. The midterm questions will be posted as an assignment on Sakai at **9am on Thursday, October 29th**. You will have until **12pm** to upload your typed responses (and these will run through Turnitin.com).

Commented [A1]: reconsider this to minimize cheating...shorten test time to 2 hrs? randomize questions?

Research Proposal Final Paper (25%): This will be a 6 to 8 page research proposal paper on a topic in memory that is of interest to you. You will first choose an understudied area or an unanswered question in the memory literature. You will need to do research on this topic to identify areas that have not been studied. Based on this research, you will create a research proposal describing the past literature, rationale for your proposed study, and include a description of the methods (study design, participants, procedures), expected results, and future directions for your proposal. You will need to cite at least **8 peer-reviewed research articles** in the introduction of your paper to ensure you have provided sufficient background for your research proposal.

In order to ensure that you do not need to change your topic several times, please put some time into research so you produce a well thought out research proposal. Please submit about half a page description of the topic for your final paper outlining the main idea for the research proposal and main method you will be proposing. I will provide written feedback on your proposal so you can take my comments/suggestions into consideration in your final research proposal. The aim of this approval is to ensure research proposals are appropriate and on the right track. Please submit this paper topic on Sakai by 5 pm on Monday, March 1st. Students will receive 2% of their final course grade for submitting a topic and will automatically be deducted 2% of the final course grade if they fail to submit a paper topic. An electronic copy of the final research proposal paper must be submitted on Sakai by 5 pm on Monday, March 29th.

Final Exam (25%): This will be around 35 multiple choice questions and 3 short answer questions (out of a choice of 5 questions) and will cover the content from after reading week to the end of term. Similar to the midterm, it will cover lecture, readings from the textbook, assigned journal articles, and material covered in seminar. The final exam will be in the final exam period (Dec 6th to Dec 19th) with the exact date of the final exam to be determined by the University. Please plan accordingly.

Seminar Participation (10%): This portion of your final mark is based on your participation in activities and discussion in the Seminar portion of this course.

Late Submission Policy:

The penalties for late submission of assigned coursework are **10% per day**, unless accompanied by medical documentation. See Medical Exemption Policy and the medical health certificate at <https://brocku.ca/registrar/toolkit/forms/>. For other types of emergencies, please contact me.

Relationship between attendance and grades:

Students are expected to attend all seminars and 10% of the final mark will depend on this participation.

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Important dates: (check the section on sessional or important dates in the relevant online University calendar at <https://brocku.ca/important-dates/>)

February 26th is the date for withdrawal from the course without academic penalty.

February 19th is the date you will be notified of 15% of your course grade.

February 16th-19th is the scheduled reading week.

April 8th-21st is set aside as the formal examination period.

K

Academic Policies

Academic Integrity:

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.

This course will use Turnitin.com, phrase-matching software for both paper assignments. If you object to uploading your assignments to Turnitin.com for any reason, please notify the instructor to discuss alternative forms of submissions.

Intellectual Property Notice:

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

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Sequence and Dates

Week (Date)	Lecture Topic	Assessments	Lecture Readings	Seminar Topic & Readings
1 (Jan 4)	Course Overview & Methods in memory research		Text: Chapter 3	<i>No Seminar</i>
2 (Jan 11)	Sensory & short-term memory		Text: Chapter 4	<i>Introductions & What makes a good presentation?</i>
3 (Jan 18)	Working memory		Text: Chapter 5	<i>In-class experiment</i>
4 (Jan 25)	Nondeclarative memory		Text: Chapter 6	<i>Data Blitz Presentations</i>
5 (Feb 1)	Episodic memory	DUE: Podcast 5 pm on Teams (upload to your seminar group)	Text: Chapter 7	<i>Data Blitz Presentations</i>
6 (Feb 8)	Failures of memory: Forgetting & distortions		Text: Chapter 8	Review for midterm
7 (Feb 15)	Reading Week- No Class			<i>No Seminar</i>
8 (Feb 22)	Midterm Exam	MIDTERM EXAM on Sakai		<i>No Seminar</i>
9 (Mar 1)	Memory & the brain	DUE: Research Proposal TOPIC 5pm	Text: Chapter 2	<i>Discussion of film, Memento</i>
10 (Mar 8)	Semantic memory		Text: Chapter 9	<i>Some video showing semantic memory deficits? Discussion in class</i>
11 (Mar 15)	Autobiographical memory		Text: Chapter 12	<i>Schacter & Addis reading</i>
12 (Mar 22)	Memory & the law		Text: Chapter 14	<i>Debate: Can you trust eyewitness testimonies?</i>
13 (Mar 29)	Aging & memory	DUE: Research proposal 5 pm	Text: Chapter 17	<i>Review Session for Final Exam</i>

Commented [A2]: Debate?

Online experiments? Through testable?

Kanopy: <https://brocku.kanopy.com/video/memento-1>.

Brock Omni record for Sakai:
https://ocul-bu.primo.exlibrisgroup.com/discovery/fulldisplay?docid=alma991008043419705152&context=U&vid=01OCUL_BU:BU_DEFAULT&lang=en.

**BROCK UNIVERSITY DEPARTMENT OF PSYCHOLOGY
Fall 2018**

PSYC 3P30 – CRITICAL THINKING IN PSYCHOLOGY

Instructor: Dr. Stokes

Email: kstokes@brocku.ca

Office Hours: After Lectures or by appointment

Lectures: Mondays, 8:00am – 10:00am, STH204

TAs: Racheal Herlehy – rh17pg@brocku.ca (Office Hours: Wed 12 – 2 MCB410)

Xiaoyang (Nick) Xia – xx11ju@brocku.ca (Office Hours: Tue 10 – 12 MCB217)

***Christine Salahub – cs13aj@brocku.ca (Office Hours: Wed 10 – 12 MCB420)**

***Course coordinator – please contact Christine with administrative questions**

Seminar 2: Wednesdays, 3:00pm – 4:00pm, MCC303 (Christine)

Seminar 3: Fridays, 3:00pm – 4:00pm, MCC303 (Nick)

Seminar 4: Wednesdays, 4:00 – 5:00pm, MCC300 (Nick)

Seminar 5: Tuesdays, 5:00pm – 6:00pm, MCD404 (Racheal)

Seminar 6: Mondays, 5:00 – 6:00pm, MCJ205 (Racheal)

Required Text:

Morling, Beth. Research Methods in Psychology 3rd Ed.

PLEASE FIND ANY ADDITIONAL READINGS ON SAKAI

Course Objectives

Psychological research is directed toward description, prediction, and explanation of human behaviour. This course addresses its methodologies and critical consumption.

Knowledge areas covered in this course relate to the processes of psychological science and include basic concepts related to methodology and design of psychological studies, as well as misunderstandings and criticisms of psychological research. Skills developed in this course include how to think critically about psychological research, design scientifically sound psychological studies, consume research-related findings, and respond to criticisms of psychological science.

Format

Lecture (two hours) and Seminar (one hour) per week.

SAKAI

SAKAI will be used for this course. It will contain this course outline as well as reading materials and resources for assignment completion. Grades for assignments and the tests will also be posted here.

Course Evaluation

Midterm Exam (in-class October 29 th)	25%
Final Exam (Date TBD)	30%
Seminar Participation	10%
Group Project	20%
Essay (Due December 3 rd , 8am)	15%
Research Participation Bonus	2%

Exams (Total of 55%)

Exams will be comprised of multiple choice, true/false, and short-answer questions derived from material presented in lecture and provided through the textbook or assigned readings. To do well on these, it is prudent that you attend all classes and complete all readings.

The Midterm exam will focus on material from weeks 1-7 (Sept 10th – Oct 22nd).

The Final exam is cumulative but will focus on material from weeks 8-12 (Nov 5th – Dec 3rd).

Group Project (20%)

In this group project, each group (4 to 5 students per group) will develop a research proposal and present this proposal to the seminar group in two stages throughout the term (see *Course Calendar* below for seminar presentation weeks). Each group's proposal will involve two types of research designs: (i) a correlational study (10%), and (ii) an experimental study (10%). Both of these studies will address the same research issue, as selected by the group from a list of issues provided by the instructor and available on SAKAI

At both points throughout the term, groups will present to their seminar the following components of the project: a brief summary of their research topic and their ideas for a correlational study and an experimental study. These presentations will be 5 - 10 minutes in length per group and will be evaluated based primarily on the soundness of the research design. At each presentation date, each group will also provide the TA with a hard copy document summarizing, in bullet form, all of the information addressed in the presentation. See the *Evaluation materials* folder on SAKAI for more instructions and information.

Each group member is expected to participate in each part of the group project. Grades will be shared by all members of the group but individual grades also will be assigned based on each individual's participation in the group process. Seminar time throughout the term will be devoted to developing this group project; additional meetings outside class time among group members (to be organized by the group members themselves) will be necessary.

Failure to complete or attend any of the group research presentations on the assigned seminar days – including days on which an individual may not himself or herself be presenting any material – will result in a grade of zero for that student for that part of the project.

Seminar Participation (10%)

Seminars are a place for open, friendly, and academic discussion of the topics presented in this course. Active participation is important and you cannot participate if you are absent. Students are expected to come to seminar having read the assigned readings. Participation will be graded each week and these grades will reflect the student's attendance and quality of participation each week. Your TA will evaluate participation weekly a five-point scale:

- 0 = absent
- 1 = present but did not participate
- 2 = participated minimally
- 3 = made some thoughtful contributions
- 4 = made substantial and competent contributions
- 5 = unique, insightful, creative contributions.

You should feel comfortable sharing ideas and discussing various points of view. You should also be professional in allowing others to share their ideas—if you disagree, do so in a professional manner. Differences of opinion are the backbone of higher education. Your seminar mark will come primarily from your participation, not your attendance.

Half marks (e.g. 3.5) are possible. Students who wish to earn seminar marks of 4 or 5 should strive to incorporate ideas and concepts from lecture and readings into the seminar discussion where possible. **You may ask your TA for your interim grade at the beginning or end of seminar the week prior to the course drop deadline.**

Topic Essay (15%)

This essay is an exercise in bringing together previously presented research with content you have learned from lecture and seminar. This will be a **different topic from your group project**, but you may choose any topic/article you find interesting. Essays will be completed individually (i.e., not in groups).

You will include a *brief* summary of a popular press article as well as a *brief* summary of the scientific research article on which it is based. You will discuss (i) the accuracy of the popular press article in light of learning about the actual scientific article that prompted the popular press report, (ii) the quality of the scientific article based on what you have learned about measurement, design, ethics, etc. You can include other supporting research articles published in any year, insofar as they shed light on the focal article. You are encouraged to see your TA while planning your essay.

A rubric is posted on Sakai. In general, grading will consider how carefully you appear to have considered the topic, the quality of your insights, and evidence of integrative thought that touches on lecture and reading material. Appropriate logical structure, as well as spelling and grammar usage, is expected.

Essays will be submitted and graded via SAKAI. Use the *Assignments* feature SAKAI (found on the left-hand navigation pane). Files you upload here will be visible to only you, the instructor, and the TA. When you submit your essay, it will be automatically submitted to Turnitin, which is

phrase-matching software used to detect plagiarism. Your essay will be compared to other essays and to articles, including papers posted on other websites. You will receive e-mails to confirm receipt of your submission.

BONUS: Submit your completed essay *by December 4th at 4:30pm* and you will receive a 5% bonus on your essay grade. For example, if you earned an 75% on your essay, but submit it early, and you will receive a grade of 80%.

Bonus Opportunity

Students may participate in research at Brock University for a 2% bonus added onto their final course grade. Students must provide a copy of the consent form with researcher's original signature) AND complete the Research Participation Form available on SAKAI. Completed Research Participation Forms and original consent form must be submitted to the Instructor **no later than December 3rd in lecture**. Students will be asked to provide a brief description of the study (1-2 sentences) and offer a mini critique (1-2 sentences; you may be creative here).

Important Notes

Withdrawing from the Course. The last day for withdrawal from this course without academic penalty is **November 6th, 2018**. It is the student's responsibility to ensure that he or she has withdrawn from the course on or before the withdrawal date to avoid assignment of a course grade. If not withdrawn, a failing grade will be assigned for the course at the end of the term. **At least 15% of your course grade will be available on SAKAI prior to this date.**

Attendance: You must attend all lectures and seminars to do well in this course. Although attendance is not explicitly collected during lectures, testable material not available in the textbook will be presented.

Absences and Late Papers: Students who miss seminar must submit a copy of the Brock University Student Medical Certificate to receive consideration for exemption. Personal holidays or travel days are not acceptable reasons for missing a lecture, seminar, deadline, test, or due date. **Assignments will be submitted electronically via SAKAI.** It is therefore suggested that assignments be completed as early as possible. If accompanied by approved medical documentation, students who miss a test/exam may be eligible to complete a makeup assignment.

Accessibility: Brock is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact Student Accessibility Services as soon as possible.

Electronic Devices: When in class please *be* in class. Physical attendance does not ensure success, rather you need to pay attention, participate, and be engaged in the material. Please turn off all cellphones, and other electronic devices in class. You are welcome to bring a laptop or ipad to class for note-taking only. **Disruptive behaviour, such as texting, web-surfing, and talking on the phone, will not be tolerated** in seminar or in lecture, as this behaviour is completely disrespectful to everyone else around you. If you are distracting others during lecture or seminar you will be asked to leave!

Email: Please use your **Brock email for all e-mail correspondence to me or your TA in this course.** Otherwise it may be sent to the SPAM folder by the university's firewall. Emails will be responded to within 24 hours of receipt. Do not expect a prompt reply on the day of a test or deadline. Assignments should be started early for this reason.

Academic Misconduct: Because academic integrity is vital to the well-being of the university community, Brock University takes academic misconduct very seriously. **Academic misconduct includes plagiarism, which involves presenting the words and ideas of another person as if they were your own (from a textbook, class mate, journal article, previously used assignment)**, and other forms of cheating, such as using crib notes during a test or fabricating data for a lab assignment. The penalties for academic misconduct can be very severe. A grade of zero may be given for the assignment or even for the course, and a second offence may result in suspension from the University. Students are urged to read the section of the Brock University Undergraduate Calendar that pertains to academic misconduct. Students are also reminded that the Student Development Centre (Schmon Tower, Room 400) offers free workshops on writing and study skills and on avoiding plagiarism.

WEEK	TOPIC	CHAPTER	SEMINAR
Sep 10	Introduction & Ways of Thinking	1	Choose partners
Sep 17	Sources of Information & The Scientific Approach	2	Group Project topic selection
Sep 24	Theories and Operations & Measurement	3 & 5	
Oct 1	Sampling & Descriptive Research	6 & 7	
Oct 8	THANKSGIVING & FALL BREAK NO LECTURE OR SEMINAR (Oct 8 - 12)		
Oct 15	Correlational Designs	8	
Oct 22	Multivariate Designs	9	
Oct 29	Midterm Exam (In-Class)	none	
Nov 5	Experimentation & Experimental Designs	10 & 11	
Nov 12	Factorial Designs	12	Group Project Pres. Correlational Design
Nov 19	Quasi-Experimental Designs & Single-n Designs	13	Group Project Pres. Correlational Design
Nov 26	Replication, Generalization, Application	14	Group Project Pres. Experimental Design
Dec 3	Ethics in Research & Course Evaluations	4	Group Project Pres. Experimental Design
Dec 6	Essays Due via SAKAI (4:30pm)		
Final Exam Date TBD			



Faculty of Social Sciences

Department of Psychology

PSYC 3P34
SP2017/D2
Psychology of Human Sexuality

Instructor Name: Martin Dragan, DHS, ACS
Email: mdragan@brocku.ca
Office Location: MCB 301

Times and Locations:
Tuesdays and Thursdays 7:00p-9:00p, WH 327

Office hours:
Tuesdays and Thursday 5:00p-7:00p and by appointment

Teaching Assistant: Mark Hoffarth - mh10xc@brocku.ca

Required Text:
Pukall, C. (2017). *Human sexuality: A contemporary introduction* (2nd ed). Don Mills, ON: Oxford University Press.

1st edition is OK too

Learning Objectives/Outcomes:
Welcome to Psychology of Human Sexuality. This course is an introduction to the psychological study of human sexuality. The objective of this course is to familiarize the student with the history, methodology, theory, and content of the study of human sexual behaviour and interpersonal attraction. The present course includes topics such as sexual theories, sexual differentiation and anatomy, physiology of sexual response, attraction and love, gender roles (and male and female sexuality), sexual orientation, variations in sexual behaviour, and sexual disorders and sexual therapy.

Course Communications:
Please note that this course is on Sakai. Supplemental reading assignments/material, as well as the course syllabus and weekly quizzes, can be found there. In addition to the material, any announcements, communications, or cancellations will be posted on Sakai.

Evaluation Components and Due Dates

Evaluation Component	Grade Weight	Date
Midterm Exam	30%	May 16 (Lec 1-4)
Final Exam	35%	TBA (Lec 6-10)
Participation (seminar)	10%	Lectures 2-10

Quizzes	5%	Lectures 2-10
Essay	20%	June 1, 2017
Total	100%	

Evaluation:

There will be two multiple choice + short answer exams, each covering the immediately preceding lectures and text/reading material. The tests will *not* be cumulative. The first exam (midterm) will be held in class on the 5th lecture (**May 16, 2017**). The second exam (final) will be held during the exam period at the end of the semester.

Seminar attendance and participation constitute 10% of your grade. Each student is assigned to a specific seminar time and location, and it is your responsibility to attend and participate in your assigned seminars. Seminar discussions will be based on additional readings, which are posted to Sakai. It is each student's responsibility to have read the assigned reading for that week and to be prepared to discuss the content of that reading in seminar.

There is also 5% reserved for online quizzes to be done via Sakai. These quizzes will consist of approximately 4 questions for each set. Quiz questions will be based on the additional readings assigned for that week. These quiz questions will also lead into seminar discussions and topics of discourse. As mentioned before, the additional readings will be available via Sakai.

Note that if you miss a lecture, seminar, or any part of your participation marks for any reason other than medical or family emergencies (e.g., the bus is late, you went to the bathroom, the lineup at Tim Horton's was really long, etc.), you will receive a mark of 0 for that day or a mark that reflects the amount of participation you engaged in. Please provide official documentation for any missed lectures or quizzes to have your mark pro-rated (see below for more details about medical notes).

Finally, 20% is reserved for the final assignment/essay. This assignment is due **June 1, 2017** prior to the start of class and must be submitted electronically (via Sakai's *Assignment* submission; see below for more details).

The essay for this course can take one of two forms: either a debate format (**Essay 1**) or an essay on sex and film (**Essay 2**). So, you must choose to do either Essay 1 or Essay 2 (only one of the two).

ESSAY 1 (Debate a current sex topic):

1.K Do pheromones affect people's sexual behaviour? Come up with two arguments in favour of pheromones as a driving factor for human sexual behaviour and two arguments against. Ultimately, what set of arguments are stronger (and have more support)? Use the current literature (i.e., 1 reference per point) to support each of your claims. Show how the literature you cite supports the arguments you make. You can use current stories in the media to help support your claims, but you also must use four academic articles on pheromones and sexuality to support your claims. In total, aside from an introductory and concluding paragraph, you should have about 4 paragraphs (i.e., 1 for each of your arguments).

2.K What is the current state of knowledge on female ejaculation? Come up with two arguments (or points/pieces of evidence) suggesting it exists, and two arguments (or points/pieces of evidence) suggesting it does not exist. Ultimately, what set of arguments are stronger (and have more support)? Use the current literature (i.e., 1 reference per point) to support each of your claims. Show how the literature you cite supports the arguments you make. You can use current stories in the media to help support your claims, but you also must use four academic articles on female ejaculation to support your claims. In total, aside from an introductory and concluding paragraph, you should have about 4 paragraphs (i.e., 1 for each of your arguments).

3.K Is asexuality a disorder or a health problem? Come up with two arguments (or points/pieces of evidence) suggesting it is unhealthy/harmful, and two arguments (or points/pieces of evidence) suggesting it is healthy (or at least neutral). Ultimately, what set of arguments are stronger (and have more support)? Use the current literature (e.g., 1 reference per point) to support each of your claims. Show how the literature you cite supports the arguments you make. You can use current stories in the media to help support your claims, but you also must use four academic articles on asexuality to support your claims. In total, aside from an introductory and concluding paragraph, you should have about 4 paragraphs (i.e., 1 for each of your arguments).

ESSAY 2 (Sex and Film):

For this essay, you can choose one of the following films to view and analyze as related to a specific sexuality topic/issue/question. Note that before you delve into the film discussion, you also need to review (i.e., summarize) the objectives, methods, findings and conclusions from 2 articles related to the topic at hand. So the first part of your essay will be a mini-review of the literature, before the actual discussion of the film (so, approximately 1 page reviewing the relevant literature). These articles should be peer reviewed journal articles and should directly address the issue.

1.K Film: *A Clockwork Orange*. Discuss how the main character learned (e.g., through classical conditioning) to engage in certain forms of appropriate sexual behaviour and to not engage in certain forms of antisocial sexual behaviours. You need to give specific examples from the film to back up your ideas. Note that, as mentioned above, before you do the film analysis, you need to review (i.e., summarize) findings from two articles on classical conditioning and sexuality from peer-reviewed literature. So the first part of your essay will be a mini-review of the literature (some of which may be critical of the sexual addiction model), before the actual discussion of the film.

2.K Film: *Secretary* OR *Shame* OR *Don Jon* (Choose **ONE** of these films). Discuss whether a main character in one of these films is (or is not) a “sexual addict” or “hypersexual.” To back up your claims, you need to read and make specific references to the sexual addiction/compulsion literature and what characterizes a “sexual addict” or “hypersexual” person (e.g., proposed diagnostic criteria for hypersexuality in chapter 16). In addition, you need to give examples of how his or her behaviour does or does not follow these criteria. Note that, as mentioned above, before you do the film analysis, you need to review (i.e., summarize) findings from two articles on sexual addictions or hypersexuality from peer-reviewed literature. So the first part of your essay will be a mini-review of the literature (some of which may be critical of the sexual addiction/hypersexuality model), before the actual discussion of the film.

Resource Material for Essays (both Essay 1 and Essay 2).

A starting point for your paper can be relevant sections or chapters in an introductory book such as Pukall’s *Human Sexuality*. Then, to elaborate on some of the ideas and research presented there, you need to consult scholarly journals. A number of journals devoted to the study of human sexuality are available in the library including the *Journal of Sex Research*, *Archives of Sexual Behaviour*, *Canadian Journal of Human Sexuality*, the *Journal of Psychology & Human Sexuality*, *Sex and Marital Therapy*, *AIDS*, and *Human Reproduction*. More general social science and biological journals publish articles on human sexuality as well. Most of these journals are available at the library, along with general reference services like Medline, Sociofile, PsychInfo, Web of Science, etc. Note that I am primarily interested in recent research from journal articles. Book chapters and popular press reports can be helpful, but the main articles should be journal articles

For the sex and film essays, as mentioned, a short literature review is also required, so you will need to use these library resources as well, but you will also, of course, need to view the film (e.g., view

on Netflix, iTunes, etc.), watch it once or twice and make notes. These films are also available at local video stores or available from a number of online sources.

Note APA Referencing for a Film:

Producer, P. P. (Producer), & Director, D. D. (Director). (Date of publication). *Title of motion picture* [Motion picture]. Country of origin: Studio or distributor.

Example:

Brooks, M. (Producer & Director). (1981). *History of the world, part I* [Motion picture]. United States: 20th Century Fox.

Note APA Referencing for a Journal Article:

Author, A. A., & Author, B. B. (Year of publication). Title of article. *Title of Journal*, volume number(issue number, if available), page range. doi:0000000/000000000000 or <http://dx.doi.org/10.0000/0000>

Example:

Bailey, J. M., & Zucker, K. J. (1995). Childhood sex-typed behavior and sexual orientation: A conceptual analysis and quantitative review. *Developmental Psychology*, 31(1), 43-55. doi:10.1037/0012-1649.31.1.43

Other Instructions:

- 1.K Essays must be typed and double spaced.
- 2.K The length of the essay must be about 800-900 words (which is roughly 3 pages, give or take a page - so it is the word count that matters, not the page count - excluding references; no longer!). A significant variation on this length will be marked down accordingly.
- 3.K Use APA guidelines for referencing, quotations and pagination. See <http://www.apastyle.org> for tips on how to reference and how to include in-text citations and direct quotes.
 - a.K Note that in APA style, you DO NOT include the title of the article or the name of the journal in your essay text. You only include the last name of the authors and year of publication when you need to include a citation in text. The title of the article and name of the journal are found ONLY in the reference list at the very end of your paper.
 - b.K In APA style, a running head is used, which has a specific format. See <https://owl.english.purdue.edu/owl/resource/560/01/> for a good example of how the running head works and what it looks like.
 - c.K Make sure you take a look at the formatting for in-text citations. For example, list all authors the first time they are cited; in subsequent citations you can use “et al.” (unless there are more than 6 authors, in which case, always use “et al.”). Both websites are helpful with this formatting rule and others that are not mentioned here.

- 4.K Proof read and revise before you submit. It is often helpful to read your sentences out loud to see if they make sense (although note that conversational or colloquial language is not to be used in formal writing).
- 5.K The paper will be graded on style as well as content, so be grammatical, organized, and take care with spelling and punctuation.
- 6.K You should have an introduction (stating your thesis, or what the essay is about) and a concluding paragraph (summary and conclusions).
- 7.K Make sure you save a copy before you submit your paper.
- 8.K Note the deadline - to be submitted by **Lecture 10 (June 1)** and 5% per day penalty for late assignments. Submit online via Sakai (see details below). **Files must be in .doc or .docx format.**
- 9.K Read the section in Brock's Calendar on **Academic Misconduct**. For example, the sections on plagiarism ("...presenting work done, in whole or in part, by someone else as if it were one's own") should be read and understood. Note: detection of plagiarism will occur electronically (Turnitin.com; see below).

Late Submission Policy:

The penalties for late submission of assigned coursework (i.e., essay) are 5% per day, unless accompanied by medical documentation. See Medical Exemption Policy and the medical health certificate at <http://www.brocku.ca/health-services/policies/exemption>

No late papers will be accepted after **June 8, 2017**, unless prior arrangements have been made with Dr. Dragan.

Relationship between attendance and grades:

Students are expected to attend all classes and must submit all assignments in order to pass this course.

Important dates: (check the section on sessional or important dates in the relevant online University calendar at <http://brocku.ca/webcal/>)

Friday, May 19 is the last date for withdrawal from the course without academic penalty.

Academic Policies

Academic Integrity:

Statement for undergraduate courses

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Polices" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.

Plagiarism software:

Essays are to be submitted electronically for plagiarism detection. Please note that detection of plagiarism will occur via Turnitin.com.

Turnitin.com

This course will use Turnitin.com, which is a phrase-matching software. You need to submit an electronic copy through Sakai's *Assignment* feature found on the left navigation bar on the 3P34 Sakai page; failure to submit via *Assignment* automatically results in a grade of zero. Your essay will be compared to other essays and to articles, including papers posted on other websites. You will receive e-mails to confirm receipt of your submission. Thus, you will be submitting your paper to Turnitin.com via Sakai and do not have to login to turnitin.com with a class ID to submit the paper.

The electronic copy is due on the assignment due date prior to the start of class; if it is late, the full late penalty will apply.

If you object to uploading your assignments electronically for any reason, you are able to submit your essay via a different method. Specifically, you will be asked to submit copies of *each* of the articles you cited. In addition, you will be required to meet the instructor to discuss your paper in detail. To choose this alternate assignment submission, you must make an appointment with Dr. Dragan to discuss your concerns with Turnitin.com at least three (3) weeks prior to the assignment deadline.

Academic Accommodation:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Services for Students with Disabilities in the Student Development Centre (4th floor Schmon Tower, ex. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

Academic Accommodation due to Religious Obligations:

Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements.

Medical Exemption Policy:

The University requires that a student be medically examined in Health Services, or by an off-campus physician prior to an absence due to medical reasons from an exam, lab, test, quiz, seminar, assignment, etc. The Medical Certificate can be found at: <http://www.brocku.ca/health-services/policies/exemption>

Sequence and Dates of focus

Week/Module/Class Dates	Focus/topic	Readings
Lecture 1	Introduction & Theory	Chapters 1 - 3
Lecture 2	Theory	Chapters 1 - 3 Muise et al. (2016). Sexual frequency predicts greater well-being, but more is not always better. <i>Social Psychology and Personality Science</i> , 7(4), 295-302.

Lecture 3	Sexual Anatomy; Hormones & Differentiation	Chapter 4 & 5 Didie, E. R. & Sarwer, D. B. (2003). Factors that influence the decision to undergo cosmetic breast augmentation surgery. <i>Journal of Women's Health, 12</i> (3), 241-253.
Lecture 4	Physiology & Sexual Response Cycle	Chapter 4 & 5 Borg & de Jong. (2012). Feelings of disgust and disgust-induced avoidance weaken following induced sexual arousal in women. <i>PLoS ONE, 7</i> (9), 1-8.
Lecture 5	MIDTERM EXAM	LECTURES 1-4; CHAPTERS 1-5
Lecture 6	Gender & Orientation	Chapter 10 & 11 Chivers et al. (2004). A sex difference in the specificity of sexual arousal. <i>Psychological Science, 15</i> , 736-744.
Lecture 7	Attraction & Love	Chapter 12 Day et al. (2015). To do it or not to do it? How communally motivated people navigate sexual interdependence dilemmas. <i>Personality and Social Psychology Bulletin, 41</i> , 791-804.
Lecture 8	Sexual Communication & Behaviour	Chapter 13 - 14 Metz & McCarthy (2007). The "Good-Enough Sex" model for couple sexual satisfaction. <i>Sexual & Relationship Therapy, 22</i> , 351-362.
Lecture 9	Sexual Variations	Chapter 15 Bogaert, A.F. (2012). A monster in all of our lives. <i>Understanding asexuality</i> (pp. 115-121). Lanham, MD: Rowman & Littlefield.
Lecture 10	Sexual Disorders, Dysfunctions, and Sex Therapy	Chapter 16 Cacchioni, T., & Tiefer, L. (2012). Why medicalization? Introduction to the special issue on the medicalization of sex. <i>Journal of Sex Research, 49</i> , 307-310.
FINAL EXAM	Second half only	Non-cumulative! LECTURES 6-10; CHAPTERS 10-16

Additional Resources

These are additional readings that you may want to read if you are particularly interested in a topic. These readings are merely suggestions. You are not responsible for them (e.g., on the exams or in lectures). They can also be used as a starting point for your essay.

Week/Module/Class Dates	Focus/topic	Readings
Lecture 1 & 2	Theory	Salvatore, C., et al. (2014). Do hormones influence women's sex? Sexual activity over the menstrual cycle. <i>The Journal of Sexual Medicine, 11</i> , 211-221.
Lecture 3 & 4	Sexual Anatomy	http://goo.gl/QciXcZ http://goo.gl/JrJXBx Ostrzenski, A. (2012). G-spot anatomy: A new discovery. <i>The Journal of Sexual Medicine, 9</i> , 1355-1359.

Lecture 3 & 4	Hormones & Differentiation	http://goo.gl/s0x7gW http://goo.gl/TShl4a Fausto-Sterling, A. (1993). The five sexes: Why male and female are not enough. <i>The Sciences</i> , 33(2), 20-25. Fausto-Sterling, A. (2000). The five sexes, revisited. <i>The Sciences</i> , 40(4), 18-23.
Lecture 3 & 4	Physiology & Sexual Response Cycle	Bohlen, J. G., et al. (1982). Development of a woman's multiple orgasm pattern: A research case report. <i>Journal of Sex Research</i> , 18(2), 130-145.
Lecture 6	Gender	Brown, M.L., & Rounsley, C.A. (1996). <i>True selves: Understanding transsexualism</i> . San Francisco, CA: JosseyBass.
Lecture 6	Orientation	LeVay, S. (2010). <i>Gay, straight, and the reason why: The science of sexual orientation</i> . New York, NY: University Press.
Lecture 7	Attraction & Love	Fisher, H. (2004). <i>Why we love: The nature and chemistry of romantic love</i> . New York, NY: Henry Holt
Lecture 8	Sexual Behaviour	Schaafsma, D., et al. (2013). Exploring the development of existing sex education programmes for people with intellectual disabilities: An intervention mapping approach. <i>Journal of Applied Research in Intellectual Disabilities</i> , 26(2), 157-166.
Lecture 9	Sexual Variations	Griffiths, M. (2001). Sex on the internet: Observations and implication for internet sex addictions. <i>Journal of Sex Research</i> , 38, 333-342.
Lecture 10	Sexual Disorders, Dysfunctions, and Sex Therapy	Tiefer, L. (2012). Medicalization and demedicalization of sexuality therapies. <i>Journal of Sex Research</i> , 49, 311-318. Leiblum, S.R. (2007). <i>Principles and practice of sex therapy</i> (4 th ed.). New York, NY: Guilford Press. Kleinplatz, P.J. (2012). <i>New directions in sex therapy: Innovations and alternatives</i> (2 nd ed.). New York, NY: Routledge.

Furthering your knowledge about human sexuality:

Do you want to learn more about the field of sex research, including possible careers related to sexuality and sexual health? Come speak to me and/or check out some of these resources:

- 1.K www.sieccan.org
- 2.K www.sexscience.org
- 3.K www.aasect.org
- 4.K www.kinseyinstitute.org

The following sites are good resources for STIs and sex education:

- 1.K www.sexualityandu.ca
- 2.K www.phac-aspc.gc.ca/std-mts/
- 3.K www.who.int/reproductivehealth/topics/en/
- 4.K www.nlm.nih.gov/medlineplus/femalereproductivesystem.html
- 5.K www.nlm.nih.gov/medlineplus/malereproductivesystem.html

6.K <http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=f2297dbbfd510410VgnVCM10000071d60f89RCRD>

To foster a safe and healthy sexual environment on campus, please keep this resource in mind: **The Brock Student Sexual Violence Support Centre (A Safer Brock)** - supports and advocates for people who have experienced sexual violence. A full list of services can be found at www.ASaferBrock.org. If you or a friend needs support or have questions you can text 289-990SAFE(7233). All services are available 24-hours and are anonymous, confidential, and free.

PSYC 3P37

Human Evolutionary Psychology

Course Outline Fall 2018

Instructor: M. C. Ashton, office B323, phone x3993, e-mail mashton@brocku.ca

Teaching Assistant: Joel Robitaille, office PL500F, email jr12uw@brocku.ca

Class Format: Lectures (2 hours per week), seminar (1 hour per week)

Lectures: Monday, 1:00 – 2:50 pm, Plaza 409

Seminars: Please check your timetable for days, times, and locations.

Office Hour: by appointment (please email the instructor to make an appointment)

Restriction: open to PSYC (single or combined) majors and minors until the date specified in the registration guide. Students must have a minimum of 8.0 credits or 3.0 PSYC credits above PSYC 1F90.

Prerequisite(s): PSYC 1F90; one of PSYC 2P25, 2P30, 3P24 (2P24) or permission of the instructor. Completion of this course will replace previously assigned grade and credit obtained in PSYC 3V86 (taken in 2011) and PSYC 4P88 (taken in 2010).

Last Date for Withdrawal without Academic Penalty: Nov. 6. Results of the first test (Oct. 29) will be made available to students before Nov. 6.

Textbook & Other Readings:

The readings for this course include (a) a textbook (available for purchase in the bookstore, with one copy of the previous edition on 3-hour reserve in the library), (b) various articles (electronic copies available free of charge through the library), and (c) lecture notes for the early lectures of the course (available on the course Sakai site after each lecture).

The textbook reference is listed below; the list of additional readings is given on a subsequent page.

Buss, D. M. (2012). *Evolutionary Psychology: The New Science of the Mind (5th ed.)*. Needham Heights, MA: Allyn & Bacon.

(note: the 4th edition is also okay; I've listed the readings for both editions but on different pages, so use the list that corresponds to the edition you're using)

Content

This course examines human psychological characteristics in terms of their function and evolution—that is, as mechanisms that have been shaped by natural selection. The course begins with an overview of general principles of evolutionary biology and evolutionary psychology, and continues with the study of specific topics: individual

differences; group differences; adaptations to the natural environment; kin relationships; cooperation and conflict; sexuality and mating; social organization. Throughout the course, there will be an emphasis on critical evaluation of evidence that a given psychological characteristic may be an adaptation.

The lectures will generally be broadly related to the assigned articles, but that there will be relatively little overlap between the lectures and the textbook. However, the textbook will serve as the starting point for student-led seminar presentations. The content of the midterm test and the final exam will be drawn from the lecture, the articles, and the textbook, with details to be provided later.

Learning Objectives

At the end of this course, students should be able to do the following:

- 1a. Explain evolution by natural selection and the evidence that led scientists to accept this explanation for life on earth
- 1b. Discuss the evolutionary processes underlying speciation, sexual reproduction, parental investment, sexual selection, senescence (aging), and altruism
- 1c. Give a brief overview of the major stages in human evolution, and the differences among humans and other great ape species
- 2a. Describe several popular misconceptions about evolution in the context of human behaviour
- 2b. Explain the concepts of adaptation, by-product, and noise, as well as the concepts of domain-general and domain-specific mechanisms (in the context of evolutionary psychology)
- 3a. Describe the main reasons for the maintenance of heritable individual differences across evolutionary time, including frequency-dependent selection, fluctuating optimum levels, mutation-selection balance, and neutral noise
- 3b. Identify the main ethical issues in the study of sex differences and other group differences, and explain several theories of the origins of those differences, with critical evaluation

Continued...

Learning Objectives (continued)

Explain and discuss various aspects of theory and research in several areas of human evolutionary psychology, including the following:

4. male and female sexuality;
5. survival in the natural environment;
6. kin altruism, parenting, family conflicts;
7. religion and politics.

E-mail Correspondence: The instructor will use students' Brock e-mail addresses to make announcements to the class. Please check your Brock e-mail account regularly. If you need to send an e-mail message to the instructor, please write your message in full proper sentences that state your question clearly. In general, however, it is better to visit office hours than to send e-mail messages to the instructor, especially when your question is likely to require a long answer.

Discussion of Controversial Topics: Openness and Respect

This course will address several topics that are sometimes controversial, including the following: the origins of life and the evolution of human beings; differences between individuals, sexes, and ethnic groups; evolutionary explanations of sexual behaviour, aggression, crime, ethnocentrism, and religion.

Everyone in the course should expect these topics to be discussed in the lectures and seminars and everyone should also be respectful of others in discussing them. Some ideas related to the above topics may conflict (or appear to conflict) with some of our prior beliefs, but our task in this course is to consider carefully the evidence that can help us to evaluate those ideas. In discussing these topics, however, we must also take care to be respectful of others—including all persons, as well as other members of the course—and especially to avoid using crude or derogatory language.

Evaluation

<i>Component</i>	<i>Date</i>	<i>Value</i>
Midterm Test	October 29	30%
Content based on lecture and readings assigned to date; format to be announced		
Written Assignment	due November 19	25%
Literature review with suggestions for future research (see additional information on subsequent page); must be between 1750 and 2250 words long, excluding references		
Final Exam	TBA	25%
Content based on lecture and readings assigned since the midterm test, plus other material as declared by the instructor; format to be announced		
Seminar Presentation	various dates	10%
Quality of seminar presentation, including both “lecture” and “discussion” components		
Seminar Participation	throughout course	10%
Quantity and (especially) quality of participation		

Format and Topics of Student Seminar Presentations

In the last five weeks of the course, seminar sessions will be led by groups of students (typically two or three students, as scheduling requires) who will discuss some topics relevant to the content area assigned for the week of their seminar presentation.

About half of each presentation should be a “lecture,” in which the students leading the seminar will describe the theoretical rationale for, and the empirical findings from, some relevant research studies. In the other half of each presentation, the students will lead a class discussion of some questions raised by the research being presented. The students leading the seminar session should prepare several such questions for class discussion. Depending on the research being examined, those questions might (for example) deal with issues such as (a) adaptation versus by-product, (b) the underlying theoretical rationale for predictions, (c) the research design used in testing predictions, (d) specific future research directions, and (e) social implications (e.g., in law, politics, economics, psychology, medicine, etc.). All students in each group should participate substantially in lecturing and in leading discussion.

The suggested basis for finding relevant research articles is to consider the studies described in the textbook chapter that is assigned for the seminar session. Students should find some research studies that are summarized briefly in the textbook chapter, and then provide a more detailed explanation of those studies by consulting the original sources. Other studies that are relevant to the same topics but that are not mentioned in the textbook could also be useful.

The list on the following page gives the textbook chapters that are assigned as the starting point for the seminar presentations of each week. During the early weeks of the course, each student (or pair of students) should consider his or her relative preferences for various topics and dates for the presentations, which will be assigned in one of the seminars during the first three weeks of the course.

Seminar Schedule

Seminars Between Lectures on...

	Topic	Reading
Sept. 10 and 17	Orientation & Topic Selection; Evolution	see lecture reading
Sept. 17 and 24	Evolution	see lecture reading
Sept. 24 and Oct. 1	Evolutionary Psychology	see lecture reading
Oct. 1 and 15	Sex Differences	see lecture reading
Oct. 15 and 22	Sexuality	see lecture reading
Oct. 22 and 29	Review for Midterm Test	
Oct. 29 and Nov. 5	Student presentations (Survival/Nature)	Chapter 3
Nov. 5 and 12	Student presentations (Parenting/Family)	Chapter 7 & 8
Nov. 12 and 19	Student presentations (Cooperation)	Chapter 9
Nov. 19 and 26	Student presentations (Aggression/War)	Chapter 10
Nov. 26 and Dec. 3	Student presentations (Sexuality)	*Chapters 4, 5, 6

Written Assignment

Your written assignment should involve a review of literature with specific suggestions for future research on a topic in human evolutionary psychology. The topic would normally be selected from those covered in the textbook and/or in the lecture; other topics might also be eligible, but require the approval of the instructor. The literature review should be focused on original research, as typically published in journal articles and scholarly books.

The length of the assignment must be between 1750 and 2250 words, excluding references; therefore, to provide a thorough literature review and a well-developed suggestion for future research, you should write concisely. (Because this is a short assignment, it is expected that the quality of writing will be very high.)

Assignments should be written using APA style guidelines. Evaluation of assignments will be based on several criteria, including (a) the thoroughness, integration, and coherence of the literature review, (b) the importance, originality, and soundness of the suggested research question, and (c) the overall organization, quality of writing, and adherence to APA format throughout the assignment.

To be considered as having been handed in on time, assignments must be handed in during class on the due date; assignments submitted later that day will be considered as one day late. The penalty for late assignments is 5% per calendar day.

About Plagiarism and Academic Misconduct

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.

One form of academic misconduct is plagiarism. If you take any text directly from a (paper or electronic) journal, book, or other source, without using quotation marks and page numbers, then this is plagiarism. If you cite any phrases, sentences, or paragraphs directly—either "word for word" or with trivial changes—then you **MUST** provide page numbers for, and quotation marks around, **ALL** of the cited text. In general, however, it is much better to paraphrase text broadly, with appropriate citation to the source of the paraphrased text, than to use direct quotations.

Another form of plagiarism is committed if you submit a written assignment that was actually prepared in whole or in part by someone else. To avoid suspicion of this form of plagiarism, you must be prepared to explain, discuss, and defend any written work that

you submit in this course. Inability to do so will be interpreted as evidence that the work is not your own.

Note also that in this course you are not permitted to submit written work that you have also submitted (or are also submitting) for another course.

This course may use Turnitin.com, phrase-matching software. If you do not want to submit your paper to Turnitin.com, you are able to choose to do your project differently. Specifically, you will be asked to submit your summary notes for each of the articles cited in your paper, indicating for each point the page number in the article where you found each point, and you will be asked to provide page numbers for every citation in your paper. In addition, you will be required to meet Prof. Ashton to explain, discuss, and defend your paper in considerable detail. To choose this alternate assignment, you must make an appointment with Prof. Ashton to discuss your concerns with Turnitin.com at least 3 weeks prior to the assignment deadline.

Academic Accommodation Statement

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Services for Students with Disabilities in the Student Development Centre (4th floor Schmon Tower, ext. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

Academic Accommodation due to Religious Obligations

Brock University will accommodate students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements.

Medical Exemption Policy

The University requires that a student be medically examined in Health Services, or by an off-campus physician prior to an absence due to medical reasons from an exam, lab, test, quiz, seminar, assignment, etc. The Medical Certificate can be found here:

<http://www.brocku.ca/health-services/policies/exemption>

List of Additional Readings with Links for Library Access

Nettle, D. (2006). The evolution of personality variation in humans and other animals. *American Psychologist*, 61, 622-631.

<http://proxy.library.brocku.ca/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=22362465&login.asp&site=ehost-live&scope=site>

Henig, R. M. (2007, March 4). Darwin's God. *New York Times*.

<http://proxy.library.brocku.ca/login?url=http://www.nytimes.com/2007/03/04/magazine/04evolution.t.html?sq=henig&st=nyt&scp=2&pagewanted=all>

Bloom, P. (2005, December). Is God an accident? *The Atlantic*.

<http://proxy.library.brocku.ca/login?url=http://www.theatlantic.com/magazine/print/2005/12/is-god-an-accident/4425/>

Camperio Ciani, A. S., Capiluppi, C., Veronese, A., & Sartori, G. (2007). The adaptive value of personality differences revealed by small island population dynamics. *European Journal of Personality*, 21, 3-22.

<http://proxy.library.brocku.ca/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=23773669&login.asp&site=ehost-live&scope=site>

Lecture Schedule (subject to minor changes) →
readings for 5TH ED TEXTBOOK (4th is on next page)

Date	Topic	Reading (5TH ED TEXTBOOK)
Sept. 10	Basics of Evolution (1)	(first class meeting)
Sept. 17	Basics of Evolution (2)	Buss 1, 2
Sept. 24	Human Evolution	
Oct. 1	Adaptations vs. by-products Evolution of language	Buss 1 (review 44-54) Buss 13 (388-390) (can start early on next week's chapters)
Oct. 8	No Class Meeting (Reading Week)	
Oct. 15	Sex Differences & Sexuality	Buss 4, 5, 6, 7 (196-198, 207-208), 11 (300-301, 330-335)
Oct. 22	Sex Differences & Sexuality (continue with previous week's readings)	
Oct. 29	Midterm Test	
Nov. 5	Survival Problems & Natural Environment	Buss 3
Nov. 12	Kin Altruism, Parenting, Family Conflicts	Buss 7&8
Nov. 19	Individual Differences	Buss 13 (390-393) Nettle
Nov. 26	Recent Human Evolution Group Differences	Camperio Ciani et al.
Dec. 3	Religion and Politics	(previous week's readings) Buss 9 (278-281), 10 (301-308) Henig Bloom

Note: Lecture notes will be available after the lectures on the course Sakai site, and should be studied for the midterm test and final exam.

Lecture Schedule (subject to minor changes) →
readings for 4TH ED TEXTBOOK (5th is on previous page)

Date	Topic	Reading (4TH ED TEXTBOOK)
Sept. 10	Basics of Evolution (1)	(first class meeting)
Sept. 17	Basics of Evolution (2)	Buss 1, 2
Sept. 24	Human Evolution	
Oct. 1	Adaptations vs. by-products Evolution of language	Buss 1 (review 47-57) Buss 13 (400-402) (can start early on next week's chapters)
Oct. 8	No Class Meeting (Reading Week)	
Oct. 15	Sex Differences & Sexuality	Buss 4, 5, 6, 7 (206-208, 218-219), 11 (302-313, 342-348)
Oct. 22	Sex Differences & Sexuality	(continue with previous week's readings)
Oct. 29	Midterm Test	
Nov. 5	Survival Problems & Natural Environment	Buss 3
Nov. 12	Kin Altruism, Parenting, Family Conflicts	Buss 7&8
Nov. 19	Individual Differences	Buss 13 (402-422) Nettle
Nov. 26	Recent Human Evolution Group Differences	Camperio Ciani et al.
Dec. 3	Religion and Politics	(previous week's readings) Buss 9 (290-294), 10 (313-321) Henig Bloom

Note: Lecture notes will be available after the lectures on the course Sakai site, and should be studied for the midterm test and final exam.

**BROCK UNIVERSITY DEPARTMENT OF PSYCHOLOGY
Fall 2017**

PSYC 3P38 – MOTIVATION & EMOTION

Instructor: Dr. Stokes

Office: MCB402

Email: kstokes@brocku.ca

Office Hours: After Lectures or by appointment in B402

Lectures: Fridays, 9:00am – 11:00am, TH248

Teaching Assistants: Holly Lockhart – hl10ze@brocku.ca

Megan Earle - me11tt@brocku.ca

Seminar 2: Mondays, 8:00pm – 9:00pm, MC D300

Seminar 3: Tuesdays, 4:00pm – 5:00pm, MC C400

Seminar 4: Tuesdays, 3:00pm – 4:00pm, EA106

Required Texts:

Fanken, Robert, E., Human Motivation. 6th Ed.

PLEASE FIND ANY ADDITIONAL READINGS ON SAKAI

Course Objectives

Human (and some nonhuman) motivation and emotion will be examined scientifically, from evolutionary, physiological, developmental, and social perspectives. The course will begin with fundamental biological dimensions of motivation and emotion common to all mammals, and will move progressively to more distinctively human motivations, emotions and social issues.

Format

Lecture (two hours) and Seminar (one hour) per week.

SAKAI

SAKAI will be used for this course. It will contain this course outline as well as reading materials and resources for assignment completion. Grades for assignments and the tests will also be posted here.

Course Evaluation

Midterm Exam (in-class October 27 th)	25%
Final Exam (Date TBD)	30%
Seminar Participation	10%
Seminar Presentation	15%
Essay (Due December 5 th , 11am)	20%
Research Participation Bonus	2%

Exams (Total of 55%)

Exams will be comprised of multiple choice, true/false, and short-answer questions derived from material presented in lecture and provided through assigned readings. To do well on these, it is prudent that you attend all classes and complete all readings.

The Midterm exam will focus on material from weeks 1-6 (Sept 8th – Oct 20th).

The Final exam is cumulative but will focus on material from weeks 7-12 (Nov 3rd – Dec 5th).

Seminar Participation (10%)

Seminars are a place for open, friendly, and academic discussion of the topics presented in this course. Active participation is important and you cannot participate if you are absent. Students are expected to come to seminar having read the assigned readings. Participation will be graded each week and these grades will reflect the student's attendance and quality of participation each week. Your TA will evaluate participation weekly a five-point scale:

0 = absent

1 = present but did not participate

2 = participated minimally

3 = made some thoughtful contributions

4 = made substantial and competent contributions

5 = unique, insightful, creative contributions.

You should feel comfortable sharing ideas and discussing various points of view. You should also be professional in allowing others to share their ideas—if you disagree, do so in a professional manner. Differences of opinion are the backbone of higher education. Your seminar mark will come primarily from your participation, not your attendance.

Half marks (e.g. 3.5) are possible. Students who wish to earn seminar marks of 4 or 5 should strive to incorporate ideas and concepts from lecture and readings into the seminar discussion where possible. **You may ask your TA for your interim grade at the beginning or end of seminar the week prior to the course drop deadline.**

Seminar Presentation (15%)

An academia, the scientific process typically involves presenting ideas and early conclusions prior to writing a formal manuscript for publication. For this assignment, you will find a current (2012 or later) article related to motivation and emotion (see topic suggestions on the presentation guidelines) and identify a debate or disagreement in the literature. Nearly all working theories will have some supporting evidence and some contrary evidence. Once you have found a focal article and identified an issue/debate, read it, comprehend it, and compare with other articles in the literature.

In your seminar presentation, you will first briefly present the focal article, then you will present the debate/issue and any other key points that are central to the discussion. When you are finished presenting, the seminar group will discuss the issues you raised as well as any potential for future research based on the findings you present. You must pick an experiment or study (not a review paper).

You will be working in pairs (assigned in first seminar). You must have your topic approved by your TA one week prior to presenting.

Topic Essay (20%)

This paper will be based on the seminar topic and article you presented. Use the feedback and in-class discussion to help form your essay. Use your in-class presentation to improve the quality of your essay. However, you will write the paper independently (i.e., not with your partner). A rubric is posted on Sakai. In general, grading will consider how carefully you appear to have considered the topic, the quality of your insights, and evidence of integrative thought that touches on lecture and reading material. Appropriate logical structure, as well as spelling and grammar usage, is expected.

Essays will be submitted and graded via SAKAI. Use the *Assignments* feature SAKAI (found on the left-hand navigation pane). Failure to submit via SAKAI by the due date will *automatically* result in a grade of zero. Files you upload here will be visible to only you, the instructor, and the TA. When you submit your essay, it will be automatically submitted to Turnitin, which is phrase-matching software used to detect plagiarism. Your essay will be compared to other essays and to articles, including papers posted on other websites. You will receive e-mails to confirm receipt of your submission.

BONUS: Hand in your completed essay *within one week* of your seminar presentation and you will receive a 3% bonus on your essay grade. For example, if you earned an 77% on your essay, but hand it in within one week of your presentation date, you will receive a grade of 80%.

Students who are unable to submit assignments by the due date, but who provide adequate documentation may be eligible for an extension— as determined by the Instructor and/or department. Failing to submit an assignment on time due to personal holidays or travel days will NOT merit accommodation. For documenting late submission due to illness, a copy of the mandatory University's Student Medical Certificate should be submitted to the Instructor.

Bonus Opportunity

Students may participate in research at Brock University for a 2% bonus added onto their final course grade. Students must provide a copy of the consent form with researcher's original signature) AND complete the Research Participation Form available on SAKAI. Completed Research Participation Forms and original consent form must be submitted to the Instructor no later than July 5th. Students will be asked to provide a brief description of the study (1-2 sentences) and describe how the study relates to motivation and/or emotion (1-2 sentences; you may be creative here).

Important Notes

Withdrawing from the Course. The last day for withdrawal from this course without academic penalty is **November 7th, 2017**. It is the student's responsibility to ensure that he or she has withdrawn from the course on or before the withdrawal date to avoid assignment of a course grade. If not withdrawn, a failing grade will be assigned for the course at the end of the term.

You will know the results of the midterm exam (25% of your grade) prior to the drop date.

Attendance: You must attend all lectures and seminars to do well in this course. Although attendance is not explicitly collected during lectures, testable material not available in the textbook will be presented.

Absences and Late Papers: Students who miss seminar must submit a copy of the Brock University Student Medical Certificate to receive consideration for exemption. Personal holidays or travel days are not acceptable reasons for missing a lecture, seminar, deadline, test, or due date. **Assignments will be submitted electronically via SAKAI. Assignments not submitted by the due date/time will not be accepted.** It is therefore suggested that assignments be completed as early as possible. If accompanied by approved medical documentation, students who miss a test/exam may be eligible to complete a makeup assignment.

Accessibility: Brock is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact Student Accessibility Services as soon as possible.

Electronic Devices: When in class please *be* in class. Physical attendance does not ensure success, rather you need to pay attention, participate, and be engaged in the material. Please turn off all cellphones, and other electronic devices in class. You are welcome to bring a laptop or ipad to class for note-taking only. **Disruptive behaviour, such as texting, web-surfing, and talking on the phone, will not be tolerated** in seminar or in lecture, as this behaviour is completely disrespectful to everyone else around you. If you are distracting others during lecture or seminar you will be asked to leave!

Email: Please use your **Brock email for all e-mail correspondence to me or your TA in this course**. Otherwise it may be sent to the SPAM folder by the university's firewall. Emails will be responded to within 24 hours of receipt. Do not expect a prompt reply on the day of a test or deadline. Assignments should be started early for this reason.

Academic Misconduct: Because academic integrity is vital to the well-being of the university community, Brock University takes academic misconduct very seriously. **Academic misconduct includes plagiarism, which involves presenting the words and ideas of another person as if they were your own (from a textbook, class mate, journal article, previously used assignment)**, and other forms of cheating, such as using crib notes during a test or fabricating data for a lab assignment. The penalties for academic misconduct can be very severe. A grade of zero may be given for the assignment or even for the course, and a second offence may result in suspension from the University. Students are urged to read the section of the Brock University Undergraduate Calendar that pertains to academic misconduct. Students are also reminded that the Student Development Centre (Schmon Tower, Room 400) offers free workshops on writing and study skills and on avoiding plagiarism.

WEEK	TOPIC	CHAPTER	SEMINAR
Sept 8	Introduction & Trends in the Study of Motivation	1	Choose partners & presentation dates
Sept 15	Components of Motivation	2	1 st Presentation Read abstract(s)
Sept 22	Hunger & Eating	3	
Sept 29	Love and Sexual Behaviour	4	
Oct 6	Attention, Arousal, and Performance	5	
Oct 13	FALL BREAK – NO LECTURE OR SEMINAR (Oct 9 - 13)		
Oct 20	Health & Stress	9	
Oct 27	Midterm Exam (In-Class)	none	
Nov 3	Wakefulness, Sleep, and Dreams	6	
Nov 10	Aggression & Anger	8	
Nov 17	Goal-incongruent (negative) Emotion	10	
Nov 24	Goal-congruent (positive) Emotion	11	
Nov 31	Curiosity & Creativity	12	
Dec 5	Essays Due by 11:00 am on SAKAI		

Textbook: Field, A. (2013). *Discovering Statistics using IBM SPSS Statistics (4th Edition)*. Sage.¹

Enroll yourself in WebAssign:²

<https://www.webassign.net/v4cgi/selfenroll/classkey.html>

Class key: **brocku.ca 3636 6937**

Notes:

1. Copies of the paperback edition of the texts have been ordered to the Campus Store. For Field, the text is bundled with WebAssign access codes (required).
2. There is a companion website to the Field textbook where you can find study tips, summaries, and the answers to “self-test” questions in the book:
<http://studysites.sagepub.com/field4e/study/default.htm>

Course Requirements:

End of chapter reading quizzes via WebAssign (at least 11 quizzes)	5%
WebAssign and Lab assignments (at least 11 assignments)	40%
Midterm	25%
Final Exam (cumulative)	30%

###Please note that the schedule below is subject to change. Changes will be announced in class. Students are responsible for keeping track of changes.

¹ Dear PSYC/NEUR 3P39 students: I'd like you to know that Prof Field's text lays out statistical principles clearly, and some of his explanations are the *best* I've ever read. In addition, the on-line resources offered with the text are fantastic pedagogical tools, to my mind. For these reasons, I have adopted this textbook for our course. That being said, I feel compelled to say, at times, his humour is *not to my taste*. For that matter, not even close. As long as you know it's the author speaking when you read, and not Prof Dwivedi, we're fine.

- ² Here is a link to the student quick start guide (see also YouTube link on Sakai):
https://webassign.net/manual/WA_Student_Quick_Start.pdf
- Also, **WebAssign** has tech support for students:
- **Phone Support**
- Toll free: 800.955.8275
- **Student Support Hours** Call us anytime!
We're here 24/7
- <https://www.webassign.com/support/student-support/>

WEEK	TOPIC	READING ASSIGNMENT
Lec 1 Mon Sep 11	Unit 1 Syllabus and Computer Data Analysis with Excel	<ul style="list-style-type: none"> • Get Textbook • Enroll WebAssign • Read Field Ch 1 [review]
Lec 2 Mon Sep 18	Unit 1 cont'd Review statistical concepts; more Excel (graphs) and start SPSS	<ul style="list-style-type: none"> • Read Field Ch. 2 [more stats review] • Hand in Quiz 1 <i>on Ch 1</i> • Hand in Homework <i>on Ch 1</i>
Lec 3 Mon Sep 25	Unit 2 Intro to SPSS and Graphs	<ul style="list-style-type: none"> • Read Field Chs 3 & 4 • Hand in Quiz 2 <i>on Ch 2</i> • Hand in Homework <i>on Ch 2</i>
Lec 4 Mon Oct 2	Unit 3 Correlation	<ul style="list-style-type: none"> • Read Field Ch 7 • Hand in Quiz 3 <i>on Chs 3 & 4</i> • Hand in Homework <i>on Chs 3 & 4</i>
No Lec Mon Oct 9 Cdn THANKSGIVING	READING WEEK	<ul style="list-style-type: none"> • Hand in Quiz 4 <i>on Ch 7</i> on Thurs Oct 12 • [Hand in Homework <i>on Ch 7</i>] • <i>Read Field Ch 8</i>
Lec 5 Mon Oct 16	Unit 4 Regression	<ul style="list-style-type: none"> • Read Field Ch 8 cont'd/part 2 • Hand in Quiz 5 <i>on Ch 8</i> • Hand in Homework <i>on Ch 8</i>
Lec 6 Mon Oct 23	Unit 4 cont'd Regression cont'd	<ul style="list-style-type: none"> • Read Field Ch 9 T-test • Hand in Quiz 6 <i>on Ch 8 cont'd/part 2</i> • Hand in Homework <i>on Ch 8 cont'd/part 2</i>
Lec 7 Mon Oct 30	Unit 5 Comparing two means; T-test	<ul style="list-style-type: none"> • Read Field Ch 11 • Hand in Quiz 7 <i>on Ch 9 T-test</i> • No homework this week ☺
*Lec 8 Mon Nov 6	Midterm (Units 1-4)	
Lec 9 Mon Nov 13	Unit 6 One-way ANOVA	<ul style="list-style-type: none"> • Read Field Ch. 11 • Hand in Quiz 8 <i>on Ch 9 T-test</i> • Hand in Homework <i>on Ch 9 T-test</i>
Lec 10 Mon Nov 20	Unit 7 Two-way ANOVA	<ul style="list-style-type: none"> • Read Field Ch. 13 • Hand in Quiz 9 <i>on Ch 11 ANOVA GLM 1</i> • Hand in Homework <i>on Ch 11 ANOVA GLM 1</i>
Lec 11 Mon Nov 27	Unit 7 cont'd Two- way ANOVA	<ul style="list-style-type: none"> • Read Field Ch 14 • Hand in Quiz 10 <i>on Ch 13 ANOVA GLM 3</i> • Hand in Homework <i>on Ch 13 ANOVA GLM 3</i>

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Lec 12 Mon Dec 4: last class	<i>Unit 8 (if there is time)</i> <i>Mixed-design ANOVA</i>	<ul style="list-style-type: none">• Read Field Ch 15• Hand in Quiz 11 on Ch 14 ANOVA GLM 4• Hand in Homework on Ch 14 ANOVA GLM 4 <p><i>For Wed Dec 6</i></p> <ul style="list-style-type: none">• Hand in Quiz 12 on Ch 15 ANOVA GLM 5• [Hand in WebAssign homework on Ch 15 ANOVA GLM 5]
Final exam period:	<i>Final exam is cumulative</i> Thurs Dec 7 to Tues Dec 19; date TBA by Registrar's Office	

- You are welcomed, and expected, to attend all lectures and tutorials, as the required text and posted lecture notes on Sakai are not a substitute for attendance. Part of class time will be used to present examples to expand and clarify key course ideas.
- The class notes/slides are NOT complete; they provide a skeletal framework for your note-taking. I will frequently be covering material not covered in the text, and you are responsible for everything covered in lectures and tutorials. I suggest that you look to your neighbour now and write down their phone number or email, so you can consult with a fellow student when you have missed class. Note that FORUM on Sakai is also a great tool to use to communicate with other students in our class.
- Note that you are expected to ask questions during lecture. Don't leave asking questions till later—you might not remember. Also, odds are, at least one other student, if not many more, are wondering something similar. So DO PARTICIPATE.
- Weekly assignments are a critical part of the course. These will be posted via Sakai and WebAssign. You will hand in your quiz/homework assignment AT THE BEGINNING OF LECTURE. Late assignments will NOT be accepted. These will count as 0. Your lowest quiz/assignment will be dropped in calculating final marks.
- The purpose of tutorials is for you to practice doing the problems assigned, and to get hands on help from me and your TA. Note that if you are unprepared for tutorial, it will be a waste of your time.
- In other words, this is NOT the type of course where you can 'get by' without doing assignments and required reading on a weekly basis (the on-line quizzes help you stay on top of course material). The concepts that we will be covering are difficult and can not be learned alone—nor can they be effectively learned in a cram session before tests or exams.
- Furthermore, on occasion, more detailed readings, and the homework assignment will be assigned DURING LECTURE. If you miss lecture, you've then missed essential information for doing the work of this course. Failure to keep up will almost guarantee a low grade for this course.
- An excellent resource for you to consider:

<https://brocku.ca/student-success-centre/>

Definitely check out their website and the excellent resources and services available to students.

- Date for withdrawal without academic penalty: Nov. 7, 2017.
- Exam dates: Please note that exam dates during the semester are FIRM. Also, exam dates for December are not available in September, since these dates are determined by the Registrar's Office, *not the professor*. Please do NOT make travel/holiday

arrangements until the exam schedule is made available by registrar. Having to go on holiday during exam period is NOT an acceptable excuse for missing a test (note that this also applies for the midterm test after Reading Week).

- Policy on Midterm Test and Final Exam:
- Students who miss the midterm for an acceptable reason (e.g., sickness or a family tragedy) MUST contact the professor by PHONE (x5389) within **3 days** of the exam. If necessary, you may leave a message with the departmental secretary. Then, you may apply in writing to the instructor within a week. The student MUST provide appropriate documentation (e.g. doctor's note, etc.). *Failure to follow procedure will result in a 0 on the exam.*
- Students who miss either the midterm or final exam for an acceptable reason (see above for procedure and guidelines) will be able to write a supplemental exam of the same value as either the midterm or final exam, depending on which one was missed. The date, time and location will be determined by the professor.

Academic Conduct

Cheating:

For exams:

No student shall:

- a) In the course of an examination obtain, or attempt to obtain, information from another student or unauthorised source or give or attempt to give information to another student or possess, use or attempt to use any unauthorised material;
- b) Represent or attempt to represent oneself as another or have or attempt to have oneself represented by another in the taking of an examination, preparation of a paper or other similar activity.
- c) Furthermore, no answer to any test/exam will be reassessed unless;
 - i) it has not been written over;
 - ii) what is to be reassessed is clearly marked as such.

For homework assignments:

No student shall:

Copy an assignment, or allow someone else to copy their assignment.

- You may consult a classmate for assignments. However, you must hand in INDEPENDENT work, (i.e., do NOT copy from another student). We can tell, trust me.
- Brock University values academic integrity, and therefore takes academic misconduct very seriously. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the code of student conduct and disciplinary procedures. Please refer to pp. 34-38 of the Brock Undergraduate calendar, or go to the Registrar's Office website for Brock University for more information.

- The penalties for academic misconduct can be very severe. A grade of zero may be given for the exam or assignment or even for the course, and a second offense may result in suspension from the University.

Notes on Creating a Respectful Learning Environment

- ◆ Our classrooms and seminars must be respectful places of learning, where we appreciate each others strengths and respect each others differences. Please see the [Respectful Work and Learning Environment Policy](http://www.brocku.ca/hr/policies/) (“ctrl+click” here or go to the Brock University Human Resources webpage <http://www.brocku.ca/hr/policies/>)
- ◆ This is a SMARTPHONE FREE CLASSROOM. Please TURN YOUR SMARTPHONE OFF/PUT ON AIRPLANE MODE at the beginning of each class and seminar.



- ◆ One issue that has come up, esp. in my larger classes, is talking while the instructor is lecturing (particularly in back rows). Please realize that in doing so, you are disrespecting your peers around you, who simply cannot hear what the instructor is saying when you do this.
- ◆ There is a break in the 2 h lecture period; please reserve your comments for your classmates until then, or until after class. As mentioned earlier, if you’ve any questions, even if it’s just clarification, *please do raise your hand and ask*. Don’t assume that your whispering does not disrupt those around you, trust me, it does.

Brock University
Department of Psychology
PSYC/NEUR 3P39 – Computer Data Analysis
Fall 2017

Instructor: Karen Arnell, PhD

Office: MC B333

Phone extension: 3225

Email: karnell@brocku.ca

Office hours: Tues. 12:30-1:30, Wed. 11:30-12:30, or by appointment

Teaching Assistant: Taylor Heffer

Office: PL519B

Phone extension: 5455

Email: th10ww@brocku.ca

Office hours: Tues. 4-5, Thurs. 9-10, or by appointment

Lecture: Fridays 11:00 - 2:00, MCJ 202

Please note:

- You must have credit in PSYC 2F23 and a minimum major average of 77%, or the permission of the department, to take this course.
- Needed course materials will be posted on Sakai throughout the term.
- The last date for withdrawal from this course without academic penalty is Tuesday November 7th 2017. You will have received approximately half of your course grade by this date.

Materials:

- Textbook:

Field, A. (2013). *Discovering Statistics using IBM SPSS Statistics (4th Edition)*. Sage. (about \$100 at Campus bookstore)

Section 2 of this course has an additional component, but we will not be using this, so you just need to purchase the text. When you buy the text, there is also a freely accessible companion website to the textbook where you can find study tips, summaries, and the answers to “self-test” questions in the book: <http://studysites.sagepub.com/field4e/study/default.htm>

- Optional Software (purchase is not required):

SPSS via Brock Site License. See Computer Help Desk in Campus Bookstore for more information and/or purchase.

Course Description:

The primary objective of this course is to provide you with the opportunity to develop your data analysis skills further. The main focus will be how to analyze your data using the SPSS statistical software package. In this course we will discuss how to: know which statistical test to perform, know what each statistical test does, enter your data in SPSS for each statistical test, perform each test using SPSS, interpret your SPSS test output, and present the results of your test to others.

Grading System:

Test 1	Fri. Nov. 3 rd (in class)	30%
Final Exam	TBA Dec. 7 th -20 th by Registrar	30%
Lab assignments	11 assignments (dates below)	40% combined

- There are no grades given for participation or attendance. However, given that much of the material presented in class won't be available in readings, attendance is strongly encouraged for your sake.

Test/Exam:

- The test and exam will NOT require you to enter data or perform analyses on SPSS during the exam, and will NOT require the use of complex calculations. However, you will be asked to show how you would set-up a data file for a particular experiment, and will be asked to interpret an SPSS data file output. Conceptually oriented statistical questions will also be included where paragraph style answers would be appropriate. You will also be asked to write a results sections for given experimental outputs.
- Material for the test and exam will come from the Sakai notes, lectures, and lab assignments. Tests/exams will not be cumulative per se except that basic concepts learned earlier in the course will continue to be relevant. Also, the final exam will ask you to specify the design and analysis you would perform for various experimental designs, and some of these may be from before the midterm test. Be warned that material presented will frequently NOT be available through readings, and will be used on tests and exams.
- Makeup tests and exams will be permitted only in cases of documented personal or medical emergencies. If you miss a test or exam, you will be given a grade of zero, unless you provide the appropriate documentation.

Laboratory Assignments:

- There will be 11 assignments during the course. The assignments require a lot of time and thought outside of class time, and should not be left until the last minute. Each assignment will be worth between 3 and 5% of the course grade. Assignments will require you to use SPSS to answer questions and demonstrate certain skills. You will be able to get started on the assignment during the last portion of each class under our supervision so you can ask questions.
- A given assignment will be handed out during class one week (each week except for the week of the midterm test), and will be due BEFORE THE START OF CLASS the next week. To save paper and printing costs, assignments will be handed in via our class Sakai site. This site will accept assignments until 10:59 pm the day they are due (i.e., until right before each class). Assignments submitted after this time will need to be printed and the paper copy submitted to the Psychology DropBox on the wall across from Kirsti VanDorsser's office. Please be sure to put the instructor's name on your assignment.
- Late assignments (those handed in after the start of class in which they are due) will be penalized 10% if handed in later on the due date, and an additional 10% for each day late after the first day. Late assignments should be submitted using the Psychology Department drop box on the wall across from the main Psychology office. Please ensure you put the instructor's name on your assignment.

- Because academic integrity is vital to the well-being of the university community, Brock University takes academic misconduct very seriously. Academic misconduct includes plagiarism, which involves presenting the words and ideas of another person as if they were your own, and other forms of cheating, such as using crib notes during a test or fabricating data for a lab assignment. The penalties for academic misconduct can be very severe. A grade of zero may be given for the assignment or even for the course, and a second offense may result in suspension from the University. Students are urged to read the section of the Brock University Undergraduate Calendar that pertains to academic misconduct. Students are also reminded that the Student Development Centre (Schmon Tower, Room 400) offers free workshops on writing and study skills and on avoiding plagiarism. For more information on the University's policy on academic integrity, visit the website at.
- It is fine to discuss the assignments with other 3P39 students and work on them together. However, all submitted written work must be written independently in your own words. Submitting written work that is the same, or highly similar, to that of another student will result in the work of both parties being considered plagiarized. No computerized plagiarism detection system (e.g., turnitin.com) will be used for this class.

Tentative Topic Schedule:

Date	Readings Schedule	Assignment Schedule	Topic(s) Schedule
Week 1 Fri. Sept. 8 th	Field Chapter sections 1.5.1 & 1.5.2, & Chapter 3	Assignment 1 handed-out	Introduction to course Introduction to SPSS Creating Data files
Week 2 Fri. Sept. 15 th	Field Chapter sections 1.6.1-1.6.5, & Chapter 4	Assignment 1 due Assignment 2 handed out	Describing, examining & transforming your data
Week 3 Fri. Sept. 22 nd	Field Chapter 2, & Chapter sections 9.1-9.5	Assignment 2 due Assignment 3 handed-out	Hypothesis testing: One-sample t-test Independent samples t-test
Week 4 Fri. Sept. 29 th	Field Chapter sections 9.6 & 9.7	Assignment 3 due Assignment 4 handed-out	Paired samples t-test Effect size and power
Week 5 Fri. Oct. 6 th	Field Chapter 11, & sections 14.1-14.8	Assignment 4 due Assignment 5 handed-out	One-way ANOVA – between and within subjects
Fri. Oct. 13 th	No readings	No assignments	No class - Reading Week
Week 6 Fri. Oct. 20 th	Field Chapter sections 11.4 & 11.5	Assignment 5 due Assignment 6 handed out	Multiple Comparison tests
Week 7 Fri. Oct. 27 th	Field Chapter 13	Assignment 6 due Assignment 7 handed-out	Factorial ANOVA (2 factor) Between subjects
Week 8 Fri. Nov. 3 rd	No readings	Assignment 7 due	Midterm test
Week 9 Fri. Nov. 10 th	Field sections 14.9-14.12, & Chapter 15	Assignment 8 handed-out	Factorial ANOVA (2 factor) Within subjects & Mixed Simple effects
Week 10 Fri. Nov. 17 th	Field Chapter 7 (but not sections 7.4.5 or 7.5), & Field sections 8.1-8.4	Assignment 8 due Assignment 9 handed-out	Correlations & bivariate regression
Week 11 Fri. Nov. 24 th	Field Chapter sections 7.5, 8.5 – 8.14, & 10.3	Assignment 9 due Assignment 10 handed-out	Multiple Regression Moderation
Week 12 Fri. Dec. 1 st	Field Chapter sections 10.4-10.5	Assignment 10 due Assignment 11 handed-out (due Dec. 8 th)	Hierarchical regression Mediation Categorical variables in regression

PSYC 3P46 – Psychology of Food and Eating. Course Outline and Schedule, 2018.

Instructor: Dr Gary Pickering, MC F243, ext: 4715, gpickering@brocku.ca

Teaching Assistant & Seminar Leader: Hannah Pickering, MCB322A, hp10ag@brocku.ca

Liaison Librarian: Colleen MacKinnon; cmackinnon@brocku.ca; x5398; office: rm1131 Schmon Tower

Lecture time: Mondays, 3-5pm (TH257)

Seminar times:

SEM 1	Tues	1900-2000	MCD400
SEM 2	Wed	1300-1400	MCD403
SEM 3	Fri	0800-0900	MCD403

Office hours:

Gary: Mondays and Thursdays by appointment (MC F243)

Hannah: Tuesdays 6-7, Fridays 10-11 (MCB300)

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Course overview and objectives:

Welcome! This course is intended for students interested in the psychology of food and eating. It will deal with psychological, sociological and biological factors influencing food/beverage consumption in humans, including theoretical and applied issues. Topics include physiological control of food intake; biological, orosensory, social and cultural factors influencing food selection; the effects of food on behaviour; eating disorders; obesity and weight control.

It is open to PSYC (single or combined), NEUR majors and PSYC minors until date specified in Registration guide, or permission of the instructor. Students must have a minimum of 8.0 overall credits or 3.0 PSYC credits above PSYC 1F90. PSYC 1F90 is a prerequisite.

The specific objectives of this course are to:

- use food and eating to illustrate the ways in which psychology is able to examine complex phenomena from biological, perceptual, cultural, and developmental perspectives
- develop a deeper understanding of the factors that underlie our own eating behavior
- help prepare students for the various challenges of the workplace after university. This includes expectations regarding deadlines and due dates for assessment items
- critically evaluate pseudoscientific claims by countering them with empirical research
- develop awareness of the social, political and economic forces that determine food preferences, choices, and behaviors, and their complex interplay.

Texts and Materials:

Required:

1. Ogden, Jane. *The psychology of eating: from healthy to disordered behavior*. Chichester, West Sussex, U.K. ; Malden, MA : Wiley-Blackwell, 2010 (Brock Bookstore + Brock library (3-hr reserve)).
2. Neil Rowland and Emily Splane. *Psychology of eating*. ISBN # 0-205-98719-2. Pearson, Boston 2014 (Brock Bookstore + Brock library (3-hr reserve)). E-book format also available.

In addition, there are selected readings from other sources listed in the Course Schedule: these will be available to you as free PDF downloads from Sakai.

Other useful resources:

- Brownell, Kelly D. and Katherine B. Horgen. *Food Fight: The Inside Story of the Food Industry, America's Obesity Crisis, and What We Can Do About It*. New York: McGraw Hill/Contemporary Books, 2004.
- The Cambridge World History of Food*, Volumes 1 and 2. 2000. (Brock library call #: TX 353 C255 2000 v.1 and v.2). Also available electronically at library.
- Capaldi, E.D. *Why We Eat What We Eat. The Psychology of Eating*. American Psychological Association, Washington, 1996 (Brock library call #: TX 357 A65 1996).
- Lang, T. and M. Heasman. *Food Wars. The Global Battle for Mouths and Markets*. Earthscan, London, 2004 (Brock library call #: TX 359 L36 2004).
- Pollan, Michael. *In Defense of Food: An Eater's Manifesto*. New York: The Penguin Press, 2008.
- Rappoport, L. *How We Eat. Appetite, Culture, and the Psychology of Food*. ECW Press, Toronto, 2003.
- Shepherd, Richard and Monique Raats, *The Psychology of Food Choice*, Volume 3 *Frontiers in Nutritional Science*, Publisher: CABI, 2006, ISBN 9780851990323.
- Toussaint-Samat, M. *A History of Food*. Blackwell Publishers, Cambridge MA, 1993 (Brock library call #: TX 353 T6413 1993).

Watson, James L. and Melissa L. Caldwell, *The cultural politics of food and eating: A Reader*, Volume 8 of Blackwell readers in anthropology, Publisher: Wiley-Blackwell, 2005, ISBN 9780631230939.

+ Sakai-based course material and links.

Assessment Summary:

<i>Assessment Item</i>	<i>Percentage of final mark</i>	<i>Due date</i>
<i>In-seminar tests x9</i>	50	During seminars, per attached Schedule
<i>Seminar participation</i>	05	Every seminar (x10)
<i>Reflection 1: Dietary record</i>	05	Week of 1st October*
<i>Reflection 2: Taste phenotype</i>	10	Week of 22nd October*
<i>Reflection 3: Oral history</i>	10	As scheduled (week of 15 th Oct, 22 nd , Oct 29 th)
<i>Final test</i>	20	3 rd December
<i>Bonus marks: Research participation or alternative assignment</i>	1.5	See below

* to be handed in at the end of your scheduled seminar that week

Policy on assessment items and submission of assignments.

Assessment items cannot be made up at another time outside of that scheduled above. Occasional exceptions may be made for a missed in-seminar test, if sufficient documentation for the absence is provided, but this is NOT guaranteed.

The following policy on late assignments will apply:

- 1 *Extensions on assignment deadlines will not be given. Ever. Really.*
- 2 *A late penalty of 50% of the assignment mark per working day of delay applies.*

Assessment Item Details:

In-seminar tests.

At the start of each of 9 of the 10 scheduled seminars a short multi-choice test will be given*. Each test will consist of approximately 10-14 questions based directly on the Required Readings and lecture from that week. You will have 10 minutes to complete each test.

*If an in-seminar test is missed because of a medical condition or similar irregular and unavoidable event, and if supporting documentation of a standard acceptable to the instructor is provided, it *may* be possible to sit the missed test at an alternative time. However, this decision will be at the discretion of the instructor.

Seminar participation.

Assessed for each seminar. Successful students will come to seminar well prepared, and will make reflective and constructive contributions to discussions on the relevant seminar theme. Unacceptable behaviors such as texting, repeat lateness or disrespectful comments will result in a zero grade.

Reflection 1: Dietary record.

A deeper understanding of some of the factors that influence food choice can be gained by taking the time to reflect on our own food choices. Additionally, much of what we know about dietary behavior is based on data collected from participants using dietary record methods; an awareness of the advantages and disadvantages of these methods can be illuminating.

In this exercise, you are to make a detailed record of your food and drink intake for 2 days (one of these days should be a weekend day). Enter this information at <https://www.myfitnesspal.com/>, and use the calorie/nutrition calculator provided there to produce a printout of your dietary record for the 2 days.

Provide a 1-2 page reflection on your dietary record. Consider questions/points such as:

- What is your appraisal of your eating behaviors?
- Did recording your eating behaviors influence what you ate?
- Did you eat more or less than you expected to?
- Are your eating habits healthy? (refer to the nutritional breakdown pie-graph)
- Were you surprised by any of the results?
- Reflect on your mood, context, activities, or other factors that may have influenced what/how much you ate
- What are the some of the advantages and disadvantages that you see in using dietary records such as this to measure a population's food intake?

Appendix your dietary record printout(s) to your reflection* .

* The printout is needed just to provide proof that you did complete the dietary record. It will not be marked, and will

be returned to you along with the marked reflection.

** In completing the dietary record, it is much easier if you carry a notebook around with you for the 2 days and jot down everything that you consume in 'real time'. This also makes it easier to record how mood, emotion, context, etc. may be influencing what you eat.

Reflection 2: Taste phenotype.

An individual's sensitivity to the bitterant propylthiouracil (PROP) has been used as an index of general taste responsiveness. (E.g., those individuals that find PROP very bitter tend to also experience tastes elicited by food very intensely). In seminar, you will be determining your own PROP tasting status.

Discuss your PROP tasting status and food/beverage preferences in relation to what is known from the literature.

Your reflection should be approximately 2 pages (excluding any references or other appendices). The Hayes & Keast (2011) paper* may provide a useful starting point. The library's FSTA database (<http://catalogue.library.brocku.ca/search/y?f>) is another potential resource.

* Available on Sakai (Resources > Readings)

Reflection 3: Oral history.

1. Research the cultural history and significance* of a specific dish**, prepare it, and bring it to the assigned seminar to share with the rest of the class.

2. While the class is enjoying your dish, give a 4-5 minute*** presentation. Your presentation should (i) briefly explain why you chose the food that you did, (ii) briefly describe how it was prepared, and (iii) summarize the results of your research. Where possible, explain how the food is a medium for constructing the self in relation, for instance, to gender, ethnic, or national identity****.

Because of time limitations, audio-visual aids such as PowerPoint and over-head projectors will not be available. You can, if you wish, bring your own non-electronic props (e.g. a display-board), but this is not required.

You will be assessed on:

- (i) ability to stay within the time allocation
- (ii) depth and quality of your research
- (iii) presentation proficiency and professionalism
- (iv) ability to answer questions from the class (including the TA)

It is your responsibility to make the Seminar Leader aware at the start of the semester of any food allergies you suffer from.

* The Cambridge World History of Food, available at the Brock library ([TX 353 C255 2000](#) v.1 and v.2), may be a useful resource.

** Prepare sufficient food for the 18-20 individuals in your seminar to have a small sample (i.e. 'bite' – size is fine). We will provide paper plates, plastic cutlery and napkins.

*** Include time for 2-3 questions from the class.

**** For example, the Passover food charoset has been presented in the past: it symbolizes the mortar used to enslave the Hebrews in Ancient Egypt, and was discussed in terms of its cultural significance and its role in the development of ethnic self-concept.

Final test.

A 2-hour written test based on content from lectures, Required Readings and seminars/labs will be given on the last day of class (Dec 3rd, 3pm). Questions will be long answer format, designed to test your ability to synthesize concepts and material from across the syllabus. More details and examples will be provided in class.

Bonus marks.

Research Participation

Students can earn 1.5 bonus marks by participating in an approved research project in the Brock Food and Environmental Psychology Lab this semester. The project available and the contact email address for the Principal Student Investigator (Shannon Ruzgys) is: *Perceptions of cultured-meat and optimization of educational messaging* (sr15cl@brocku.ca). Email the Principal Student Investigator if you would like to take part in the study or find out more information about it. You are encouraged to make contact as soon as possible, as recruitment for this study may fill up quickly.

Alternative Assignment to Research Participation

Critical Reviews of Research Article

The subject pool in the Department of Psychology has been part of our curriculum for a long time. The reasons for including research participation for bonus credits is to give our students some first-hand experience in psychology/sensory research as well as to help our scientists, including student researchers, with their research projects. Although we encourage our students to participate firsthand in research, research participation should be voluntary and students should not feel forced to participate in any research. Therefore, we also offer our students the opportunity to complete alternative assignments in lieu of participating in research to earn bonus credits. This option is also designed for students who are unable to, or do not wish to, participate in research, but still wish to earn bonus credits. This alternative assignment is intended to give our students some exposure to research in sensory science.

The alternative equitable assignment consists of reading 1 research article and writing a short summary. The review is graded on a *pass or fail basis*. If passed, a bonus of 1.5% is added toward your final grade for this course.

If you decide to earn bonus marks by writing a research summary instead of gaining first-hand experience with experimentation, **you must follow the guidelines stated herein and take them seriously. Make sure the review is your own work. Plagiarism and poor quality work will not be accepted.** The review will most likely be run through Turn-It-In, so make sure that the ideas are yours and are in your own words. Turn-It-In is a software program through the university that enables the grader to run the completed work from the student through a nationwide database to check for plagiarism. So please do not copy anyone else's work. If you do, this constitutes *academic misconduct*.

Guidelines

Choose a paper from peer-reviewed journals that is directly related to either *attitudes toward alternative meat-sources* or *optimizing communications to promote pro-environmental behavior*. This must not be a paper that has already been formally covered in seminar or lab as part of this course, or that comprises of another assessment item in this course. The article you select should have been published within 10 years. The FSTA database may assist. Please download a PDF version of the article because you will submit it with your summary. The review of the article should flow from the following questions and should not be a simple restatement of the abstract. The information provided below outlines what you are expected to include in the review.

1. **KBriefly discuss the objectives of the article and its rationale** (*i.e., identify the research questions*)
2. **KWhat are the research hypotheses?** (*briefly summarize the overall hypotheses instead of quoting specific hypotheses in the article*)
3. **KBriefly describe the methodology used in the article to test hypotheses** (*e.g., what's the methodology name, participants, data source, etc.*)
4. **KWhat are the results?** (*a brief discussion on overall results should suffice*)
5. **KAre there any practical implications?** (*i.e., how the findings can be related to real life?*)

The review should be approx. 2 pages in length (typed, 1.5 line spaced, with 12-point font and 1-inch margins), and should address all the questions as stated above. Be sure to summarize the study in your own words. **DO NOT** directly quote. Papers must be well organized and thoroughly proofread before submitting. Papers must answer all parts of the question thoroughly and demonstrate serious thought about the topic.

Tips on How to Read Journal Articles

How you read is as important as what you read. Reading an important article is not very helpful if you do not know how to identify the main points. Fortunately, most journal articles are well structured in a similar format, beginning with some background information and the research questions, followed by a concise literature review and hypotheses development. Then the methodologies will be discussed and the results will be presented. Finally, it will end with a general discussion about research implications. Each section of the article has a defined purpose, and keeping this in mind will help you better grasp the key points in a journal article. As you read a journal article, it is also important to take systematic notes. A good approach is to try and summarize main points and ideas rather than copying parts of the article word-for-word. You may

make such notes directly on your copy of article (either print-outs or electronic versions). This can be done by highlighting sections that make important points or writing your comments on the article. Be careful not to overly highlight the article or taking notes. Some brief summary on main ideas should suffice for this assignment.

Evaluation of Alternative Assignments

The due date for the alternative assignment is Monday 19th Nov, 9 a.m. Both the completed assignment and the research paper reviewed should be emailed to gpickering@brocku.ca with the following in the subject line: “Alternative Assignment PSYC3P46”. No late assignments will be accepted.

NOTE: You will receive the bonus marks for acceptable papers only, and they will be graded simply as *pass* (full bonus marks) or *fail* (no bonus marks).

If you have any more questions about the alternative assignment, please feel free to contact gpickering@brocku.ca for instructions.

Requirements to pass the course.

In addition to achieving a final minimum mark of 50%, attendance at all scheduled seminars is a requirement to achieve a passing grade in this course (further detail below).

Academic conduct

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one’s own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, ‘Academic Misconduct’, in the “Academic Regulations and University Polices” entry in the Undergraduate Calendar, available at <https://brocku.ca/webcal/2018/undergrad/areg.html#sec67> to view a fuller description of prohibited actions, and the procedures and penalties. The penalties for academic misconduct can be very severe. Students are also reminded that the Student Development Centre (Schmon Tower, Room 400) offers free workshops on writing and study skills and on avoiding plagiarism. If, after reading the University’s policy, you have any doubts about what constitutes academic misconduct, discuss these with your instructor or TA.

Additional information:

- we take a very dim view of academic misconduct in this course. All suspected cases will be sent directly to the Dept for further action.
- use of electronic devices, including image-capturing devices (such as smart phones) during tests will be considered a breach of academic integrity.
- you should sign an Academic Integrity pledge and include it when submitting all written assignment items. This pledge can be found at: http://brocku.ca/webfm_send/4713.

Class and seminar conduct and attendance

If you are in class or seminar, you will be expected to be attentive, participate, stay the entire time, and be prepared for any activities scheduled for that day. You will be asked to leave class/seminar if you do any of the following:

- Talk on your cell phone (**turn phones off!**)
- Text on your cell phone (**turn phones off!**)
- Use your laptop or tablet device for purposes not directly related to this course
- Pass notes to classmates
- Sleep

Attendance at seminars is mandatory (necessary in order to pass the course). An attendance sheet will be taken. If absence is unavoidable you will need to produce written evidence justifying your absence of a standard satisfactory to your instructor (e.g. original medical certificate). You are expected to be respectful of your classmates and Seminar Leader during presentations and seminar discussions (e.g. listen attentively; don't interrupt; be critical of the arguments, not the person). Attendance at lecture is recommended. Lectures and seminars (or parts thereof) cannot be recorded electronically (audio and/or video) without the specific written permission of the instructor.

Contact procedures

Questions or concerns regarding seminars should be directed in the first instance to Seminar Leader/Teaching Assistant (TA) Hannah Pickering, MCB322A, hp10ag@brocku.ca. Should there be any complaints about the performance of the TA, students should contact Dr Cathy Mondloch. For grades appeals in regard to marking done by the TA, appeals against grades, or other decisions of the TA, discuss them with the TA first. If you are not satisfied with that resolution, contact Dr Cathy Mondloch. For all other questions/issues about the course, contact the Instructor, Dr Gary Pickering, at gary.pickering@brocku.ca. **Consultation with the Instructor should be by appointment.**

About Your Instructor:

Prof Gary Pickering – After nine years in psychiatric nursing in New Zealand and Australia, Gary decided to combine his passion for science and wine and pursue an academic career in oenology (wine science). After taking a BSc degree from Victoria University (Wellington), he completed a Postgraduate Diploma in Viticulture & Oenology (*distinction*) through Lincoln University, NZ. A PhD followed before Gary joined Charles Sturt University in Australia, as Lecturer, and then the Eastern Institute of Technology, New Zealand as Research Manager and Senior Lecturer.



He left the sunny shores of New Zealand for Brock University in 2000, where he is now employed as a full Professor of Biological Sciences and Psychology. Gary's other principal teaching assignments are OEVI 4P20 Sensory Evaluation of Wine and BIOL 5P73 Advanced Wine

Flavor. He has a very active research programme specializing in flavor and sensory science, and the genetics and psychophysics of taste, and has published over 100 papers, book chapters and conference proceedings (www.BrockU.CA/ccovi/gary). A new and developing research interest in his lab is Environmental Psychology, particularly perception and mitigation of climate change. He is the recipient of a number of research awards, and is a member of various industry and professional associations and committees. Gary is also President of Picksen International Inc. (www.picksen.com), serves as an international wine judge, and is working on a number of books.

About Your Teaching Assistant and Seminar Leader:

Hannah Pickering – I have an undergraduate degree in psychology from Brock University and have been working in the sensory science field for five years. I have a great deal of experience with the psychology of food and eating course, having taken this course in the past as both a student and TA, so please feel free to email me with any questions at any time. I'm here to make PSYC 3P46 as fun and less stressful as possible! I was born and raised in New Zealand and plan on returning there to complete my Master's degree. Before realizing my interest in sensory science, I dabbled with philosophy, forensics and statistics. If you have any questions, please do not hesitate to ask.

Schedule

(Please note: this Schedule, including the Required Readings, is subject to change. Please check Sakai every week for updates).

Week #: date	Lecture topic	Required Readings	Optional Readings	Seminar topic
1: 10th Sept	Course overview and administration	None	Ogden: Ch 1	<i>No seminar</i>
2: 17th Sept	1. Introduction 2. The meaning of food 3. Models of food choice	Ogden: Ch 3 Ogden: Ch 4	1 Shepherd & Ratts: Ch 1 2 Shepherd & Ratts: Ch 3	1 <i>In-seminar test (Week 2 material – 4 marks)</i> 2 <i>Seminar Discussion: The meaning of food</i>
3: 24th Sept	<i>Role of Biology & Learning I:</i> Biology, evolution & history of food	Rowland & Splane: Ch 2 Rowland & Splane: Ch 4	1 Oxford: History, Diet, and Hunter Gatherers. 2 Shepherd & Ratts: Ch 4	1 <i>In-seminar test (Week 3 material – 6 marks)</i> 2 <i>Seminar Discussion: Biology, evolution & history of food</i>
4: 1 st Oct	1. <i>Role of Biology & Learning II:</i> Mood, emotions, food cravings & addictions 2. <i>Social Influences on Food Choice:</i> marketing, advertising, media & context	Shepherd & Ratts: Ch 5 Rowland & Splane: Ch 8 Rowland & Splane: Ch 7 Shepherd & Ratts: Ch 12	1 Shepherd & Ratts: Ch 7 2 Shepherd & Ratts: Ch 8 3 Shepherd & Ratts: Ch 6,9,10	1 <i>In-seminar test (Week 4 material – 6 marks)</i> 2 <i>Lab exercise: Basic tastes + PROP determination</i>
8th Oct	Reading Week			
5: 15th Oct	<i>Role of Biology & Learning III:</i> Sensory factors and learning (Guest Presenter, Margaret Thibodeau)	Rowland & Splane: Ch 3 Rowland & Splane: Ch 5	1 Shepherd & Ratts: Ch 6 2 Logue: Evolutionary Theory & the Psychology of Eating 3 Bajec & Pickering (2010) Hayes & Keast (2011)	1 <i>In-seminar test (Week 5 material – 7 marks)</i> 2 <i>Oral histories – Group 1</i>
6: 22 Oct	TBA	-	-	1 <i>Oral histories – Group 2</i>
7: 29 Oct	<i>Unhealthy Eating I.</i> Introduction; what is healthy eating; diet-related illness; the meaning of size; body dissatisfaction	Ogden: Ch 2 Ogden: Ch 5 Ogden: Ch 6	Rowland & Splane: Ch 9	1 <i>In-seminar test (Week 7 material – 5 marks)</i> 2 <i>Oral histories – Group 3</i>
8: 5 Nov	<i>Unhealthy Eating II.</i> Obesity: scope & theories on causation	Ogden: Ch 8 Rowland & Splane: Ch 11	1 Shepherd & Ratts: Ch 20 2 Rowland & Splane: Ch 1	1 <i>In-seminar test (Week 8 material – 5 marks)</i> 2 <i>Seminar Discussion: Obesity – whose to blame?</i>
9: 12 Nov	<i>Unhealthy Eating III.</i> Obesity: dieting & treatment	Ogden: Ch 7 Ogden: Ch 9 Rowland & Splane: Ch 12	Rowland & Splane: Ch 13	1 <i>In-seminar test (Week 9 material – 6 marks)</i> 2 <i>Seminar Discussion: Seminar Material</i>
10: 19 Nov	<i>Unhealthy Eating IV.</i> Eating disorders and treatment	Ogden: Ch 10 Ogden: Ch 11 Rowland & Splane: Ch 10	-	1 <i>In-seminar test (Week 10 material – 6 marks)</i> 2 <i>Seminar Discussion: Eating Disorders</i>
11: 26 Nov	1. <i>Vegetarianism and Ethical Issues</i> 2. <i>Food Choices across the Lifespan</i> 3. <i>Course evaluations</i>	Fox & Ward (2008) Shepherd & Ratts: Ch 15	1 Shepherd & Ratts: Ch 13 & 14 2 Piazza et al. (2015) 3 Pollan, M. (2006). The omnivore's dilemma. NY: Penguin Books 4 Pluhar (2010)	1 <i>In-seminar test (Week 11 material – 5 marks)</i> 2 <i>Seminar Discussion: The ethics of eating</i>
12: 3 Dec	<i>Final test</i>			<i>No seminar</i>

Psychology Department Course Outline Cover Page

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This page contains important information for all students who are taking courses in the Psychology department. Students are advised to read this information carefully and to take responsibility for all items that appear on this page, and in the following course outline.

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1. From the Associate Dean of Social Sciences: "Because academic integrity is vital to the well-being of the university community, Brock University takes academic misconduct very seriously. Academic misconduct includes plagiarism, which involves presenting the words and ideas of another person as if they were your own, and other forms of cheating, such as using crib notes during a test or fabricating data for a lab assignment. The penalties for academic misconduct can be very severe. A grade of zero may be given for the assignment or even for the course, and a second offence may result in suspension from the University. Students are urged to read the section of the Brock University Undergraduate Calendar that pertains to academic misconduct. Students are also reminded that the Student Development Centre (Schmon Tower, Room 400) offers free workshops on writing and study skills and on avoiding plagiarism."K

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2. Department Shredding: All essays, tests and exams that are not picked up by students will be shredded. For courses ending on or before June 30, 2006, items were held for six months before shredding. For courses ending after June 30, 2006, items will be held for twelve months. Note that final exams will not be returned to students.

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3. Student Numbers: In order to ensure privacy of secure information, it is the Psychology Department's policy that student numbers will not appear on the cover page of any assignment or exam. Students are advised to place the name and number of the course, the professor's name, and their TA's name on the cover page of all course material. Student numbers can be placed on the second page of essays and the answer sheet of tests.

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4. Handing in Assignments: All essays and assignments are to be handed in during lecture and/or seminar times. The Assignment Box that is on the wall across from MC B328 in the Psychology Department is to be used only when students cannot make it to class due to extenuating circumstances. If the Assignment Box is used, **students should not place their student number on the cover page. Instead, the name and number of the course, the professor's name, and the TA name should be placed on the cover page. If these items do not appear on the cover page, the assignment may not be given to the correct professor.**K

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5. Last Day for Withdrawal: All courses will have a final date for withdrawal without academic penalty. It is the students' responsibility to ensure that they have withdrawn from the course on or before this date if they do not want a grade assigned. If not withdrawn, a failing grade may be assigned for the course.

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NOTE TO STUDENTS: The Psychology Department is a member of the University of Waterloo. **NOT** to be placed on the cover page of assignments or exams. If these items do not appear on the cover page, the assignment may not be given to the correct professor. K

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PSYCHOLOGY & HEALTH PSYCHOLOGY
Course Outline Fall 2017
BROCK UNIVERSITY DEPARTMENT OF PSYCHOLOGY

Psychology 3P51: Sept-Dec 2017

Dr. I.C. Muir, Office in MCB334, Lab MCB215/216

Telephone 905-688-5550, extension 4681

E-mail: icmuir@brocku.ca

NOTE: The instructor will not be responsible for returning long-distance phone calls. Also, it is the student's responsibility to check grades on the university website. Also, I do not reply to emails requesting information that can be easily looked up by the student.

Teaching Assistant / Seminar Leader: Xiaoxiaoyang x11ju@brocku.ca, Matt Green mng06mc@brocku.ca

Required Textbook: Psychology of Health and Health Care: A Canadian Perspective, 5th Edition, Poole, Hunt-Matheson and Cox, Prentice Hall, 2016.

Last day for withdrawal without penalty: November 9th

Office hours: Tuesdays 2-4pm, otherwise by appointment only please.

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Lectures: Tuesdays 1:00pm-3:00pm AS117

Seminars

SEM 1 Mondays 5:00pm-6:00pm MCD403

SEM 2 Tuesdays 5:00pm-6:00pm MCD304

SEM 3 Fridays 1:00pm-2:00pm MCA323

SEM 4 Wednesdays 4:00pm-5:00pm CK116

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Seminar conflicts: You should not have signed up for this course & a seminar conflict. I cannot reallocate everyone that has done this. It is your responsibility to work this out & seek a solution if you wish to attend.

Course Content and Objectives:

Course Objectives are to familiarize students with the history, research methodology, theory and content of the study of Human Health Psychology so that each individual may apply the learning to his or her own career.

Content Includes: Foundations of Health Psychology; Stress, Pain and Coping; Psychology and the immune system; Behaviour and Chronic Disease; and Behavioural Health.

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valuation

- Mid-term Test:** Materials from readings and lectures. Consist of multiple choice questions and short essay questions.
- Final Exam:** During Exam period: Readings and Lectures. Exam consist of multiple-choice questions, short essay, and answer questions. This exam is cumulative for the whole year & focus more on materials since the midterm test.
- Attendance and participation during seminars:** **Seminar Paper Presentation:** You MUST hand in a copy of that article to your seminar leader and a copy of the abstract to your entire seminar one week prior to your presentation. A penalty for not doing this. See handout for details.
- Final Paper:** You are responsible for writing a short popular press media report that describes recent research findings on a "health psychology" related phenomenon. This paper less than 500 words. See handout for details. Students are expected to electronically submit papers to www.turnitin.com.

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Late papers and Presentations: Papers and presentations that are not completed on the required date are penalized 0.5% per day up to a maximum of 5%. Papers normally submitted in class, submitted after-hours, they should be submitted to the Psychology Department dropbox. **Instructors name and course number need to appear on the cover for the paper to be accepted.**

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Factors: attendance, participation and preparation of assignments. All students are asked to prepare for every seminar by reading in advance appropriate chapters and abstracts assigned to that seminar. You are expected to contribute to general discussion in each seminar. Finally, seminars are meant to be fun, stimulating, informative, interesting and creative.

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PLEASE NOTE! In order for you to obtain a grade above tests, you must attend the test on the date shown. Alternate arrangements can only be made for official medical/legal documents. If you miss a seminar, you may not attend another seminar to make up that attendance grade.

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Schedule	Topic
Sept 27 th	Chapter 1: Welcome to Health Psychology, Chapter 2: Stress and Coping
Sept 28 th	Chapter 2: Stress and Coping
Sept 26 th	Chapter 3: Psychoneuroimmunology
Oct 3 rd	Chapter 4: Health Communication
Oct 7 th	No Class - Fall Break
Oct 7 th	Special reading assignment on Sakai: Evolution and Darwinian Medicine: Symptoms or evolutionary adaptations?
Oct 14 th	Chapter 5: Health and Physical Activity
Nov 7 th	Chapter 6: Health-Compromising Behaviours
Nov 14 th	Chapter 7: Chronic and Life-Threatening Illnesses
Nov 21 st	Chapter 8: Pain
Nov 28 th	Chapter 9: The World of Health Care: Places, Procedures and People ESS' YS DUE!!! (20%)
Dec 5 th	Chapter 10: Health Promotion and Exam
T.B.A	Final Exam (35%)

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Students are responsible for both the material and assigned readings, and roughly equal weighting. The mid-term test can only be written at the time indicated, so please attend. You cannot make-up tests or special sessions for any student, and only if you have a documented medical justification for missing a test, such as students who normally have grades proportionately reweighed, increasing the relative contribution of the final exam. The test and examination will consist of questions in diverse formats, including multiple choice, short answer, and essay questions, at the instructor's discretion. Grades are assigned according to the following convention: 90-100% is A+, 85-89% is A, 80-84% is A-, 77-79% is B+, 73-76% is B, 70-72% is B-, 67-69% is C+, 63-66% is C, 60-62% is C-, 57-59% is D+, 53-56% is D, 50-52% is D-, 47-49% is F. Appeal procedures for mid-term tests are strictly structured, as explained by the instructor. Attention is drawn to the Statement on Academic Ethics and the Senate Resolutions on Academic Dishonesty and the Senate Policy Statements distributed at registration and available in the Senate office. Any student who infringes on one of these resolutions is treated strictly according to the published policy.

Academic integrity is a core value of the academic mission of Brock University, defined as the pursuit of knowledge and scholarship through the provision of academic programs and a learning environment of the highest quality. It is in the interest of the University's academic mission that every student adheres to the highest standards of scholarly integrity. As such, academic dishonesty is taken very seriously and is not tolerated.

Academic dishonesty, defined as academic misconduct, consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, including lower grade or failure on an assignment or examination, failure in a course, suspension from Brock University for a definite period, notation on a student's official transcript, or withholding or rescinding a Brock University degree or certificate.

It is your responsibility to understand what constitutes academic misconduct. For information on various kinds of academic dishonesty please refer to the current Brock University Undergraduate Calendar at <http://www.brocku.ca/webcal/current/undergrad/areg.html>

The following illustrates only four examples of academic dishonesty:

- 1. Plagiarism; defined as presenting work done in whole or part by someone else as if it were your own, or for which other credit has been obtained, including direct quotations or large sections of paraphrased material without acknowledgement.
- 2. Improper collaboration, including copying from another student, or making information available to other students knowing that this is to be submitted as the borrower's own work.
- 3. Impersonation, copying or using unauthorized aids in tests and examinations.
- 4. Obtaining medical or other certificates under false pretences.

In this course, we are using a software package designed to reveal plagiarism. Students are required to submit their work electronically [and in hard copy] so that we can check for academic dishonesty. If a student declares a principled objection to participating in the use of such a system, the instructor will provide a reasonable offline alternative. Submission of rough notes and drafts for an assignment, a draft bibliography and/or evidence of the use of sources and references, is not considered plagiarism.

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Course Objectives, 2017

Prerequisites:	Psychology 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000
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Course Objectives

- To develop an understanding of brain function and the neural basis of behaviour.
- To extend knowledge of brain function to an understanding of disorders associated with damage to the brain e.g., aphasia, agnosia, amnesia and approaches to assessment, management, and rehabilitation.
- To develop an appreciation of how knowledge is acquired in the field through the exploration of research methods in experimental and clinical neuropsychology and neuroscience.
- To develop a critical and analytic approach to the study of brain-behaviour relationships through lecture, seminar, discussion, library research and the writing of a major essay.

Textbooks/Materials:

Kolb, R. S. (2015). *Fundamentals of human neuropsychology*. 4th ed. New York: Worth.

Weekly Readings for discussions in seminar. See Turning Point Clicker! Bring to every class.

Evaluation: (Weighting of assignments)

Seminar Facilitation	20%	Midterm Test	20%
Essay	15%	Final Exam	20%
Seminar Participation	20%	Lecture Participation	17%
Research Participation (bonus)	10%	Lecture Notes (bonus)	10%

Course Outline

Date	Topic	Readings
13 January	Introduction to the basics of Neuropsychology	Chk 1, 102
20 January	Organization of the Nervous System	Chk 3, 10, 107
27 January	Neurological & Neuropsychological Assessment	Chk 16, 128
03 February	Hemispheric Specialization	Chk 1, 2, 7
10 February	Motor Systems	Chk 8, 16
17 February	Visual Perception & Spatial Processing	Chk 8, 13, 14, 121
20-24 February	Midterm Test	
03 March	Language	Chk 15, 19
10 March	Learning & Memory	Chk 15, 18
17 March	Attention	Chk 14, 12

24 March	Executive Functions	Chk 16, 17
31 March	Emotion	Chk 16, 20
07 April	Neuroplasticity	Chk 13, 15
10 April	10 April ~ snow day ~ 11-26 April ~ EXAMS	
14 April	14 April ~ Good Friday	

Evaluation Information

Examinations ~ 40%

There will be two examinations (including various types of questions: MC, short answer, longer answer) based on material covered in the lecture and the textbook, with the Midterm test (15%) given at (approx.) the midpoint of the semester and the Final Exam (25%) scheduled during the regular examination schedule.

Lecture Participation (~15%) Participation will be assessed weekly in lecture via the clicker responses. Questions, opinions, polls will be presented during the lecture and students are invited to participate via responding to the query with their clicker remotes. Documented absences for valid reasons will be prorated upon approval of the Instructor.

Seminars

The seminar will provide an opportunity to explore the clinical and applied side of neuropsychology. Attendance is mandatory and everyone is expected to have completed the required weekly lecture and seminar readings prior to the seminar and to have prepared notes and a question that will facilitate discussion. A major component of this class is seminar format and, as a result, will have an emphasis on in-depth discussion of topics related to neuropsychological case studies. The case study method is a standard learning environment for applied and professional health-related disciplines. Active participation and interaction among the students is, therefore, of particular importance.

Seminar Participation and Attendance

Each weekly you will arrive to class having completed the required readings for the course in order to be prepared to contribute to the group discussion. During the seminar, a facilitator will introduce the topic of interest, highlight background information and then facilitate/promote discussion on the topic. Your responsibility is to become involved in the discussion and participate in initiating comments and addressing issues. In addition, **BEGINNING 23 February** you are asked to prepare a **question with comments & 50 words** (on the readings that are assigned each week) for discussion and submit it on-line to our Teaching Assistant **by 10:00 p.m.** the evening before your seminar. Each submission will contribute to your participation grade. Task will be your discussion on the topic, and will contribute 20% towards your final grade. Failure to attend a seminar (i.e., without appropriate documentation) will be provided to, and discussed with, the professor will result in non-acceptance of the question submission associated with that class. Seminar grades will be based on collegiality as well as the extent and quality of contributions. Non-attendance results in an attendance grade of zero for that seminar. If you are unable to attend a particular seminar for medical or other serious reasons, advise our email or instructor and provide documentation to the instructor of the course.

Seminar Preparation Two (typically) of you will be assigned a particular case each week which is related to one of the weekly topics in the course to research and facilitate discussion in seminar format. Each topic will be based on case studies. Your responsibility will be to act as a facilitator and you will be asked to work on a joint facilitation of the seminar class pertaining to a topic related to the lectures (topics/questions will be assigned during the first class) activating discussion and highlighting pertinent aspects of the case. Together, you are asked to **develop an active demonstration** related to the topic and lead/facilitate discussion on the topic for the week. You are asked to meet with your team at least one week before the seminar topic week in order to discuss the demonstration and how to divide and coordinate the roles of the facilitators. You are not to present, rather set the stage and initiate discussion associated with the implications of the case, the disorder and its relationship to brain, behaviour & function (going well beyond the facts of the case). The material should be integrated with the mechanisms discussed in the textbook (sections associated with the case study being reviewed).

The week of your topic, each facilitator will provide a separate two-page summary of 400-500 words of the facilitator's hand-out (referred to above) of the information relevant to the seminar topic with an additional sheet indicating what resources you accessed as references. This sheet should be typed and presented in a 3rd edition format (in terms of its parenthetical referencing, margins, font, reference citations) and is to be provided to your TA at least 2 days prior to your presentation which will be examined and, upon approval, will be made available to your colleagues through your specific seminar Sakai site. It is your responsibility to submit this via uploading the handout through your seminar specific Sakai site through the Assignments tool.

Note that an introduction of the topic, and the direction the topic will explore, should be presented by each facilitator in a maximum of 10 minutes each. The demonstration can be integrated with the introduction, or presented whenever is most helpful, and may take an additional 10 minutes for purposes of participation and explanation of how it relates to, or otherwise exemplifies or highlights, an aspect of the to-be-discussed neural dysfunction. Be sure to refer to the demonstration in your written hand-out to the class. Mechanisms and measurement should be emphasized (in both the demonstration and the discussion) i.e., not only should discussion explore what is functionally at risk in the case study, but also what part(s) of the brain are contributing to its presentation, and how one can measure/detect/define the functional challenge. Facilitators should be sure to introduce controversy, questions and queries to spark discussion and the integration of concepts throughout.

Research Paper = ~ 15%

A paper focusing on a particular research issue in neuropsychology is to be submitted. You will be asked to choose a topic associated with human neuropsychology and then to identify an issue or question raised in the area as a focus for your paper in terms of brain-behaviour relationships and neuropsychology (i.e., an integration of thought processes with brain physiology). You will submit a 1-page summary of the topic and question/issue you will be examining for approval in order to assure that your topic is suitable. This is to be submitted to your TA through your seminar specific Sakai site 'Assignments' tool. The date of your seminar on the week of "Final" will be confirmed for approval during the reading break week, by the week of 13 Feb. The final paper is due 4 weeks later in your seminar the week of 13 Mar. It is to include a minimum of 10 original journal articles (primary sources) and can include additional secondary resources (e.g., textbooks, scholarly books). No more than 12 references in total is recommended since the paper is to be 8-10 pages (2000-2500 words in length) (excluding title page, abstract page and references) and is to be written in a 3rd style. The paper is to be submitted to the 'Assignments' tool of your seminar specific Sakai site @ your TA's hard copy to your TA in seminar of the week it is due.

Each submission MUST have a TITLE PAGE as a separate sheet indicating: (a) the report title (b) your name (c) your student # (d) the date (e) the course # (PSYC3P59) (f) my name as course instructor (g) your lab group # and @2" name (h) the total # of pages in the submission including the title page

Research Participation (2% - Students can earn 2% bonus marks towards their final grade for participating in research studies conducted in the Department of Psychology, or approved by the instructor. For each half hour of participation, you can earn 0.5% bonus marks. You MUST complete a Research Participation Form - staple it to the original Consent Form received when you do the study and submit it to the Teaching Assistant forms must be received before the final examination, however, it is recommended that you hand in the forms as soon as the participation is completed. Sign: it is possible through the e-library the link will be provided on Sakai, but also directly through any other access available as long as the research has been approved by Brock University. Participation can involve any research that could potentially be related to course content:

Cognition, Perception, Memory, Attention, Sleep, Emotion, etc. On the Research Participation form you must provide evidence of the study's relevance, a writing explanation of how the topic under investigation relates to brain function (as requested on the form).

Lecture Notes (10% Bonus) For an additional 10% bonus, students can choose to prepare a Lecture Note to share with the class and submit it to their Seminar/Lab-specific Sakai Site through Assignment Tools. The @ will assign you to a particular week for which you would be responsible and you would take notes, transcribe them into an electronic document and upload it to your seminar site. The @ will post these notes to the seminar resource folder to share with your seminar-mates, and the instructor will select one per week to post to the lecture resource folder to share with the class.

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Sakai

Important course materials and information can be accessed through the Sakai version of this course. Handouts, diagrams, lecture material and relevant course content can be found on this site. Course relevant notices will be posted as needed; please check the Sakai-site regularly.

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Students with Disabilities

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the University community with disabilities. If you require academic accommodations related to a permanent disability to participate in this course, you are encouraged to contact the Student Development Centre Services for Students with Disabilities (4th floor Schmon Tower, ext. 3240) and also discuss these accommodations with your professor/instructor.

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Academic Misconduct – a message from the

Because academic integrity is vital to the well-being of the university community, the University takes academic misconduct very seriously.

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Academic misconduct includes plagiarism, which involves representing the words and ideas of another person as if they were your own and other forms of cheating such as crib notes during a test or fabricating data for a lab assignment. The penalties for academic misconduct can be very severe. A grade of zero may be given for the assignment or even for the course and a reprimand may result in suspension from the University.

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Students are urged to read the section of the University Undergraduate Calendar that pertains to academic misconduct, or for a more 'friendly' version take a look at the handout on Sakai for this course or the Psychology webpage identified in the following address. (<http://www.syc.brocku.ca/undergrad/misconduct.htm>)

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Students are also reminded that the Student Development Centre Schmon Tower Room 4002 offers free writing help on writing, study skills and on avoiding plagiarism. For more information on the University's policy on academic integrity, visit the website at <http://www.brocku.ca/academic/integrity>.

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Students are particularly warned of the following challenges: quoting without using quotation marks; you will need to not only cite the reference, but also the page number and use quotes; changing words around is insufficient to consider your work your own; and not to quote, work with classmates on projects intended to be independent (joint discussion and coordination is promoted and encouraged, but any final document must be completed and written independently); information/materials from the internet or link point form, must still be referenced. Use of any electronic device (including cell phones) during examinations will be considered a breach of academic integrity.

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You must complete and submit the "Statement of Academic Integrity" pledge that is available on the course website. Your work/questions/essays will be subject to an electronic plagiarism detection system known as Turnitin and in its stead an additional assignment will be required.

For the Research Paper only – multiple submissions to Turnitin ARE permitted until the due date so that you will be able to review and correct inadvertent plagiarism. This is NOT available for the weekly assignments.

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If you have any doubts or concerns about your work, please approach your instructor for guidance.

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Last Date for Withdrawal/Drop from this course without financial penalty Friday, 20 January 2017

Last Date for Withdrawal from this course without academic penalty Friday, 01 March 2017

Date to change from credit to audit status in this course Friday, 01 March 2017

kk

Note that you will have received at least 48% of your final grade by 15 March (one week prior to the last date of withdrawal without academic penalty) since you will have completed a midterm test (20%) as well as participated in seminars and lectures for more than half of your course (12.5%). In addition, some of you will have facilitated a seminar (20%).

**PSYC 3P60
Children's Thinking
2016 Fall Term**

OVERVIEW

“Teaching is more than imparting knowledge; it is inspiring change. Learning is more than absorbing facts; it is acquiring understanding.” -William Arthur Ward

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This course provides an advanced introduction to the development of children's thinking. We will explore some of the key theories of cognitive development and their influence on current research. We will study a range of topics including understanding of objects and space, social cognition, eyewitness testimony, and the influence of early experience.

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OBJECTIVES

CONTENT OBJECTIVES: That students

1. understand the major theories of cognitive development.
2. become familiar with both ‘classic’ papers and contemporary research.
3. apply basic research to ‘real world’ issues in cognitive development.

SKILL OBJECTIVES: That students become (more) skilled at

1. linking individual studies to the major issues in developmental psychology.
2. participating and contributing to meaningful group discussions.
3. thinking critically about published research.
4. developing an argument by integrating several resources.

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INSTRUCTOR

Dr. Mayu Nishimura

E-mail: via **Sakai** only!

Office Hours: MCB 301 Mondays 11am-12pm or by appointment

Please Note: I will check e-mail on Sakai twice each week. Please address e-mails to Dr. Mayu Nishimura. (It is a bad habit to send e-mails that begin with ‘Hi There’!) Students are encouraged to make appointments or drop-in. Interacting with students is a rewarding part of my job!

TEACHING ASSISTANT

Ms. Tessa Mazachowsky
Office Hour: By Appointment Only
Email: tm10nt@brocku.ca

The teaching assistants and I adopt a team-based approach to supporting and assessing your learning. Please consult with your TA regarding questions related to course assignments and grading; contact the course instructor if an issue about grading cannot be resolved. Xiaomei and Ann bring a wealth of experience to this course; they will be happy to help you, but please allow some lead-time.

Please **contact your TA** (not instructor) regarding matters associated with the day-to-day administration of the course. For example, notify your TA about any illnesses or family emergencies that might cause you to miss an examination or an assignment deadline, about examination timetable conflicts, about questions regarding submissions to turnitin.com, or about grade postings on Isaak/Sakai. For very personal issues, contact professor.

Please e-mail your TA via Sakai ONLY.

TEXT

Bjorklund, D.F. (2012). *Children's Thinking: Cognitive Development and Individual Differences*. (5th edition). Thomson Wadsworth

IMPORTANT

INFORMATION ABOUT SEMINARS AND ASSIGNMENTS CAN BE FOUND IN THE PSYC 3P60 Sakai COURSE INFORMATION. CHECK THE WEB COURSE INFORMATION REGULARLY! THE INSTRUCTOR RESERVES THE RIGHT TO CHANGE THE ASSIGNED READINGS.

Sakai is a course management system that has gained support and interest from Brock faculty, staff, and students. The course outline, information about seminars, essays, assignments, lecture notes, and marks will be posted on Sakai. Use Sakai for obtaining course information and lecture notes.

All courses will have a final date for withdrawal without academic penalty. It is the students' responsibility to ensure that they have withdrawn from the course on or before this date if they do not want a grade assigned. If not withdrawn, a failing grade may be assigned for the course.

Date by which notification of a minimum of 15% of course grade will be received by students: November 4, 2016. Last date for withdrawal from course without academic penalty: November 8, 2016.

COURSE REQUIREMENTS

TESTS

- | | | |
|----------------|---------------------|-----|
| • Midterm Exam | October 24 | 16% |
| • Final Exam | <i>as scheduled</i> | 30% |

SEMINAR PARTICIPATION

- | | | |
|-------------------------------|--|-----|
| • Preparation & Participation | | 24% |
|-------------------------------|--|-----|

ASSIGNMENT

- | | | |
|-----------------------------------|------------------------|-----|
| • Major Assignment (Final) is Due | November 28– in class! | 30% |
|-----------------------------------|------------------------|-----|

BONUS MARKS

- Students may earn up to 2% in bonus marks by participating in research **related to cognition/development**. In order to receive bonus marks, students need to hand in the consent form and a written summary of the experiment's research question, procedure, and a brief statement of how the study relates to cognitive development. (See 'resources' for details.) Participate early --- we will not be sympathetic when people cannot find a study in which to take part during the last week. You must complete participation by **December 2, 2016**.

* Tests will cover ALL material: lectures, films, seminars, and readings. The final exam will be cumulative with an emphasis on the second half of the course.

** *Participation* does not mean attendance. It means arriving prepared and taking an active role!

***Individual essay to be submitted as a hard copy and online to Turnitin.com. If you have a principled objection to using Turnitin.com, please see the instructor for an alternative.

LATE PENALTY: 5% per day. You must submit *both* the electronic version *and* the printed version by the due date or marks will be deducted! No exceptions!!!

IMPORTANT CODES

TURNITIN.COM: Class ID and Password will be given in class

ACADEMIC INTEGRITY

Because academic integrity is vital to the well-being of the university community, Brock University takes academic misconduct very seriously. Academic misconduct includes plagiarism, which involves presenting the words and ideas of another person as if they were your own, and other forms of cheating, such as using crib notes during a test or fabricating data for a lab assignment. The penalties for academic misconduct can be very severe. A grade of zero may be given for the assignment or even for the course, and a second offence may result in suspension from the University. Students are urged to read the section of the Brock University Undergraduate Calendar that pertains to academic misconduct. Students are also reminded that the Student Development Centre (Schmon Tower, Room 400) offers free workshops on writing and study skills and on avoiding plagiarism. For more information on academic integrity please visit <http://www.psyb.brocku.ca/undergrad/misconduct.htm>. "I didn't know" is not an excuse.

Tip: If you do not understand something that you read, ask for help! Do not let confusion lead to plagiarism.

Tip: Changing one or two words in a sentence is *not* paraphrasing. You should paraphrase paragraphs or pages, not individual sentences.

Tip: Even if you write in your own words, you must cite the source!

POLICY ON PERSONAL ELECTRONIC DEVICES

We have been allotted 3 hours per week in which to focus attentively, in collaboration, on learning. It is imperative that we listen to each other and concentrate on the task at hand. Personal electronic devices can disrupt this process, for the user, for nearby students and for the instructor. Unexpected beeps, ring tones, and attractive WEB pages distract us all.

To foster our learning environment, you are permitted to bring personal devices (cell phones, PDAs, laptops, sound recorders, and other electronic devices) to lecture, but they must only serve class needs (e.g., typing on a laptop while taking class notes; using an iPhone to record lectures). The goal of this policy is to keep our class in the "foreground." If you ever appear to be "backgrounding" the class, you will be asked to put your personal device away immediately. Examples of "backgrounding" the class include: answering or making a cell phone call; texting or IMing; checking or writing e-mail; surfing the web; wearing headphones; logging into MySpace, Facebook, your SHU blog, or other social network; reading an ebook or any printed matter not related to class content (e.g., a magazine); and handheld gaming. Please set your cell phones to "silent" mode before class begins. We reserve the right to ban electronic devices entirely if we feel they are distracting you or your classmates from proper study. **Personal devices are not permitted in seminars**. Seminars provide an opportunity for an exchange of ideas and personal devices inevitably disrupt this process.

Class Meetings (Mondays 9:00-11:00a\$)

Our class meetings will be used to develop your knowledge of some selective aspects of cognitive development. We will not discuss everything in the assigned reading material. Instead, we will cover some topics in depth. You are required to read the entire chapter; material from the chapters will be on tests. Knowledge that you gain from the chapter will enhance your comprehension of lecture material and seminar readings.

Seminars will be used to further your understanding of material discussed in lecture or the textbook. Seminars will take several approaches (e.g., journal articles, films, group activities), depending on the topic. Students are expected to come prepared for seminar, having completed required readings and associated discussion questions. To keep everything in sync, we will have '(lectures and seminars. Please pay attention to dates! K KKKKK

LECTURE #1: INTRODUCTION

DATE: September 12

READ: Chapter 1

SEMINAR #1: Read Steinberg, Hepach, R., Vaish, A., & Tomasello, M. (2012). Young children are intrinsically motivated to see others helped. *Psychological Science*, 23, 967-972.

DATES: Week of September 19th

LECTURE #2: Biological Basis of Cognitive Development

DATE: September 19

READ: Chapter 2

SEMINAR #2: Read Steinberg, L. (2007). Risk taking in adolescence: New perspectives from brain and behavioural science. *Current Directions in Psychological Science*, 16, 55 – 59.

DATES: Week of September 26th

LECTURE #3: Sociocultural perspectives on cognitive development

DATE: September 26

READ: Chapter 3. **Must hand in choice of major assignment**

SEMINAR #3: WATCH Documentary: "Born into Brothels" before seminar

DATES: Week of October 3rd

LECTURE #4: Infant Perception and Cognition

DATE: October 3

READ: Chapter 4

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SEMINAR #4: *Each student will be assigned one of the following readings:*

Hannon, E. E. & Trehub, S. E. (2005). Tuning in to musical rhythms: Infants learn more readily than adults. *PNAS*, *102*, 12639 – 12643.

Persistent Link:

<http://proxy.library.brocku.ca/login?url=http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1194930/>

OR

Pascalis, O. et al (2005). Plasticity of face processing in infancy. *PNAS*, *102*, 5297 – 5300.

Persistent Link:

<http://proxy.library.brocku.ca/login?url=http://www.ncbi.nlm.nih.gov/pmc/articles/PMC555965/>

OR

Kuhl, P. K., Tsao, F., & Liu, H. (2003). Foreign-language experience in infancy: Effects of short-term exposure and social interaction on phonetic learning. *PNAS*, *100*, 9096 – 9101. Persistent

Link:

<http://proxy.library.brocku.ca/login?url=http://www.ncbi.nlm.nih.gov/pmc/articles/PMC166444/>

DATES: Week of October 17th (no seminar week of October 10th because of Thanksgiving. Use the time to prepare for midterms)

LECTURE #5: Thinking in Symbols: Development of Representation

DATE: October 17

READ: Chapter 5-6

SEMINAR #5: Tutorial - Come prepared for questions regarding the midterm

DATE: Week of October 24th

LECTURE #6: *** Midterm Exam (Covers up to & including Chapter 6)*****

DATE: October 24

SEMINAR #6: *No seminar week of October 24 TAs will not be there*

LECTURE #7: Learning to Think on Their Own: Executive Function

DATE: October 31

READ: Chapter 7.

SEMINAR #7: Read Sabbagh, M. A., Xu, F., Carlson, S. M., Moses, L. J., & Lee, K. (2006). The development of executive functioning and theory of mind. *Psychological Science, 17*, 74-81.

DATES: Week of November 7th

LECTURE #8: Memory Development

DATE: November 7

READ: Chapter 8

SEMINAR #8: *Competition! Visit a Toy Store and bring in photos of worst/best toy (See seminar leader for details.)*

DATES: Week of November 14th

LECTURE #9: Social Cognition

DATE: November 14

READ: Chapter 10

SEMINAR #9: Read Hermann et al. (2007). Humans have evolved specialized skills of social cognition: The cultural intelligence hypothesis. *Science, 317*, 1360-1366.

DATES: Week of November 21st

LECTURE #10: Role of Early Experience

DATE: November 21

READ: Chapter 10

SEMINAR #10: Read Nelson et al. (2007). Cognitive recovery in socially deprived young children: The Bucharest early Intervention Project. *Science, 317*, 1360-1366.

DATES: Week of November 28

LECTURE #11: Applied developmental psychology

DATE: November 28 **Final assignment is due!**

READ: To be determined

SEMINAR #11: *Tutorial. Come prepared with questions*

DATES: Week of December 5th

LECTURE #12: Review
DATE: December 5th

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Details about Course Requirements

Preparing for Seminars. Students are expected to have carefully read assigned seminar readings in preparation for each seminar. Students should have also completed associated thought questions in advance and will turn in their typed responses at the beginning of each seminar. Seminar participation will be evaluated based on quality of students' written and oral responses.

Midterm & Final Exam. Both tests will comprise multiple choice and short-answer questions. The final exam will also include a longer essay question. Questions will cover content from the text, lectures, and seminar readings and activities.

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Major Project. Students will work individually with partner, or in a group of three to complete a major assignment. Please see details under resources.

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Other Notes from the Psychology Department

Shredding: All essays, tests and exams that are not picked up by students will be shredded. For courses ending on or before June 8th (items were held for six months before shredding). For courses ending after June 8th (items will be held for twelve months). Note that final exams will not be returned to students.

Student Numbers: In order to ensure privacy of secure information, the Psychology Department's policy that student numbers will not appear on the cover page of any assignment or exam. Students are advised to place the name and number of the course, the professor's name, and their A's name on the cover page of all course material. Student numbers can be placed on each of the following pages if necessary.

Handing in Assignments: All essays and assignments are to be handed in during lecture and/or seminar times. The assignment box that is on the wall across from [K> %'. In the Psychology Department is to be used only when students cannot make it to class due to extenuating circumstances. If the assignment box is used, students should not place their student number on the cover page. Instead, the name and number of the course, the professor's name, and the A's name should be placed on the cover page. If these items do not appear on the cover page, the assignment may not be given to the correct professor.

"0" The Psychology Department at Brock University will retain historical copies of [course Outlines. We urge you to retain this course outline for your future reference.

PSYC 3P65 (1/2 credit): Brain and Language

Lectures: Wednesdays noon-2pm TH 147

SEM 1 Thur 8-9; Andrew Chung; SEM 2 Mon 8-9 Andrew Chung

Instructor: Prof. V. D. Dwivedi
Dept. Psychology/Centre for Neuroscience
Office location: MC B331
Office Hours: <https://brocku.ca/dwivedi-brain-and-language-lab/courses/>
Tel: (905)688-5550 ext. 5050 (departmental secretary)
Office phone: ext. 5389
@vddwivedi

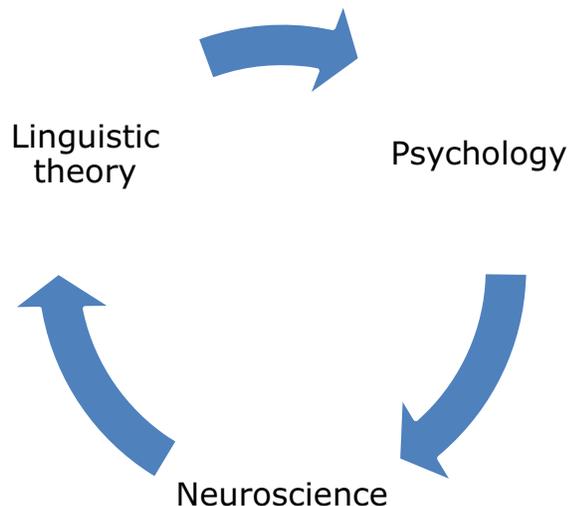
E-mail: via **Sakai** only

Please Note: I will check e-mail on Sakai twice each week. I will not answer complex questions via e-mail, but will address such questions during class time. Please address e-mails to Dr. Dwivedi (It is a bad habit to send e-mails that begin with 'Hey There'!)

Teaching Assistant: Andrew Chung

The teaching assistants and I adopt a team-based approach to supporting and assessing your learning. **Please e-mail your TA and me via Sakai only.**

Content: This is a course for students who are interested in theories about language and the human brain. We will be examining state-of-the-art models of language processing in terms of neurocognitive architecture of language. In addition, students will receive experiential training in research via technological use of software programs relevant to research creation. We end the class with an in-house poster conference on a research paper relevant to class material.



Method: One 2-h lecture per week plus one 1-h seminar/workshops; assignments.
Text: Kemmerer, D. (2015). *Cognitive neuroscience of language: An Introduction*. New York: Psychology Press.

Evaluation:

- 40% Two in-class tests; 20% each
- 25% Assignments
- 15% Poster
- 5% Poster presentation
- 5% questions on poster (2.5%) and quiz on posters (2.5%)
- 5% Seminar participation
- 5% Other participation (2% on participation in either 2 experiments in cognitive psychology or 1 ERP experiment; 1% for write up of experience in experiment(s) as it relates to our course; 2% participation in workshops at A to Z centre NOT already covered in lecture)

****No "extra credit" opportunities are available for this course.****

If you find this course interesting and would like some further information, check the following websites:

www.linguistlist.org
<http://www.cogneurosociety.org/>
<http://www.neurolang.org/>

- You are welcomed, and expected, to attend all lectures and seminars, as the required text and posted lecture notes on Sakai are not a substitute for attendance. Part of class time will be used to present examples to expand and clarify key course ideas.
- Many times I will be using articles to build on ideas presented in the text.
- The overheads/powerpoint notes are NOT complete; they provide a skeletal framework for your note-taking. I will frequently be covering material not covered in the text, and you are responsible for everything covered in lectures and seminars. I suggest that you look to your neighbour now or in seminar and write down their phone number or email, so you can consult with a fellow student when you have missed class.
- **Note that you are expected to ask questions during lecture.** Don't leave asking questions till later—you might not remember. Also, odds are, at least one other student, if not many more, are wondering something similar. So DO PARTICIPATE.

Seminar expectations:

- You are required to attend and participate in seminar for 5%. You may miss one seminar, with no penalty (drop one).
- The purpose of seminars is to first, review any questions regarding the reading material. Secondly, and importantly, seminars will serve as “workshop” classes, these will

function either as tutorials regarding computer software or workshops about poster presentation.

- Some seminars will be structured as computer tutorials; students should bring laptops to seminar and will work through assignment of the week with TA assistance.
- As the term progresses, you will be in groups of 2 or 3, and work through a paper relevant to the class in the form of a poster presentation. I will post the relevant papers on Sakai to choose from. I will have more instructions on this project as the term progresses.
- Note that the text is an excellent place to help with research topics; both for background material as well as for relevant references. In other words, not only does it serve as a background to lecture material, it is a resource for your research topics, so USE IT.
- An excellent resource for you to consider:
 - <https://brocku.ca/student-success-centre/>
 - Definitely check out their website and the excellent resources and services available to students, in general.

Other participation: 2% + 3%

A to Z centre

For the **2%** participation in workshops at A to Z centre, you must attend a total of 3h of a workshop (titles listed below) before last day of class (Wed Nov 28). You may attend more if you like but not less.

Suggested workshops you may attend:

- *University Writing: Total Experience*
- Any of the workshops under the heading *Essay Writing* (except for Paragraph Writing; Quotes vs. Paraphrases)
- Any of the workshops under the heading *Grammar*.
- *If there are others you are interested in, ask me or TAs. The key is to **not duplicate** workshops covered in lecture.*

Participation in experiments

- For **3%** participation:
 - In order to get a sense of cognitive neuroscience methods, ideally you would participate in an EEG/ERP experiment (these run anywhere from 2-3 hrs to overnight) for **2%** of experiment participation mark, then **1%** for a one-page (double space, APA formatting) write up reflecting on the experience. This would be a write-up of an explanation of how the topic under investigation relates to brain function/cognitive neuroscience methods/language.
- The write-up, and participation must occur before **last class, Wed Nov 28**. If late, it's 0.

- Another option for **3%** experiment participation is to do *at least 2 psychology* expts in related fields: Language, Cognition, Perception, Memory, Attention, Sleep, Emotion, etc. (=2%)
- For additional 1%, a 2 page write up (double space, APA formatting) reflecting on the experience is required. This would be a write-up of an explanation of how each experiment relates to brain function/cognitive neuroscience methods/language.
- The write-up, and participation must occur before **last class, Wed Nov 28**. If late, it's 0.

Date for withdrawal without academic penalty: November 6, 2018.

Policies on In-class Tests:

Students who miss the midterm for an acceptable reason (e.g., sickness or a family tragedy) **MUST** contact the professor by PHONE within 3 days of the exam. If necessary, you may leave a message with the departmental secretary. Then, you must apply in writing to the instructor within a week. The student **MUST** provide appropriate documentation (e.g. doctor's note, etc.). Students who miss the test for an acceptable reason (see above for procedure and guidelines) will be able to write a supplemental exam where the date, time and location will be determined by the professor. Other than that, there will be no opportunity for makeup work.

www.brocku.ca/health-services/policies/exemption

Academic Conduct

Brock University values academic integrity, and therefore takes academic misconduct very seriously. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the code of student conduct and disciplinary procedures. Please refer to <http://www.brocku.ca/academicintegrity/>

- ◆ See below from Registrar's Office website for Brock University:
- ◆ "The penalties for academic misconduct can be very severe. A grade of zero may be given for the exam or assignment or even for the course, and a second offense may result in suspension from the University."

Cheating:

No student shall:

- a) In the course of an examination obtain or attempt to obtain information from another student or unauthorised source or give or attempt to give information to another student or possess, use or attempt to use any unauthorised material;
- b) Represent or attempt to represent oneself as another or have or attempt to have oneself represented by another in the taking of an examination, preparation of a paper or other similar activity.
- c) Submit in any course or program of study, without both the knowledge and approval of the person to whom it is submitted, all or a substantial portion of any academic writing, essay, thesis, research report, project or assignment for which credit has previously been obtained or which has been or is being submitted in another course or program of study in the University or elsewhere;

d) Submit in any course or program of study any academic writing, essay, thesis, research report, project or assignment containing a statement of fact known by the student to be false or a reference to a source which reference or source has been fabricated.

Furthermore, no answer to any test/exam will be reassessed unless;

- a) it is written in ink;
- b) it has not been written over;
- c) what is to be reassessed is clearly marked as such.

Tentative Course Outline

Week and Dates	Topic	Reading
Lec #1 Sep 5	<ul style="list-style-type: none"> Syllabus, Overview of Course AZ Learning; Excel workshop 1 	Get textbook. Read Kemmerer Ch 1.
Lec #2 Sep 12	Part 1 Cognitive Neuroscience of Language: challenges and future direction (i) Neuroanatomy (ii) Functional Neuroimaging <ul style="list-style-type: none"> AZ Learning; Excel workshop 2 	Kemmerer Ch 2
Lec #3 Sep 19	Part 1 cont'd	
Lec #4 Sep 26	Part 1: Perception and production of speech	Kemmerer Chs. 5, 6, 7
Lec #5 Oct 3 No lecture (Week 6 of term) Oct 10 Lec #6 Oct 17	Part 1: cont'd  READING WEEK TEST 1	
Lec #7 Oct 24	Part 2	
Lec #8 Oct 31	Part 2: Sentence processing <ul style="list-style-type: none"> AZ learning on how to make a poster in Microsoft Publisher 	Kemmerer Chs. 14, 15, 16
Lec #9 Nov 7	Part 2 cont'd	
Lec #10 Nov 14	Part 2 cont'd	
Lec #11 Nov 21	TEST 2 [Mon Nov 26: hand in (at least) 3 questions for your poster by 5pm]	
Lec #12 Nov 28	Run in-house poster conference	(very short) quiz on posters in seminar

LEARNING OUTCOMES:***Brain and Language course objectives: Theoretical understanding***

- Understand what are the outstanding questions in cognitive neuroscience of language. Why haven't we solved things yet?
- Understand the relations and links between neuroscience, linguistics, psychology.
- Be familiar with major theoretical models of language processing and representation.
- Have gained a solid understanding of both the research methodologies used in cognitive neuroscience of language and many of the well-established major findings in the field
- Appreciate how knowledge is created in cognitive neuroscience of language through hands-on experience: see below
- Have developed active-learning and transferable skills (e.g. critical thinking, communication, and group work skills): see below

Brain and Language course objectives: Hands-on experience***Computer technology***

- Understand the practicality of *Excel*/familiarize oneself with *Excel's* basic features.
- Use Excel as a data analysis tool and become comfortable doing so.
- Graph data in Excel.
- Understand the practicality of *Psychopy*/familiarize oneself with *Psychopy's* basic features.
- Use *Psychopy* as a software tool to create simple experiment.

Why is computer work part of this class?

- In the 21st century professional workplace, you will be required to use some sort of software program, and definitely Excel. The key here is to show yourself that YOU CAN DO IT, that is, that software can be clunky, it can be buggy and frustrating. But learning how to handle that frustration, along with basic point and click skills, is something you will use from now on in the workforce. So let's get to it. And oh yeah, these skills are useful for research, too!
- ***Research poster project***
 - Learn how to use the library/web and search for reference materials in general.
 - Learn how to present and summarize ideas in a concise way: e.g. Explain your hypothesis to others.
- Demonstrate skill and confidence in making academic presentations on original research and leading discussions.
 - How to use Microsoft Publisher; How to make a poster

Why is Group Work part of this class?

- In the 21st century professional workplace, you will be working in teams. If you have team skills, you will thrive.
- Note that you need to have a pdf draft of your poster handed in on **Wed Nov 14**.

Notes on Creating a Respectful Learning Environment

- ◆ Our classrooms and seminars must be respectful places of learning, where we appreciate each others strengths and respect each others differences. Please see the [Respectful Work and Learning Environment Policy](#) (“ctrl+click” here or go to the Brock University Human Resources webpage <http://www.brocku.ca/hr/policies/>)
- ◆ This is a smart phone free classroom. Please turn your smart phone off at the beginning of each class and seminar.
- ◆ Recent research has shown that using laptops is not as effective a learning tool as compared to hand writing one’s notes during lecture. Furthermore, it has been shown to be disruptive to other students’ learning. As a result of this, I ask that those who prefer to use laptops sit in the last few rows so that this is of minimum disturbance to other students in the lecture room. I list the reports in the popular media below. I also have the actual published works. The design and statistics are sound. In other words, this is good evidence.
- ◆ <http://www.cbc.ca/news/technology/story/2013/08/14/technology-laptop-grades.html>
- ◆ <http://www.vox.com/2014/6/4/5776804/note-taking-by-hand-versus-laptop>
- ◆ Policies regarding electronic communication: On the course Sakai site, you will see two methods of communicating with members of this course. For student to TA/Professor communication, use the MESSAGES Tool.¹
- ◆ For peer to peer (ie., student to student) communication, use the FORUM tool. Note that the Forum tool is NOT a social media site, it is for communication that is related to this course only. It will also be monitored by the TAs and myself. The Forum tool is especially useful for group to group communication. USE IT.

¹ Sending a message on Sakai

To send a message:

1. In your site's [menubar](#), click **Messages**.
2. On the "Messages" screen, click **Compose Message**.
3. Next to "To", use the list to select the individual(s) or group(s) you want to receive the message. To select multiple participants, **Ctrl**-click (in Windows) or **Command**-click (in Mac OS X). You can also choose to send your message to users with a particular role (e.g., Instructor or Teaching Assistant). Do NOT send to All participants. That is what Forum is for ☺
4. Next to "Send Cc", check the box to send a copy of the message to recipients' email addresses. This ensures that the receiver doesn't miss your msg!

Note that sending your message via the **Send Cc** option, your message will go directly to the recipients' email address, and a copy will go to both their *Received* folders and your *Sent* folder in Messages. Recipients cannot reply to the message via email; they also must use the Messages tool.

BKSES OF NEUROPSYCHOPHARMACOLOGY

(NEUROPSYCHOPHARMACOLOGY)

Coursework: 67% ; 8%

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Professor: tefan M. Brudzynski, Room MCCB335, tel. ext. 4653

Thursdays, 1:00-12:00 noon, or by appointment

E-mail: sbrudzyn@brocku.ca

Seminar: Kevin Mulvihill, Room MCCB408, tel. ext. 6282

Mondays, 1:00 pm - 3:00 pm, or by appointment

E-mail: km07gk@brocku.ca

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The lectures and seminars will

1) demonstrate mechanisms of pharmacokinetics and drug action, and classification

of psychoactive agents;

2) illustrate principles of pharmacology and relationship between chemical structure

of psychoactive compounds and their pharmacological effects;

3) emphasize the chemical nature of brain functions and consequences of action of

specific agents on neurons and selected neurochemical brain systems.

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1. **Main textbook:** David C. Comaty, E. Joseph, and Julien M. Robert: "The Comprehensive Guide to the Action, Uses, and Side Effects of Psychoactive Drugs," 40th anniversary edition, Worth Publishers, New York, 2014, pp. 614+, including glossary and index. Other editions are also suitable for this course: 2nd (2011), 3rd (2008) and 10th (2005).

2. **Resource book:** Eldman S. Robert, Meyer S. Ferrol and P. Uenzen F. (Indiana): "Principles of Neuropsychopharmacology," 4th ed., Elsevier, Amsterdam, MA, 1997, pp. 910 (4th ed.) (for later edition). This book contains much more material than required and is suitable only for students particularly interested in the subject.

Evaluation: Final grade will comprise the following components (out of 100%):

1) in-class test #1, #2, and #3 (mandatory); test #1 = 20%, tests #2 & #3 = 30% each; Seminar participation (mandatory) Total %

2) Seminar mark will consist of: 40% quiz results + 10% participation in discussions - 20% of the final mark. There will be 10 quizzes worth 2% each.

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1. Introduction and bases of pharmacology

2. Pharmacodynamics and receptor theory

3. Pharmacokinetics: Absorption and distribution

4. Pharmacokinetics: Biotransformation and elimination

5. Neuronal toxins

6. Agents acting on the cholinergic system

7. Agents acting on the adrenergic and noradrenergic systems

8. Agents acting on dopaminergic system

9. Agents acting on the glutamatergic and other aminergic systems

10. Agents acting on serotonergic and GABAergic systems

11. Agents acting on histaminergic system and opioid receptors

12. Agents acting on peptidergic and other brain systems

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Content of in-class 1-hour tests

Written in-class tests will consist of multiple choice questions, short-answer questions, and graph-questions. The multiple-choice questions will dominate (about 60% of questions). The tests are designed to predominantly check the understanding of the material. Results of the tests will be discussed with students during. Content of the tests will be as follows:

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- TEST# 1: Bases of pharmacology, pharmacodynamics, pharmacokinetics.
- TEST# 2: Neural toxins, drugs of the cholinergic, adrenergic, noradrenergic systems.
- TEST# 3: Dopaminergic system, drugs of the glutamatergic and GABA-ergic systems.

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Seminars Seminars will supplement lectures by explaining necessary basic elements of lecture content and will provide some extra material. Some source articles will be provided for reading as preparation for seminar discussion and quizzes one week before the seminar. Each 50-min seminar has some time reserved for discussion, if needed. There are quizzes consisting of approx. 5-10 questions each. Each quiz will be marked by the seminar leader and will be worth 10% of the final mark.

Note on Participation

Each missed seminar will be penalized by a 2% deduction from the quiz - 2% of the final seminar mark. The penalty will not apply if the student, who was absent, has legitimate medical or other emergency certificate.

Students with Disabilities

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; CADEMIC POLICIES

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Intellectual Property Notice

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor for this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

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Academic Misconduct

Because academic integrity is vital to the well-being of the university community, Brock University takes academic misconduct very seriously. Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcatalog/view/fullerdescriptionofprohibitedactions>, and the procedures and penalties.

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Academic misconduct includes plagiarism, which involves presenting the words and ideas of another person as if they were your own, and other forms of cheating, such as using crib notes during a test or fabricating data for a lab assignment. The penalties for academic misconduct can be very severe. A grade of zero may be given for the assignment or even for the course, and a second offence may result in suspension from the University. Students are also reminded that the Student Development Centre (Schmon Tower, Room 455) offers free workshops on writing and study skills and on avoiding plagiarism.

In this course, the computerized plagiarism detection system (Turnitin.com, phrase matching software) is

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will not be used. Students should be aware, however, that Laboratory Reports represent independent projects and it is discouraged writing these Reports together with classmates. This may confront students with in your class.

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Academic Accommodation Statement:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the University community with disabilities. If you require academic accommodations related to a permanent disability to participate in this course, you are encouraged to contact the Student Development Centre Services for Students with Disabilities, 4th floor Schmon Tower, ext. 7845, and also discuss these accommodations with the professor/instructor.

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Medical Exemption Policy:

The University requires that a student be medically examined in Health Services, or by an off-campus physician prior to an absence due to medical reasons from an exam, lab, test, quiz, seminar, assignment, etc. The Medical Certificate can be found at: <http://www.brocku.ca/health-services/policies/exemption>

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Academic Accommodation due to Religious Obligations:

Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements.

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Student Sexual Violence Support Centre:

The Brock Student Sexual Violence Support Centre supports and advocates for people who have experienced sexual violence. A full list of services can be found at: www.brocku.ca/safer. A Safer Brock.org. If you or a friend needs support or have questions you can text 888-990-SAFE(7233). All services are 24/hr, anonymous, confidential, and free.

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Library help:

If you need any help finding library resources you may contact Colleen Mackinnon in the library:

Email: cmackinnon@brocku.ca

Online: <http://researchguides.library.brocku.ca/CHYS> (live Chat is also available here).

Some important dates:

February 15 @ 185 @ ~~185~~ Last day to submit Intent to Graduate for Spring Convocation k k k

February 18 @ 8785 @ ~~185~~ Reading week k k k k k k k k

March 5, ^ 185 @ ~~185~~ Last day for withdrawal without academic penalty k

March 7 185 @: Good Friday, University closed, no classes k

April 5, ^ 185 @ ~~185~~ Last day of classes for Duration 7 k

April 13 @ 185 @ ~~185~~ Snow days and reading days k

April 18 @ 885 @ ~~185~~ Examination session begins k

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PSYC 3P68 – Sleep and Wakefulness – Fall 2017 (D2)

Psychology Department, Faculty of Social Science, Brock University

Course Instructor:

Professor Kimberly Cote, PhD

Office: MC B319

Email: Use Sakai email only please

Office Hours: by appointment

Teaching Assistant:

Reuben Howlett

Office: MC-B416 (Sleep Lab)

Email: Use Sakai email only please

Office Hours: email for appointment **Lectures:** Thursdays, 1500-1700, ST107

Seminars: Note: seminars start week of Sept 18th /19th

SEM 1	M	1900-2000	EA106
SEM 2	T	1200-1300	EA107

COURSE DESCRIPTION

In this course we will explore the nature of a universal human behaviour – sleep. We spend approximately 1/3 of our lives asleep, yet scientists cannot yet fully explain *why* we need sleep. The purpose of this course is to introduce you to the basics of sleep behaviour, through reading important scientific literature and learning the methods of sleep research. We will cover basic topics such as the neuroanatomy, physiology, phylogeny, circadian rhythms, and ontogeny of sleep. The second part of the course has a more applied focus, covering topics such as sleep disorders and their treatment. In seminar, you will debate controversies such as, ‘what are the functions of sleep’ and ‘how much sleep do we really need’? You will also discuss how to raise awareness for issues such as the impact of sleepiness on academic performance, sleepy driving, and sleep disorders. It has been said that understanding the human brain is one of the last true scientific frontiers – unraveling the mysteries of sleep is a large part of that puzzle.

Restriction: open to PSYC (single or combined), [NEUR](#) majors and PSYC minors until date specified in Registration guide. After that date open to PSYC (single or combined), [NEUR](#), GHUM, SOSC majors and PSYC minors until date specified in Registration guide. Students must have a minimum of 8.0 overall credits or 3.0 PSYC credits above [PSYC 1F90](#). **Class Format:** Lecture 2 hours; seminar, 1 hour per week.

COURSE OBJECTIVES

After completing this course, you should be able to:

- Understand basic principles and practice in sleep research and sleep disorders medicine
- Know the basic neural mechanisms and electrophysiological features of sleep and wakefulness
- Understand homeostatic and circadian processes underlying sleep/wake regulation
- Outline diagnostic criteria and treatment options for various sleep disorders
- Think critically on controversial issues in sleep research
- Develop strategies to increase awareness of the consequences of sleep loss and sleep disorders

COURSE ADMINISTRATION

Sakai: is an online course information delivery system that will be used in the management of this course. Sakai uses the same account and password as the my.Brocku.ca portal. On your course **Sakai**, you may view the course syllabus, slides, relevant web links, illustrations, and important announcements.

E-Mail and Office hours policy: The Professor and TA will be available for consultation by appointment. Please e-mail the Professor or TA through using Sakai (i.e., message tool). Expect up to 2-3 days before a response to your e-mail.

Evaluation and Grading: The breakdown of grading is as follows:

Term Test	20 [Oct. 19 th]
Final Exam	30 [date TBA by Registrar]
Seminar	20
Essay	30 [Nov. 16 ^h]
TOTAL MARK	100

*Note: last day to withdraw from this course without academic penalty is **Monday, Nov 6th, 2017.***

COURSE REQUIREMENTS

Term Test & Final Exam: The term test will take place on **October 19th**. It will cover all material to date from lectures and lecture readings. The final exam will be scheduled by the Registrar's Office (<http://www.brocku.ca/registrar/scheduling>). The final exam will cover only material that follows the midterm test, and will cover material from lectures and lecture readings. *Makeup tests and exams will be permitted only in cases of documented personal/medical emergencies. If you miss a test, you will be given a grade of zero, unless you provide the appropriate documentation.*

Essay: You will be required to write an essay on a selected topic. The report must be a well-written, APA-style report. It will be graded on quality of writing, creativity of ideas, and appropriate use of primary references. **See Sakai for additional information on essay topics, assignment guidelines, and the University's policy on academic integrity. Also note the website at Brock University for information on academic integrity at: <http://www.brocku.ca/academicintegrity/index.php>.** The paper is due in class on **Thursday, November 16th** (at the start of class). If you hand your paper in late, be sure to put the Professor's name on it before placing it in the essay box in the Psychology Department. **The late penalty is 10% per day (i.e., 10 of 100 marks; weekends are counted as 2 days).**

Turn-it-in Policies and Procedures for Essay: Each student must enrol themselves at www.turnitin.com. **The class ID for Psyc 3P68 is 16012920; the enrolment password is "Sleepy".** Note: you must hand in a hard copy of your essay, as well as submit an identical electronic copy to Turnitin.com; failure to turn in an identical copy automatically results in a grade of zero. Your essay will be compared against other essays and articles, including papers posted on other websites. *The hard copy and the electronic copy are BOTH due on the assignment due date; if either copy is late, the full late*

penalty will apply.

If you do not wish to submit your paper to Turnitin.com, there is an alternative available. You will be asked to submit copies of all of your papers listed in the Reference section, your summary notes for each of the articles (indicating the page number in the article where you found each point), and you will be asked to provide page numbers for every citation in your paper. In addition, you will be required to meet with the professor to explain, discuss, and defend your paper in detail. To choose this alternate assignment, you must make an appointment with the professor prior to the deadline to discuss your concerns about using Turnitin.com.

Seminars: The expectation for your participation in seminars is commensurate with the level expected in a 3rd-year university course. In other words, both full attendance and active participation are expected. You must prepare for seminars by reading the assigned papers, and you are expected to engage in critical thinking and cooperative, intellectual discussion. Since attendance is mandatory for *all* seminars, absences have a significant impact on your seminar grade. *Absences will be excused only in cases of documented personal/medical emergencies.* All documentation should be submitted to the TA.

Course Readings: All readings are compulsory for the course and should be done prior to the lecture. Refer to the *Course Calendar* below for the detailed schedule. This year, we will be using chapters from a pre-published textbook, THE SCIENCE OF SLEEP, © Benjamin Rusak, 2016. The author has given us permission to use the pre-published book, and asks for your feedback. Additional required readings, for both lecture and seminar, are available on reserve in the library.

BROCK UNIVERSITY ACADEMIC POLICIES

Academic Integrity:

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Polices" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.

Academic Accommodation for Students with Disabilities:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Student Accessibility Services in the Student Development Centre (4th floor Schmon Tower, ex. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

Academic Accommodation due to Religious Obligations:

Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements.

Medical Exemption Policy:

The University will accommodate students whose studies become interrupted, or who may be unable to complete academic work, due to an incapacitating medical condition. In these situations, the student must complete the Brock University Student Medical Certificate or Brock University Student Health Services Medical Certificate (or in case of a concussion, the Brock University Student Health Services Medical Concussion Certificate) and include any relevant medical documentation to support his/her request for academic accommodation based on medical grounds. The University may, at its discretion, request more detailed documentation in certain cases.

COURSE CALENDAR

Date:		Topic:
Sept 7th	Lecture topic	Intro to Course & Normal Sleep
	Lecture Readings	1. Text: Chapter 1: Introduction to Sleep and Circadian Rhythms Research
Sept 11-12	Seminar topic	No seminar
	Seminar Readings	No seminar reading
Sept 14th	Lecture topic	Measurement of Sleep
	Lecture Readings	1. Text: Chapter 2: Methods for Studying Sleep and Circadian Rhythms 2. Text: Chapter 5: Homeostatic and Circadian Regulation of Sleep
Sept 18-19 ^h	Seminar topic	Sleep Lab Tour and Polysomnography Demo (Go to MC-B416)
	Seminar Readings	No seminar reading
Sept 21st	Lecture topic	Sleep Deprivation & Circadian Rhythms
	Lecture Readings	1. Text: Chapter 6: Suprachiasmatic Nuclei, Circadian Rhythms and Aging 2. Text: Chapter 11: Physiological Consequences of Sleep Loss 3. Text: Chapter 12: Sleep Loss and Human Performance (12.1 only)
Sept 25-26	Seminar topic	Debate: How much sleep do we really need?
	Seminar Readings	1. Reserve: Kripke et al. (2002). Mortality Associated with Sleep Duration and Insomnia. 2. Reserve: Buysse & Ganguli, (2002). Can Sleep be Bad for You?
Sept 28th	Lecture topic	Phylogeny & Functions of Sleep
	Lecture Readings	1. Text: Chapter 4: Sleep in Other Species 2. Text: Chapter 13: Functions of Sleep (13.1 and 13.2 only)
Oct 2-3	Seminar topic	Debate: Does sleep play a role in learning and memory?
	Seminar Readings	1. Reserve: Stickgold & Walker, (2005), Sleep and Memory: The Ongoing Debate. 2. Reserve: Vertes & Siegel, (2005), Time for the Sleep Community to Take a Critical Look at the Purported Role of Sleep in Memory Processing.
Oct. 5th	Lecture topic	The Role of Sleep in Learning and Memory
	Lecture Readings	1. Text: Chapter 13: Functions of Sleep (13.3 onward)
Oct 9-10	Seminar topic	No seminar
	Seminar Readings	No seminar reading
Reading Week Oct 9^h-13th		
Oct 19th	Lecture topic	*** MIDTERM TEST ***
	Lecture Readings	No lecture reading

Oct 23-24	Seminar topic	Sleepy driving: consequences and designing countermeasures
	Seminar Readings	1. Reserve: Dawson & Reid, (1997). Fatigue, Alcohol and Performance Impairment. 2. Reserve: Barrett, Horne & Reyner (2004). Sleepiness Combined with Low Alcohol Intake in Women Drivers... * see additional sources on Sakai (optional)
Oct 26th	Lecture topic	Sleepiness, Shift Work, & Disorders of Sleep/Wake Schedule
	Lecture Readings	1. Text: Chapter 12: Sleep Loss and Human Performance (12.2 only) 2. Text: Chapter 7: Pineal gland and melatonin
Oct 30-31	Seminar topic	Devising a smart plan for Shift workers
	Seminar Readings	Reserve: Caldwell et al., (2008), Alertness Management Strategies for ... Contexts.
Nov 2nd	Lecture topic	Sleep Across the Lifespan
	Lecture Readings	1. Text: Chapter 3: Sleep Across the Human Lifespan
Nov 6-7	Seminar topic	Discuss the problems with school start times for children & adolescents
	Seminar Readings	Reserve: Carskadon, M. et al., (1998), Adolescent Sleep Patterns, Circadian Timing, and Sleepiness at a Transition to Early School Days.
Nov. 9th	Lecture topic	Disorders of Excessive Daytime Sleepiness
	Lecture Readings	Akintomide and Rickards (2011). Narcolepsy: a review
Nov 13-14	Seminar topic	Raising RLS awareness: the most common disorder you've never heard of
	Seminar Readings	Reserve: Montplaisir et al. (2011). Restless Legs Syndrome and Periodic Limb Movement during Sleep.
*** ESSAY DUE in class (at start) November 16th ***		
Nov 16th	Lecture topic	Insomnia
	Lecture Readings	Reserve: Perlis M.L. et al. (2011). Models of Insomnia.
Nov 20-21	Seminar topic	Debate: Behavioural vs pharmacological treatment of insomnia
	Seminar Readings	Reserve: Smith et al., (2002). Comparative Meta-analysis of Pharmacotherapy and Behavior Therapy for Persistent Insomnia.
Nov 23rd	Lecture topic	Parasomnias
	Lecture Readings	Reserve: Peever et al. (2014), Breakdown in REM sleep...REM sleep behavior disorder
Nov 27-28	Seminar topic	Defend or Prosecute the Case of Homicidal Somnambulism
	Seminar Readings	Reserve: Broughton et al. (1994). Homicidal Somnambulism: A Case Report.
Nov 30th	Lecture topic	Strange things about sleep
	Lecture Readings	Nir & Tononi (2010) Dreaming and the brain...
Dec 4-5	Seminar topic	No seminar

	Seminar Readings	No seminar reading
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Note: Final exam date to be announced by the Registrar's Office

PSYC 3P72 – Drugs and Behaviour – Fall 2018 (D2)
Psychology Department, Faculty of Social Science, Brock University

Course Instructor:

Professor Kimberly Cote, PhD

Office: MC B319

Office Hours: by appointment

Email: Use Sakai email only please

Teaching Assistants:

Kari Lustig

Dawn Ryan

Office hours: by appointment

Email: Use Sakai email only please **Lectures:** Mondays, 10:00-11:00, TH 257

COURSE DESCRIPTION

This course takes a multidisciplinary approach to understanding the effects of drugs on human behaviour. You will learn about the bio-psycho-social impact of drugs that are commonly used (e.g., caffeine, nicotine, alcohol, natural health products), illicit and restricted drugs (e.g., stimulants, marijuana, opiates, hallucinogens, and performance-enhancing drugs), and prescription medications (e.g., hypnotics and psychiatric drugs). Issues of substance abuse will also be covered, including treatment and prevention. Presentations will be in the form of a digital audio-video on a specific topic. An essay will be required based upon your reading of the novel, *Memoirs of an Addicted Brain: A Neuroscientist Examines His Former Life on Drugs*, by Marc Lewis.

Format: This course is offered in a “blended format”, meaning that there will be 1 hour per week of traditional face-to-face time (e.g., seminar discussion in class), and 2 hours per week of “online activities”. Each week, students will prepare for class by reading the text material, and completing on-line activities (e.g., watch online lectures and videos, read online text, or perform web search). Each week, a subset of students will also prepare an online digital presentation prior to class and actively participate in class discussion.

Restriction: open to PSYC (single or combined), [NEUR](#), PHTH majors and PSYC minors until date specified in Registration guide. Students must have a minimum of 8.0 overall credits or 3.0 PSYC credits above [PSYC 1F90](#).

COURSE OBJECTIVES

After completing this course, you should be able to:

- **Understand basic principles of drug action and their effects on behaviour and society**
- Know the basic principles of pharmacology and brain mechanisms of drug effects
- Understand the bio-psycho-social impact of drugs that are commonly used, illicit and restricted drugs, and prescription medications
- Consider issues around substance use disorders including treatment and prevention
- Develop digital presentation skills and participate in discussions on topics in Drugs and

- Behaviour
- Critically evaluate the literature and write a scholarly paper on a specific drug

COURSE ADMINISTRATION

Sakai: is the online course information delivery system that will be used in the management of this course. Sakai uses the same account and password as the my.Brocku.ca portal. On your course **Sakai**, you may view the course syllabus, slides, announcements, email, quizzes, digital resources, and assignments.

E-Mail and Office hour policy: The Professor will be available for consultation by appointment. Please e-mail the Professor through Sakai (i.e., message tool); expect up to 2-3 days before a response. You should consult with the Professor regarding lectures, readings, and tests. Teaching Assistants (TAs) will advise on and grade presentations and essays. Consult with TAs well ahead of deadlines; their office hours are by appointment.

Evaluation and Grading: The breakdown of grading is as follows:

1. Course participation	20
<i>Connect Smartbook Chapter Quizzes</i>	10
<i>Class attendance & mini-web assignments</i>	10
2. Module Tests in Sakai	35
<i>Module 1 Test</i>	5 [Sept 24]
<i>Module 2 Test</i>	5 [Oct 29]
<i>Module 3 Test</i>	5 [Nov 19]
<i>Module 4 Test</i>	5 [Dec 3]
<i>Module 5 Test</i>	15 [Dec 10]
3. Digital Presentation	20
<i>Sign up for your topic/date on Sakai</i>	
4. Essay	25
<i>Annotated Bibliography</i>	5 [Nov 5]
<i>Final Essay</i>	20 [Dec 3 rd , <u>in class</u>]
TOTAL MARK	100

*Note: last day to withdraw from this course without academic penalty is **Tuesday, Nov 6th, 2017**. Please note that you may have only 10% of your final grade reported by this date.*

BROCK UNIVERSITY ACADEMIC POLICIES

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COURSE REQUIREMENTS

1. Course Participation.

1a. Connect Smartbook Chapter Quizzes: Smartbook provides an opportunity to interactively assess your comprehension of the text *prior to class*. To complete a segment you must answer a predetermined number of questions accurately. Marking of the Smartbook is as follows: complete/incomplete. There is no credit for a partially completed segment (i.e., for answering 10 of 12 questions correctly). Completing Smartbook is worth 10% of your final mark. You may miss one of the 11 Smartbook quizzes without penalty. Because Smartbook is designed to assess your understanding of basic content prior to the material being covered in class and to help you manage your time, there will be no extensions granted for completion. Its value is significantly reduced if you complete the Smartbook late. Smartbook quizzes are required for all chapters in Modules 2, 3, and 4. See Course Calendar

below for due dates of chapter quizzes.

1b. Class Attendance and mini-web assignments. Participation grades will be based on lecture attendance and completion of on-line activities. You are expected to attend 100% of classes scheduled, complete all online activities in the Modules section of Sakai, and submit two mini-web assignments by specific dates (see Assignments in Sakai). Each missed class, or late mini-web assignment, will result in a reduction of **2% of your final grade** up to a maximum of 10%. This rubric for participation is intended to stress the importance of your attendance (and participation) in class activities. One absence from class will be excused; beyond that, each missed class will result in a grade reduction, regardless of the reason for the absence. Medical notes will *not* be accepted to excuse absences from class.

2. Module Tests in Sakai: Five tests will be administered on Sakai and due on the dates specified above. Tests 1-4 will contain approximately 25-30 multiple choice questions and cover material from on-line lectures, textbook readings, and online activities for a given learning module. The tests will be visible to students immediately following the last lecture in a module. Students will have one week to complete the test before it disappears before class (at 10am). Note that in order to maintain the integrity of the online tests, questions are selected from a database at random, the order of response choices is randomized within question, and one cannot go back to previous questions. The time to complete a quiz of this length would normally be 30 minutes; a time limit of 1 hour has been extended to all students in order to accommodate individuals requiring extra time through Student Development Centre. Students are expected to complete the quizzes independently, with no assistance from anyone. Test 5 will be longer in length and include an essay question; it will focus on content from chapters 17 and 18 but will require application of knowledge of material learned throughout the course. *Makeup tests will be permitted only in cases of documented personal/medical emergencies. If you miss a test, you will be given a grade of zero, unless you provide the appropriate documentation.*

3. Digital Presentation: A full description of the presentation assignment is on Sakai, under Assignments. Presentations will involve completion of a digital audio-video and active participation in class discussion on the day your topic is covered. See Sakai for additional information on assignment guidelines and to sign up for topics (which must be done by the end of the 2nd week of classes). The digital audio-video presentation is worth 20% of your final grade and is due on the date and time specified in the calendar (e.g., Group 1 on the topic of caffeine is due Fri Sept 21st before 10am, that is, 72hrs before the class scheduled on caffeine). **Presentations submitted after 10am on the due date (but within 24 hours) will receive a late penalty of 10% (i.e., 10 marks out of 100); presentations submitted between 24-48 hours after the deadline will receive will receive a late penalty of 20%; all presentations received 48 hours after the deadline will be given a grade of zero but are still required to be completed in order to obtain credit for the course.** *Missed presentations will be permitted only in cases of documented personal/medical emergencies, and must still be completed by the end of term in order to receive course credit. Class attendance and participation is required on the day your presentation topic is covered.*

Presentation dates and topics include:

	Due online:	Class	Lecture topics:	Assignment topics:
Group 1	Sept 21	Sept 24	Caffeine	Is there cause for concern with caffeinated energy drinks and caffeine products?
Group 2	Sept 28	Oct 1	Nicotine	Should cigarettes be illegal? What is the evidence for harm?
Group 3	Oct 12	Oct 15	Alcohol	Should the alcohol limit for driving be changed?
Group 4	Oct 19	Oct 22	Natural Health Products	Are you satisfied that NHPs on the market are both safe and effective? Choose a specific example of an NHP.
Group 5	Oct 26	Oct 29	Stimulants	Discuss the rise in use and abuse (addiction) with Methamphetamine?
Group 6	Nov 2	Nov 5	Marijuana	Should marijuana be legal for medical or recreational use?
Group 7	Nov 9	Nov 12	Opiates	Should there be clean needle and heroin dispensary programs available in Canada?
Group 8	Nov 16	Nov 19	Performance Enhancing Drugs	Should some PEDs be allowed in society (e.g., in sports, academia, or the corporate world)?
Group 9	Nov 23	Nov 26	Psychiatry Drugs	How are anti-psychotic medications being used off-label, e.g., in older adults and children with disabilities?

Note: you must sign up for presentation topics on Sakai by the end of the 2nd week of classes.

4. Essay: The full description of the essay assignment is on Sakai, under Assignments. You will be required to write an essay on a specific topic. Using the required reading, *Memoirs of an Addicted Brain*, you must choose one of the drugs used by author Marc Lewis as the topic for your essay. **See Sakai for additional information on assignment guidelines, and the University's policy on academic integrity.** Also note the website at Brock University for information on academic integrity at: <http://www.brocku.ca/academicintegrity/index.php>. The final essay is worth 20% of your course grade. The paper is due in class on **Dec 3rd, at start of class.** If you hand your paper in late, be sure to put the Professor's name on it before placing it in the essay box in the Psychology Department. **The late penalty for the essay is 10% per day (i.e., 10 of 100 marks).** *A paper must be submitted in order to receive credit in the course.*

Turn-it-in Procedures for Essay: Each student must enrol themselves at www.turnitin.com. **The class ID for Psyc 3P72 is 18808721; the enrolment password is "Dopey".** Note: you must hand in a hard copy of your essay, as well as submit an identical electronic copy to Turnitin.com; failure to turn in an identical copy automatically results in a grade of zero. Your essay will be compared against other essays and articles, including papers posted on websites. *The hard copy and the electronic copy are BOTH due on the assignment due date; if either copy is late, the full late penalty will apply.*

If you do not wish to submit your paper to Turnitin.com, there is an alternative available. You will be asked to submit copies of all of your papers listed in the Reference section, your summary notes for each of the articles (indicating the page number in the article where you found each point), and you will be asked to provide page numbers for every citation in your paper. In addition, you will be required to meet with the professor to explain, discuss, and defend your paper in detail. To choose this alternate assignment, you must make an appointment with the professor prior to the deadline to discuss your concerns about using Turnitin.com.

Annotated Bibliography. An annotated bibliography will be required in preparation for the major course essay. It is worth 5% of your total course grade and is due on **Nov 5th at 10am**. See detailed instructions in Sakai, under Assignments. **The late penalty is zero on the assignment.** *Late submissions will be permitted only in cases of documented personal/medical emergencies.*

Course Readings:

There are two required textbooks for the course.

1. **Drugs, Behaviour and Society.** Edited by Hart, Ksir, Hebb, & Gilbert. McGraw-Hill Ryerson, 2nd Canadian Edition, 2015.

Purchasing the text gives you access to *Connect*. *Connect* includes an on-line version of the text and numerous learning activities that will help you prepare for class and enhance your understanding of course content. From the bookstore, you may purchase a package that includes both the text and a *Connect* code, or you may simply purchase a code for *Connect*. The latter option gives you access to the ebook and to all on-line learning resources.

Student registration link for Connect: <http://connect.mheducation.com/class/k-cote-fall-2018>

2. The required reading for the essay is: **Memoirs of an Addicted Brain: A Neuroscientist Examines His Former Life on Drugs**, by Marc Lewis. Doubleday Canada, 2011.

COURSE CALENDAR

**For details, and access to online lectures and activities,
consult the MODULES tool in Sakai**

Week of:	Topic:	
Module 1: Foundations		
Sept 10th	Topic	1. Introduction to Course
	Readings	Hart Chapters 1-3 Lewis Chapters 1-2
	Online Lecture	Introduction to Drugs & Behaviour
	Online Activity	--
	Smartbook Quiz	--
	Presentation topic	--
Sept 17^h	Topic	2. Principles of Psychopharmacology
	Readings	Hart Chapters 4-5 Lewis Chapters 3-4
	Online Lecture	Principles of Psychopharmacology
	Online Activity	-- 2.1: Watch TV Interview with author Marc Lewis -- 2.2. Check out Lewis' Blog -- Optional Neuroscience tutorials
	Smartbook Quiz	--
	Presentation topic	--
Module 2: Drugs Commonly Used		
Sept 24th	Topic	3. Caffeine
<u>Test#1 due before class</u>	Readings	Hart Chapter 11 Continue reading Lewis novel for essay deadline
	Online Lecture	The Biopsychological effects of Caffeine
	Online Activity	3.1: Watch film - 16x9 The Bigger Picture on energy drinks
	Smartbook Quiz	Quiz1 Chapter 11
	Presentation topic	Group 1: Do Canadian regulations go far enough to protect people from caffeine in products?
Oct 1st	Topic	4. Nicotine
	Readings	Hart Chapter 10
	Online Lecture	The Biopsychological effects of Nicotine
	Online Activity	4.1: Watch film - Cigarette Smoking: the uncertain role of nicotine
	Smartbook Quiz	Quiz2 Chapter 10

	Presentation topic	Group 2: Should cigarettes be illegal? What is the evidence for harm?
Reading Week Oct 8-12th, 2018		
Oct 15th	Topic	5. Alcohol
	Readings	Hart Chapter 9
	Online Lecture	The Biopsychological effects of Alcohol
	Online Activity	5.1: Read New in the News on College Binge Drinking 5.2: Watch PBS Interview: Why Haven't Efforts Worked...
	Smartbook Quiz	Quiz3 Chapter 9
	Presentation topic	Group 3: Should the alcohol limit for driving be changed?
Oct 22nd	Topic	6. Natural Health Products
	Readings	Hart Chapter 12
	Online Lecture	--
	Online Activity	6.1: Watch video on Ginkgo Biloba and memory 6.2: Mini-web Assignment #1 Due: Submit internet search on NHPs
	Smartbook Quiz	Quiz4 Chapter 12
	Presentation topic	Group 4: Are Canadian regulations of NHPs safe and sufficient?
Module 2: Illicit Drugs		
Oct 29th	Topic	7. Stimulants
<u>Test#2 due before class</u>	Readings	Hart Chapter 6
	Online Lecture	The Biopsychological effects of Cocaine & Amphetamines
	Online Activity	7.1: Read news in Modules on Crystal Meth
	Smartbook Quiz	Quiz5 Chapter 6
	Presentation topic	Group 5: Discuss the pattern of use and abuse with Methamphetamine in Canada?
Nov 5th	Topic	8. Marijuana & Hallucinogens
<u>Annotated Bibliography Due before class</u>	Readings	Hart Chapter 14 & 15
	Online Lecture	The Biopsychological effects of Marijuana & Hallucinogens
	Online Activity	8.1: Watch Tedtalks: war on drugs
	Smartbook Quiz	Quiz6 Chapters 14 and Quiz7 Chapter 15
	Presentation topic	Group 6: Should marijuana be legal, either for medical or recreational use?
Nov 12th	Topic	9. Opiates

	Readings	Hart Chapter 13
	Online Lecture	The Biopsychological effects of Heroin and Prescription Opiates
	Online Activity	9.1: Watch film – Ben: Diary of a Heroin Addict 9.2: Watch film – Unstoppable: The Fentanyl Epidemic in Canada
	Smartbook Quiz	Quiz8 Chapter 13 Opiates
	Presentation topic	Group 7: Should there be clean needle and heroin dispensary programs available in Canada?

Module 4: Restricted and Controlled Drugs

Nov 19th	Topic	10. Performance Enhancing Drugs
<u>Test#3 due before class</u>	Readings	Hart Chapter 16
	Online Lecture	--
	Online Activity	10.1: Listen to Podcast - A Fair Game 10.2: Listen to Podcast - Cognitive stimulants and human performance 10.3 Mini-web Assignment#2 Due: Submit web search on controversies with PED use and professional sport
	Smartbook Quiz	Quiz9 Chapter 16 PEDs
	Presentation topic	Group 8: Should some PEDs be allowed in society (e.g., in sports, academia, or the corporate world)?

Nov 26th	Topic	11. Hypnotics & Psychiatry Drugs
	Readings	Hart Chapter 7 & 8
	Online Lecture	The Biopsychological effects of Hypnotics and Psychiatry Drugs
	Online Activity	11.1: Watch - Ben Goldrace on TedTalks
	Smartbook Quiz	Quiz10 Chapters 7 and Quiz11 Chapter 8
	Presentation topic	Group 9: How are anti-psychotic medications being used off-label in older adults and children with disabilities?

Module 5: Addictions

Dec 3rd	Topic	12. Substance Use Disorder: Prevention & Treatment
<u>Test#4 due before class</u>	Readings	Hart Chapter 17 & 18
	Online Lecture	Treatment of SUD
	Online Activity	12.1: View CAMH: Introduction to Addiction slide set 12.1: Watch Film on PTSD and Substance Use Disorder
<u>Essay Due In class</u>	Smartbook Quiz	--
	Presentation topic	--

Test#5 Due December 10th by 10am

Psychology Department Course Outline Cover Page

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This page contains important information for all students who are taking courses in the Psychology department. Students are advised to read this information carefully and to take responsibility for all items that appear on this page, and in the following course outline.K

K

1. From the Associate Dean of Social Sciences: "Because academic integrity is vital to the well-being of the university community, Brock University takes academic misconduct very seriously. Academic misconduct includes plagiarism, which involves presenting the words and ideas of another person as if they were your own, and other forms of cheating, such as using crib notes during a test or fabricating data for a lab assignment. The penalties for academic misconduct can be very severe. A grade of zero may be given for the assignment or even for the course, and a second offence may result in suspension from the University. Students are urged to read the section of the Brock University Undergraduate Calendar that pertains to academic misconduct. Students are also reminded that the Student Development Centre (Schmon Tower, Room 400) offers free workshops on writing and study skills and on avoiding plagiarism."

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2. Department Shredding: All essays, tests and exams that are not picked up by students will be shredded. For courses ending on or before June 30, 2006, items were held for six months before shredding. For courses ending after June 30, 2006, items will be held for twelve months. Note that final exams will not be returned to students.

K

3. Student Numbers: In order to ensure privacy of secure information, it is the Psychology Department's policy that student numbers will not appear on the cover page of any assignment or exam. Students are advised to place the name and number of the course, the professor's name, and their TA's name on the cover page of all course material. Student numbers can be placed on the second page of essays and the answer sheet of tests.

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4. Handing in Assignments: All essays and assignments are to be handed in during lecture and/or seminar times. The Assignment Box that is on the wall across from MC B328 in the Psychology Department is to be used only when students cannot make it to class due to extenuating circumstances. If the Assignment Box is used, **students should not place their student number on the cover page. Instead, the name and number of the course, the professor's name, and the TA name should be placed on the cover page. If these items do not appear on the cover page, the assignment may not be given to the correct professor.**K

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5. Last Day for Withdrawal: All courses will have a final date for withdrawal without academic penalty. It is the students' responsibility to ensure that they have withdrawn from the course on or before this date if they do not want a grade assigned. If not withdrawn, a failing grade may be assigned for the course.

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NOTE TO STUDENTS: The Psychology Department (Brock University) **NOT** historical outlines, this outline y, w " \$his, Outline y, w, !, w

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N&f 1) r /k ?rk	7-C&he' k ha,- r/k (k (k r (Df) /r 1 r' - k& S-r))k &/1&'r)k
November 1st w/w	Mid-term Test 2 / i' n' v' i' t' i' o' n' l' a' s' s' (0 %)w
N&f 1) r /R 1 %rk	10-C&he' k ha,- r/k (k (k r (Df) /r 1 r' - k& ' (Df) i& (Df) 6- (Df) 9r), &) r w
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Registrar scheduled w	FINAL EXAM (45%)w

Students are responsible for both lecture material and assigned readings, with roughly equal weighting. The midterm test can only be written at the time indicated, so plan to attend. There can be no make-up tests or special sessions for any student. If and only if there is adequate written medical justification for missing the test, such students will normally have their grades proportionately reweighed, increasing the relative contribution of their final exam. The test and examination will consist of questions in diverse formats, including, multiple choice, short answer, and essay questions, at the instructor's discretion. Grades will be assigned according to the following convention: A+, k*+*#&k A, k*\$* , & k A-, k-#& k B+, k"/-0& k B, k\$"-1& k B-, k0"-0#& k C+, k0"/00& k C, k0\$"/01& k C-, k"-+ #& k D+, k"/+0& k D, k\$"+1& k D-, k\$"/, #& k I4 k Appeal procedures for midterm tests are strictly structured, and will be explained by the instructor. Attention is drawn to the Statement on Academic Ethics and the Senate Resolutions on Academic Dishonesty as found in the Senate Policy Statements distributed at registration and available in the Senate office. Any student who infringes on one of these resolutions will be treated strictly according to the published policy. k

Academic integrity is a core value of the academic mission of Brock University, defined as the pursuit of knowledge and scholarship through the provision of academic programs and a learning environment of the highest quality. It is in the interest of the University's academic mission that every student adheres to the highest standards of scholarly integrity. As such, academic dishonesty is taken very seriously and will not be tolerated.

Academic dishonesty, defined as academic misconduct, consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, e.g., lower grade or failure on the assignment or examination, failure in the course, suspension from the University for a definite period, notation on the student's official transcript, or withholding or rescinding a Brock University degree or certificate.

It is your responsibility to understand what constitutes academic misconduct. For information on the various kinds of academic dishonesty please refer to the current Brock University Undergraduate Calendar at <http://www.brocku.ca/webcal/current/undergrad/areg.html>.

The following illustrates *only four examples* of academic dishonesty:

- Plagiarism, defined as presenting work done in whole or part by someone else as if it were one's own, or for which other credit has been obtained, e.g., using direct quotations or large sections of paraphrased material without acknowledgement.
- Improper collaboration, e.g., copying from another student, or making information available to other students knowing that this is to be submitted as the borrower's own work.
- Impersonation, copying or using unauthorized aids in tests and examinations.
- Obtaining medical or other certificates under false pretenses.

In this course, we will be using a software package designed to reveal plagiarism. Students will be required to submit their work electronically [and in hard copy] so that it can be checked for academic dishonesty. If a student declares a principled objection to participate in the use of such a system, the instructor will provide the student with a reasonable offline alternative [e.g. submission of rough notes and drafts of the assignment, a draft bibliography and/or evidence of the use of sources and references, etc].

READING (on reserve in the library)

Books

1. K. J. Gergen, *The Self and Social Behavior in Changing Conditions* (New York: Basic Books, 1974).
 - K 'ha, -r/ k k g 1-16)k
 - K 'ha, -r/ k k g >51)k
 - K 'ha, -r/ k k g >5-172)k
2. K. J. Gergen, *The Self and Social Behavior in Changing Conditions* (New York: Basic Books, 1974).
 - K 'ha, -r/ k k g >5-17)k
 - K 'ha, -r/ k k g 73-212)k
 - K 'ha, -r/ k k g 213-227)k
3. K. J. Gergen, *The Self and Social Behavior in Changing Conditions* (New York: Basic Books, 1974).
 - K 'ha, -r/ k k g 2>-117k
 - K 'ha, -r/ k k g 120-15)k
5. K. J. Gergen, *The Self and Social Behavior in Changing Conditions* (New York: Basic Books, 1974).
 - K 'ha, -r/ k k g 53->1)k
 - K 'ha, -r/ k k g >>103)k
 - K 'ha, -r/ k k g ~ 5-125)k
5. K. J. Gergen, *The Self and Social Behavior in Changing Conditions* (New York: Basic Books, 1974).
 - K 'ha, -r/ k k

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Se_`ej be[K2018**

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E-j ai~ marina.de.lima.marcolin@brocku.ca
CX^`ac`~ Ext.K6282,KMCB408
OfficeKXZ[] ^ ~ y appointment

Lec`Z[e: Monday andKWednesday ,`^^ - ~^^^ K6mK! K248

LabX[a`X[ie] ^ Monday ~^^ - ~^^ K6mK! K254
Labs will run on alternate weeks beginning on September 10th

CXZ[] eKCaLe^da[KDe] c[i_`iX^`

IntegrativeKapproach toKbasicKneuroscienceKfocusing onKbehaviouralKanalysis inKanimalKmodels' insights intoKbrainKandKbehaviourKrelations providedKby the traditionalKand theKlatest techniques (e.g. stereotaxic surgery,KDREADDs, viral vectors andKoptogenetics,KtransgenicKorganisms).

P[e[ezZi] i`e] ^ BIOL 1P92KandKNEURK2P36K

Completion of this course will replace previous assigned grade and credit obtained in #\$\$%K (PSYC)K,<=1,K,= 1 and 3P82.*

RezZi[edKReadi^!] ^

- CCACGuidelines <http://www.ccac.ca/en/training/modules2>
- Review andKresearchKpapers forKeachKclass willKbeKpostedKonKSakai

CXZ[] eKXjZ^ ica`iX^`

In theKevent ofKclass cancellations orKotherKimportant announcements, students willKbe informed thro\$%KSakai.K3tudents areKresponsibleKforKchecking theirKemailKandKSakaiKregularly throughout the term.

j_X[` a^`Da`e] ^

OctoberK8⁴⁵– 12⁴⁵ ReadingKWeek

OctoberK24⁴⁵ DateKby which you willKhaveKobtainedKa least ~" 3 Kof yourKcourseKgrade

NovemberK6⁴⁵ DeadlineKfor withdrawlKfrom theKcourse without academicKpenalty

Lea[^i^! KXjec`iQe] ^

1. DevelopKcriticalKeyeKforKcurrent literature,KexperimentalKdesignKandKethicalKissues inKbehaviouralKneuroscience
2. GainKknowledgeKabout behaviouralKneuroscienceKassessments and techniques
3. Learn tools forKappropriateKdataKacquisitionKandKdataKanalysis
4. Improve skills in scientific writing

Lecture Schedule

Note: adjustments may be made over the duration of the course

Week	Date	Topic
1	Sept 10 th	Introductory concepts of animal behaviour
2	Sept 17 th and 24 th	Why do we use animals in research?
3	Sept 24 th and 31 st	Ethical considerations on animal research
4	Sept 24 th and 26 th	How do we study animal behaviour?
5	Oct 1 st and 8 th	Experimental designs and Test 1
Reading Week		
6	Oct 15 th and 22 nd	Anxiety and depression
7	Oct 22 nd and 29 th	Learning and memory 1
8	Oct 29 th and 31 st	Learning and memory 2
9	Nov 5 th and 12 th	Social behaviours 1
10	Nov 12 th and 19 th	Social behaviours 2 and Test 2
11	Nov 19 th and 26 th	Social behaviours 3
12	Nov 26 th and 28 th	Drug abuse and addiction
13	Dec 1 st	*Test

Lab Schedule

Note: adjustments may be made over the duration of the course

- Lab 1 – Sept 10th Scoring scheme set up
- Lab 2 – Sept 24th Video scoring
- Lab 3 – Oct 15th Test 1 review and discussion
- Lab 4 – Oct 29th Statistical analysis 1
- Lab 5 – Nov 12th Test 2
- Lab 6 – Nov 26th Make-up session for missed quizzes and help session

Assessment

Component	Grade Weight	Date
#part, up quizzes	103 K	Throughout the term
Test 1	203 K	Oct 1 st Lecture
Lab Report	103 K	November 2 nd Lecture
Test 2	153 K	November 12 th Lab
Term paper	& 3 K	Nov 28 th Lecture
Test 3	153 K	Dec 1 st Lecture
Total	1003 K	

Start of Lecture

At the beginning of each lecture, each student will answer a brief quiz regarding the mandatory readings of each lecture. The final grade will be the combination of the best 10 quizzes of each student.

Lab 1

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Each student will work in groups but will write the lab reports individually. The lab report is due November 12th. A hard copy must be submitted to the instructor on that Monday by 9am in class. More details will be posted on Sakai.

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Each student will write a research proposal on a topic and technique of their interest. The [X Xa] K X ic K Z] K be [X Q ed b ~ K he K ^] [Z c X] K Z ^ i K Oc X be [K ~ st K is due on November 28th by 4pm. A hard copy must be submitted to the instructor (a n k electronic copy must be submitted through the assignment tab on Sakai. More details will be posted on Sakai.

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#tudents must attend all classes and lab scheduled unless medical exemption issued. Participate and keep up to date with all course content - this condition is not met/ students will lose 3 % of their final grade per unjustified missed class/lab.

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Late submission of assigned coursework will not be accepted, unless accompanied by medical documentation. Please see the medical exemption policy and medical health certificate at <http://www.brocku.ca/healthservices/policies/exemption>

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One makeup examination will be provided for each test for students with medical documentation only. In order to write the makeup exam, you must notify the instructor of a medical exemption by email [i X] to missing a test. Original copies of medical documentation must be provided as soon as possible. If documentation has not been provided within one week of missing a test or assignment, a grade of zero may be given.

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Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks/ appropriate paraphrasing and referencing/citation, collaborating appropriately/ and avoiding misrepresentation, is a core principle in university study. #tudents should consult Section 11/ "Academic Misconduct" in the "Academic Regulations and University Polices" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions/ and the procedures and penalties.

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's part of Brock University's commitment to a respect- u work and learning environment/ the University will make every reasonable effort to accommodate all members of the university community with disabilities. -you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Services for #tudents with Disabilities in the #tudent Development Centre, t% floor K

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Schmon Tower, 6x03240, You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments

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Academic Accommodations for Religious Obligations:

Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test/assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements

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Medical Exemption:

The University requires that a student be medically examined by Health Services or a off-campus physician, [i] to an absence due to medical reasons from an exam, lab, test/quiz/ seminar, assignment/etc. Completed Brock University medical certificate must be provided for missed tests or assignments. The medical certificate can be found at <http://www.brocku.ca/health/services/policies/exemption>

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I am an instructor that focuses on fostering the development of students' skills through mastery of the course content. I aim to create a positive and supportive learning environment where diversity of ideas can be freely expressed. I strive to emphasize the links between topics and encourage students to think about the organization of the knowledge they are gaining. I am aware of the diversity of students, their goals, and learning styles so I attempt to engage students and assess their learning in a variety of ways. I encourage the development of critical thinking through applications to daily life and experiences outside the classroom that are reflected in course assessments and activities in lecture.

Course Communication

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Students will be emailed via Sakai in the event of cancellations, inclement weather, and other issues.

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Component

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Component	Weight	Due Date
Lecture Participation	+0, k	k
Learning Experiences Assignment / Personality, Interests, and Values	+0, k	January 22 ²³ at 2:00pm
Learning Experiences Assignment / Skills	+0, k	January 24 ²⁴ at 2:00pm
LinkedIn Profile	5, k	February 5 ²⁴ at 2:00pm
1 st Search Assignment	+0, k	February 27 ²⁴ at 2:00pm
Professional Development Assignment	5, k	February 28 ²⁴ at 2:00pm
Resume and Cover Letter	+0, k	March 5 ²⁴ at 2:00pm
Interview Assignment / Preparation with Interview Question Resources	5, k	March 27 ²⁴ at 2:00pm
Interview Assignment / Interview Stream	5, k	March 4 ²⁴ at 2:00pm
Knowledge Mobilization Assignment	5, k	March 28 ²⁴ at 2:00pm
9 th section on Career Conversations	5, k	April 2 ²³ at 2:00pm
- portfolio	20, k	April 4 ²⁴ at 2:00pm
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Participation points in lecture will be based on group work, answering questions, discussions based on videos, etc. This is an important aspect of the course and students are encouraged to attend lecture to earn these participation points. These points will come randomly throughout the term, so please attend all lectures to ensure you get credit.

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Complete this assignment by 11:59 PM on Monday, 11/15/2022.

Completing this assignment will help you to identify at least **eight key learning experiences** that you have had while completing your degree, and what you learned from them. You are asked to answer a number of questions about these eight experiences. As some of these questions will be factual and straightforward while others will require you to reflect more! This assignment will act as a basis for the creation of your portfolio, your final assignment in this course.

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This assignment will ask you to reflect on the skills that you have gained from experiences you reflected on last time. Further, you will learn more about a specific occupation and the transferable skills required for that occupation.

This assignment will ask you to reflect on the skills that you have gained from experiences you reflected on last time. Further, you will learn more about a specific occupation and the transferable skills required for that occupation.

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Profile

The purpose of this assignment is to launch your participation in LinkedIn (<https://www.linkedin.com>), which is an online tool that you can use to build professional connections.

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In addition to your LinkedIn profile, you will need to find three possible contacts via LinkedIn or Ten Thousand Coffees (<https://www.tenthousandcoffees.com>) to speak with them about their career. You have until mid-March to complete the interview and reflect on it, but start now as it may take several weeks to connect with someone. It will be great to speak with you. You may wish to wait until you have completed the Search Assignment and Professional Development Assignment before you choose the first person to contact. Action on Career Conversation Assignment. For more details about what you need to ask the person you contact.

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Job

In this assignment, you will be asked to write about some of the diverse careers that psychology majors might pursue after their degree. The goal in having you complete this assignment is to familiarize yourself with a number of resources that you can use when trying to make decisions about a potential career. These resources can help you in terms of giving you information about things like the demand there is for the job, which will be directly related to the salary expectations, credentials that are needed, and skills that are required.

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Professional Development

Using LinkedIn.com, find three Brock alumni who have either the same career path, or different ones that interest you. You are asked to ask questions about their training and skills, and to reflect on what you can learn from their professional development.

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Assignment

For this assignment, you will create a resume and cover letter for a current job posting that interests you. You are required to include a link to this job posting when you submit this assignment. This will require you to update your resume and teach you how to tailor a resume for a specific posting.

When you interview for a job, there are a number of questions that a potential employer might ask. For this assignment, I want to help you begin thinking about questions that you might encounter during an interview and some of the best ways to answer them. Our job is to search for information about the purpose of the question, the interviewer might ask it, and what a good strategy would be for answering it.

When you interview for a job, there are a number of questions that a potential employer might ask. For this assignment, I want to help you begin thinking about questions that you might encounter during an interview and some of the best ways to answer them. Our job is to search for information about the purpose of the question, the interviewer might ask it, and what a good strategy would be for answering it.

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is the date for withdrawal from the course without academic penalty

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are set aside for designated reading days these may be used to cover assessed because of adverse weather

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is set aside for formal examination period but note that this course has no final exam

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Academic misconduct is a serious offence. In principle, academic integrity, particularly doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the Undergraduate Calendar, available at <http://3brocku.ca/webcal> to view full description of prohibited actions, and the procedures and penalties.

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3 &)'" & w Accommodation ^ w

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Services for Students with Disabilities in the Student Support Centre (the floor in Schmonk Tower, K&B2) 0. You are also encouraged to discuss any accommodations with the instructor in advance of due dates and scheduled assessments.

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Brock University requires that a student be medically examined in Health Services, or a non-campus physician prior to an absence due to medical reasons from an exam, lab, test, quiz, seminar, assignment, etc. Medical Certificate can be found at: <http://3brocku.ca/health-services/3services/exemption>

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Slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. Student posts or instructor work, without the instructor's express consent, may be charged with misconduct under

Brock's Academic Integrity Policy and Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights

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Courtesy Policies

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Comet to lectures

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There will be discussions, videos, and activities that will require responses and group participation. Participation will make up 40% of your final grade.

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Instructions for the assignments can be found under the menu links for the assignments on the left side of the SAKAI site for * (@:) * OGI instructions, worksheets, evaluation criteria, and other supporting documents relevant to each assignment will be linked to each assignment.

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Assignments should be submitted using the Blackboard tool, a link to which is provided in the instructions for each assignment, and can also be accessed under the Assignments menu on the left side of the SAKAI site. Save your work on the worksheet, and then browse and attach this document to the Assignment link for the particular assignment. Once it has been submitted and marked, your work or instructor will attach a document with feedback and grading of this assignment. The status of the assignment in the assignment list will change to "returned" when it has been graded.

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@gradebook. Grades for each of your assignments will be posted throughout the course to Gradebook. Please note that grades for each assignment will be out of a certain number of points that corresponds directly to the percent of your final grade. For example, an assignment out of 10 means that the assignment is worth 40% of your final grade.

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o y % us. w isyllabus or course outline may be accessed here.

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Announcements. Use this tool for any course announcements from the instructor, coordinator or markers. We will always email students when a new announcement is posted.

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Lecture Notes. Some lecture notes will be posted in SAKAI under Resources in the "Lecture Notes" link.

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Courtesy Communication

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Please contact the coordinator, Tammy Stewart, tammy.stewart@brocku.ca about the following issues:

- Extenuating circumstances, such as a medical illness, that prevent you from submitting an assignment by the due date. Please email a picture or scan of appropriate documentation, a medical note to the coordinator as part of your request to waive the penalty for a late assignment.
- Technical questions about the use of LinkedIn, InterviewStream, SAKAI, etc.
- Questions to clarify assignment instructions.
- Questions about grades recorded in Gradebook in SAKAI.

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There are three markers for the assignments in this course. They have been assigned to students to evaluate within an alphabetical range. Please see the list of markers above to determine who will be

marking your assignments. Please contact your marker directly if you have any questions about the evaluation of your assignments.

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* Please contact the instructor, Caitlin Mahy at brocku.ca with any conceptual questions about course material. Clarifying a concept introduced in lecture. Brief, straightforward questions may be addressed via email that take less than 5 minutes to answer, whereas more complex questions should be discussed in person at an appointment. Please expect a response within 24 hours.

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Community & Learning

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If you have questions, feedback, or find yourself struggling in this course, please come and talk to me right away. The sooner you talk to me the more I can help about a problem. If you come to me a few minutes or after the fact, there will be very little I can do.

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Course & Ironmen

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I want to create an open and accepting environment. Let's all work together to make sure everyone is comfortable and respected.

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S** w w January k 24 k	LinkedIn & Use of Social Media k <i>Guest Speaker: Cara Boese</i>	LinkedIn Profile & Initiative career conversation k	February k 5 ⁶ k 5, k 2 k p m k
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S** w w March k 4 k	Knowl ^o Mobilization k <i>Guest speaker: Jayne Morrish</i>	Knowl ^o Mobilization Assignment k	March k 28 ⁶ k 5, k k a t k 2 k p m k
S** w w March k 28 k	Panel Discussion k	9 ^o action & Career Conversation k	April k 2 ²³ k 5, k k a t k 2 k p m k
S** w 2 w April k 2 k	Networking k <i>Guest Speaker: Marisa Brown</i>	- portfolio k	April k 4 ⁶ k 20, k k a t k 2 k p m k



Course Number: PSYC 4P49
Term/Year/Duration: FALL/2016/SEP-DEC
Course Title: HUMAN EMOTION

Course Description

The Human Emotion course will cover historical and current beliefs about the nature of human emotions, including the definition and measurement of emotions, models of emotion perception, the relationship between emotion and other domains of psychology, developmental changes in emotion across adulthood, emotion-related psychopathology, and fear processing. You will be encouraged to think critically throughout the course, drawing links across the different topics and reading beyond the articles posted on SAKAI for you each week. I ask that you find and read at least one additional article each week (of your choice) that is related to the lecture topic and that you are prepared to discuss your additional readings with others during the seminars. There is not a set textbook for this course.

Instructor Name:	Abbie Coy, PhD
Email:	acoy@brocku.ca
Instructor's Office Location:	Plaza (6 th Floor), Room 628A
Teaching Assistant:	Meghan Weissflog (meghan.weissflog@brocku.ca)
Office Hour:	Meghan Weissflog office hour 2pm-3pm on Tuesdays in Plaza 615

TIMES AND LOCATIONS:

LECTURES: Thursdays, 5pm – 7pm in TH147

SEMINARS:

1. Wednesdays, 2pm – 3pm in PL308
- OR
2. Tuesdays, 4pm – 5pm in PL411

Office Hour (Meghan Weissflog) – Tuesdays 2pm-3pm in PL615

Note: Classes at Brock University end ten minutes ahead of the hour to facilitate transfer time.

Course Prerequisites (if any):

Restriction: Open to PSYC (single or combined), NEUR majors and PSYC minors until the date specified in the Registration guide. Students must have 13.5 credits or 5.0 PSYC credits above PSYC 1F90.

Prerequisite: PSYC 1F90

Required Readings or Texts:

Readings for lectures and seminars will be posted on SAKAI each week. As fourth year students, I would expect you to be reading **at least one additional article each week** that interests you and that is related to the lecture topic for that week. You are responsible for finding and reading an article of interest. You will be asked to provide details on this paper in your weekly summaries, and you may be asked **to discuss your additional reading each week in the lecture and in the seminar.**

Course Communications:

Please check SAKAI regularly for updates and announcements.

Evaluation Components and Due Dates

Evaluation Component	Grade Weight	Due Date
Participation: 1. Seminar contribution oral (50% of participation grade) 2. Written commentary (50% of participation grade)	20	Ongoing assessment until final class for PSYC 4P49. Written summaries (typed) to be handed in during your weekly seminars. We will discuss the format in the first lecture.
Mid-term exam: 1 hour. Short answers (not multiple choice)	20	6th October 2016 during the lecture slot.
Poster presentation: 1. Produce a research poster (50%) 2. Give a short 5 minute oral presentation in which you walk the audience through your poster (50%)	30	10th November 2016. Presentations will take place during the lecture slot.
Final essay	30	15th December 2016 – we will discuss how I would like you to submit this essay nearer the time
Total	100%	

***NOTE THAT THERE IS NOT A FINAL EXAM FOR THIS COURSE**

Late Submission Policy:

The penalties for late submission of assigned coursework (e.g., papers, assignments, weekly reflections) are 5% per day, unless accompanied by medical documentation. See Medical Exemption Policy and the medical health certificate at <http://www.brocku.ca/health-services/policies/exemption>

Relationship between attendance and grades:

Students are expected to attend all classes and must submit all assignments in order to pass this course.

Important dates: Key dates listed below. See the relevant online University calendar at <http://brocku.ca/webcal/> for further details.

November 8th, 2016 is the date for withdrawal from the course without academic penalty.

You will be notified of 20% of your course grade **prior to November 1st, 2016**.

Week commencing **Monday October 10th 2016** is a reading week - there will be no classes.

Academic Policies

Academic Integrity:Statement for undergraduate courses

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Polices" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.

Plagiarism software:Turnitin.com

This course may use Turnitin.com, phrase-matching software. If you object to uploading your assignments to Turnitin.com for any reason, please notify the instructor to discuss alternative submissions.

Intellectual Property Notice:

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under

Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

Academic Accommodation:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact Services for Students with Disabilities in the Student Development Centre (4th floor Schmon Tower, ex. 3240). You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

Academic Accommodation due to Religious Obligations:

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Medical Exemption Policy:

The University requires that a student be medically examined in Health Services, or by an off-campus physician prior to an absence due to medical reasons from an exam, lab, test, quiz, seminar, assignment, etc. The Medical Certificate can be found at: <http://www.brocku.ca/health-services/policies/exemption>

Syllabus is on the next page....

Sequence and Dates of focus/activities/readings

Week/Module/Class Dates	Focus/topic	Lecture Activities/Assessments	Readings	Seminar/Lab Activities
Lecture 1 8 th September Seminar 1 13 th & 14 th September	Course Intro What is an emotion?	Review syllabus. Talk about "what is an emotion"?	None	Submit commentary in your seminar. Seminar discussion will focus on your commentary.
Lecture 2 15 th September Seminar 2 20 th & 21 st September	Measuring emotions	Lecture + discussion	Posted on SAKAI each week	Discuss lecture reading + own reading Submit commentary in your seminar.
Lecture 3 22 nd September Seminar 3 27 th & 28 th September	Models of emotion perception	Lecture + discussion	Posted on SAKAI each week	Discuss lecture reading + own reading Submit commentary in your seminar.
Lecture 4 29 th September Seminar 4 4 th & 5 th October	Emotional development + we will discuss the mid-term exam	Lecture + discussion	Posted on SAKAI each week	Discuss lecture reading + own reading Submit commentary in your seminar.
Lecture 5 6 th October No Seminar 5 (11 th & 12 th October) due to reading week	MID-TERM exam in class	MID-TERM exam in class	Course material covered so far (lectures and seminars)	N/A **No seminars and no commentary due this week
Lecture 6 13 th October Seminar 6 18 th & 19 th October	No lecture READING WEEK	No lecture READING WEEK	Choice from a list of review papers TBC	Activity based on reading completed during reading week Submit commentary in your seminar.
Lecture 7 20 th October Seminar 7 25 th & 26 th October	Emotions and the brain	Lecture + discussion	Posted on SAKAI each week	Discuss lecture reading + own reading Submit commentary in your seminar.
Lecture 8 27 th October Seminar 8 1 st & 2 nd November	Emotional disorders I + discuss poster presentation	Lecture + discussion	Posted on SAKAI each week	Poster prep workshop **No commentary due this week

Lecture 9 3 rd November Seminar 9 8 th & 9 th November	Emotional disorders II + discussion about the poster session next week	Lecture + discussion	Posted on SAKAI each week	Discuss lecture reading + own reading Submit commentary in your seminar.
Lecture 10 10 th November Seminar 10 15 th & 16 th November	POSTER SESSION in the lecture slot	POSTER SESSION in the lecture slot	Those relevant to your poster	Review of poster session / any presentations we did not have time for during the lecture slot **No commentary due this week
Lecture 11 17 th November Seminar 11 22 nd & 23 rd November	Fear processing	Lecture + discussion	Posted on SAKAI each week	Discuss lecture reading + own reading Submit commentary in your seminar.
Lecture 12 24 th November Seminar 12 29 th & 30 th November	Review/integration Discuss final essay	Review Lecture + Open discussion	Review previous readings	Essay writing / questions about essay Submit commentary (essay plan) in your seminar.
Lecture 13 1 st December Seminar 13 6 th & 7 th December	Drop-in with any questions	Drop-in	Review previous readings	Drop-in to receive feedback on essay plans **No commentary due this week
Final Essay Due on 15 th December 2016				

hormone-behaviour relationships. kkkkkkkk

3. k Ability to read, critically evaluate, and synthesize readings from the primary literature in the field as evidenced by oral presentations and written work. k

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SEMINAR w LECTURE w SCHEDULE w

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DATES

TOPICS

Suggested Textbook Readings

(Dates for lecture topics are approximations. Dates for quizzes and assignments are fixed). *Italicized information refers to seminars.*

SEPT 4	The endocrine system <i>Seminar – presentations are assigned</i> <i>Provide choice of three presentation topics.</i>	Chapt 2
SEPT 11	Theoretical and technical approaches Required reading: Beach FA (1950) The snark was a boojum. <i>American Psychologist</i> , 5: 115-124. Quiz 1. <i>Endocrine disorders presentations</i>	Chapt 1
SEPT 18	Male sexual behaviour Required reading: Antonio-Cabrera E, Paredes RG (2014) Testosterone or oestradiol implants in the medial preoptic area induce mating in noncopulating rats. <i>Journal of Neuroendocrinology</i> . 26: 448-458. Quiz 2. <i>Endocrine disorders presentations</i>	Chapt 6
SEPT 23	Female sexual behaviour Required reading: Roney JR, Simmons ZL (2013) Hormonal predictors of sexual motivation in natural menstrual cycles. <i>Hormones and Behavior</i> , 63: 636-645. Quiz 3. <i>Endocrine disorders presentations</i> ASSIGNMENT OF PRESENTATION TOPICS	
OCT 2	Sexual Differentiation Required reading: Burke et al. (2014) Hypothalamic response to the chemo-signal androstadienone in gender dysphoric children and adolescents. <i>Frontiers in Endocrinology</i> , May Vol 5, Article 60. Quiz 4. <i>Review</i>	Chapt 5
OCT 9	Class Test – 20% <i>No seminar</i>	
-KAK16k	k READING WEEK	
OCT 23	Hypothalamic-pituitary-adrenal axis Required reading: TBA. Quiz 5. <i>Presentations</i>	Chapt 11

OCT 30

Learning and Memory

Chapt 12

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Required reading: TBA**Quiz 6.***Presentations*

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NOV 6

Parental behaviour

Required reading: k wadhan DS" kGolomon-Nanek ANk Hillis MC" kGrober MS (2014)k.k mechanismkforrapidneurosteroidalkregulationofkparentingkbehaviour.k*Proceedings of the Royal Society: Biological Sciences.* kUl7;281(1786).kpii:k20140239.kdoi:k 10.1098/rspb.2014.0239.k

Quiz 7.*Presentationsk k*

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Required reading: BattorikAkHilczynskikHk(2014) Differenceskinkforebrainkandrogenk receptorlexpressionkinkwinnerskandlosersofkmalekolekaggressivekinteractions.k*Brain Research,* k<http://dx.doi.org/10.1016/j.brainres.2014.07.028>k

Quiz 8.*Presentations*

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COMPOSITION OF GRADES:

TESTS: 45%

QUIZZES: 8 quizzes, best 5 included for 15%.

Seminar endocrine disorders assignment: 10%

Presentation and annotated bibliography: 25%

Contribution to seminar and class discussion that demonstrates knowledge of course material (lecture and assigned reading material) (evaluated by questions posed and questions answered) and attendance: 5%

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SEMINAR PRESENTATIONS ON ENDOCRINE DISORDERS (10%)

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function (mood, cognitive, motoric, anything k'brain-related'), be sure to mention it. k k A e l o n l y p o s s i b l e k
visually aids to use are paper ones (in other words, if you want to show a picture, bring one, but no
electronics are to be used).

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Endocrine w#-\$&(&vndMe0!\$(- vassigne(w#&-class):w1) kKushing's syndrome; k(2) lacromegaly; k(3) k
radioimmunoassay; k(4) polycystic ovarian disease; k(5) hyperaldosteronism; k(6) diabetes insipidus and k
mellitus; k(7) enzyme immunoassay; k(8) precocious puberty; k(9) kNallman's syndrome; k(10) k. Addison's k
disease; k(11) conditional genetic knockouts; k(12) congenital hypothyroidism (cretinism) k(13) kHashimoto's k
thyroiditis; k(14) pancreatitis; k(15) k alacorrhea; k(16) k immunohistochemistry/immunocytochemistry k(17) k
Grave's disease (adult onset); k(18) k ynecomastia; k(19) k l and k removal and k hormone replacement; k(20) k*in
situ* hybridization.

kk

CLASS PRESENTATIONS w w

^\$1 r-point\$&- ntation will involve v! following \$k

- 'K - n c e l y o u r p r e s e n t a t i o n t o p i c h a s b e e n a s s i g n e d , l y o u s h o u l d b e g i n t o c o l l e c t a s m a n y r e s e a r c h a r t i c l e s a s p o s s i b l e o n t h e t o p i c . k
- 'K Your task will be to prepare a presentation that answers the question posed in your presentations topic. A presentation SHOULD NOT be in the form of a typical university teaching lecture on a topic. k k Instead, imagine that you were the expert that was called on to speak to a community group about the topic, or that you were invited to talk on a radio programme about the topic. k
- 'K Go, i9 v& ative' find ways to simplify the material to convey to a general audience k l o n e ' s k w h o m a y n e v e r h a v e h a d a b i o l o g y o r p s y c h o l o g y c l a s s . k " e v e r t h e l e s s , d o n o t s a c r i f i c e a c c u r a c y . k
- 'K REHEARSE. You will have k \$ v s & w h a n v 5 w # ' k f o r y o u r p r e s e n t a t i o n . k
- 'K Some w (a s v s & f o r m a t t i n g \$ k - " c o u r s e , a p o w e r - p o i n t p r e s e n t a t i o n i s o n e p o s s i b i l i t y) b u t k e e p i t e n g a g i n g k w i t h a s m u c h t e x t o n s l i d e s a s p o s s i b l e . Y o u m a y a l s o m a k e a v i d e o k p r e s e n t a t i o n (c o u l d b e l i k e a d o c u m e n t a r y o r s e t u p a s a n i n t e r v i e w) o r h a v e a v o i c e r e c o r d i n g o f y o u r p r e s e n t a t i o n t h a t c o e s a l o n g k w i t h s o m e k v i s u a l s . k H a t e v e r y o u d o , k t h o u g h , k m a k e s u r e y o u d o n o t h a v e t e c h n i c a l k i t c h e s t h e d a y o f y o u r p r e s e n t a t i o n (m a k e s u r e t h e k e q u i p m e n t r e q u i r e d i s r e a d y , k w o r k i n g , a n d l a v a i l a b l e f o r y o u r p r e s e n t a t i o n) . k
- 'K You can get real ideas for how to present to a general audience from television programs, k radio programs, and podcasts on science-related topics. For example, listen to k ' u i r k s a n d k ' u a r k s " o n k K ? K r a d i o , o r k G i e n c e F r i d a y o n k " a t i o n a l k v b l i c k 9 a d i o , o r k t h e k G i e n c e k H e e k l y k p o d c a s t p u t o u t b y t h e k ? r i t i s h n e w s p a p e r k A h e k G u a r d i a n) , o r s o m e o f t h e k A e d A a l k s , o r k t h e k p o d c a s t p u t o u t b y t h e k j o u r n a l k " a t u r e " . k k A e k 9 a d i o , a b " p o d c a s t s a r e v e r y e n t e r t a i n i n g a n d k a r e h i g h l y r a t e d . F o r t e l e v i s i o n p r o g r a m s , t r y k " - C . 2 l o n k w ? G . . . m a y b e y o u c a n f i n d o l d k e p i s o d e s o f k ? i l l k " y e t h e k G i e n c e k G u y " k
- 'K You will likely read much more and learn much more than you will ever be able to present in k % k m i n u t e s . k k A a t k i s k - N k) k w e k w a n t y o u t o p r e s e n t t h e d i s t i l l e d v e r s i o n . k k A k i v e k u s a k s e n s e k h o w e v e r , o f k w h a t y o u h a v e r e a d i n k a k m o r e a c a d e m i c k f o r m , l y o u w i l l p r o v i d e u s a n k a n n o t a t e (w b i b l i o g r a p h y o f t h e k v - 0 a r t i c l e - w h a t y \$ % % - (k o p r e p a r e y o u r p r e s e n t a t i o n . k k D E A D L I N E \$ k A e l a n n o t a t e d b i b l i o g r a p h y i s k d u e i n k c l a s s t h e d a y o f y o u r p r e s e n t a t i o n . k

. **annotate (bibliography)** is a reference list that also includes a few sentences after each reference about how the article was important or relevant for your presentation. Here are modifying what we want from the typical annotated bibliography and request that you provide the following specific information: For each of the articles, you will provide a brief write-up in which you will describe 1-3 of the principles of hormone/behaviour relationships (list of principles is on later pages) were illustrated in the article presented and if the principles were illustrated. You do not need to describe each and every principle illustrated; pick a few of the best illustrations (and try not to pick only the most obvious). Typically, this will require no more than two or three paragraphs per article.

BE SURE TO MAKE AN APPOINTMENT TO CONSULT AT LEAST TEN DAYS IN ADVANCE, AND AT LEAST TWO WEEKS IN ADVANCE.

REMEMBER: YOU ARE ALWAYS WELCOME TO MAKE AN APPOINTMENT FOR

COURSE-RELATED HELP AND ADVICE AND CLARIFICATION.

Because academic integrity is vital to the well-being of the university community, Brock University takes academic misconduct very seriously. Academic misconduct includes plagiarism, which involves presenting the words and ideas of another person as if they were your own, and other forms of cheating, such as using crib notes during a test or fabricating data for a lab assignment. The penalties for academic misconduct can be very severe. A grade of zero may be given for the assignment or even for the course, and a second offense may result in suspension from the University. Students are urged to read the section of the Brock University Undergraduate Calendar that pertains to academic misconduct. Students are also reminded that the Student Development Centre (Schmon Tower, Room #202) offers free workshops on writing and study skills and on avoiding plagiarism.

CLASS PRESENTATION TOPICS: (NOTE: All presentations will be made in person)

k

1. Does taking oral contraceptives change how the brain works?

k

2. What are the benefits to hormone replacement therapy in menopausal women?

k

3. Is there such a thing as a "morning person" and a "night person"?

k

4. Does stress speed-up aging?

k

5. What triggers puberty, and why is it happening later than before?

k

6. Does anabolic steroid use lead to "roid rage"?

k

7. What does the study of songbirds tell us about brain plasticity?

k

8. Could you take melatonin to recover from jet-lag?

k

9. Do women that live together cycle together?

k

10. Is there a link between male infertility and environmental toxins?

k

11. How is research progressing on the male version of "the pill"?

k

k

, .kKantautismbeunderstoodasexcessivemaleness?k

k

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k

".k.rekwomenmoreattractiveudingthefertilephaseofthecycle?k

k

- .kShouldkworryaboutsodiuminsportsandenergydrinks?k

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w.kHhatiskcomfortingabout“comfortfoods”?k

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'. . Dokthesekenes(e.g.,thekmelanocortin-4receptorkene)makemeklookfat?k

k

9.kIs theredarksidektoxytocin?(notalwaysk“thelove/trusthormone”)k

k

G.kGrrlpower:kBowisktherelationshipbetweenhormonesandsexdifferenceskunusualinhyenas?k

k

A.kHhatcanwelearnaboutk hormone-behaviourrelationshipsfromnakedmolek rats?k

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@kGex(in)determination:kBowandwhendoeslananemonefish(protandrouskfalsek clownfish)changeitsk sex?k

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PRINCIPLES OF HORMONES & BEHAVIOUR RELATIONSHIPS (Pfaff *et al.*, 2004)

k

1. Hormones can both facilitate and repress behavioural responses.

k

2. A single hormone can have many effects: a single hormone can affect complex behaviours.

k

3. Hormone combinations can be important for influencing an individual behaviour.

k

4. Hormone metabolites can be the behaviourally active compounds.

k

5. There are optimal hormone concentrations: too much or too little can be damaging.

k

6. Hormones do not 'cause' behaviour; they alter probabilities of responses to even stimuli.

k

7. Familial/genetic dispositions to hormone responsiveness can influence behaviour.

k

8. The sex of the recipient can influence the behavioural response.

k

9. Hormone actions early in development can influence hormone responsiveness in the K" during adulthood.

k

10. Puberty alters hormone secretion and hormone responsivity and heralds sex differences.

k

11. Changes in hormone levels and responsiveness during aging affect behaviour.

k

12. Duration of hormone exposure can make a big difference: in some cases longer is better; in other cases brief pulses are optimal for behavioural effects.

k

13. Hormonal secretions and responses are affected by biological clocks.

k

14. Effects of a given hormone can be widespread across the body; central effects consonant with peripheral effects form coordinated/unified mechanisms.

k

15. Hormones can act at all levels of the neuraxis to exert behavioural effects; the nature of the behavioural effect depends on the site of action.

k

16. In responsive neurons, rapid hormone effects can facilitate water-enomic actions.

k

17. Gene duplication and splicing products for hormone receptors in the K" often have different behavioural effects.

k

18. Hormone receptors and other nuclear proteins influence hormone responsiveness.

k

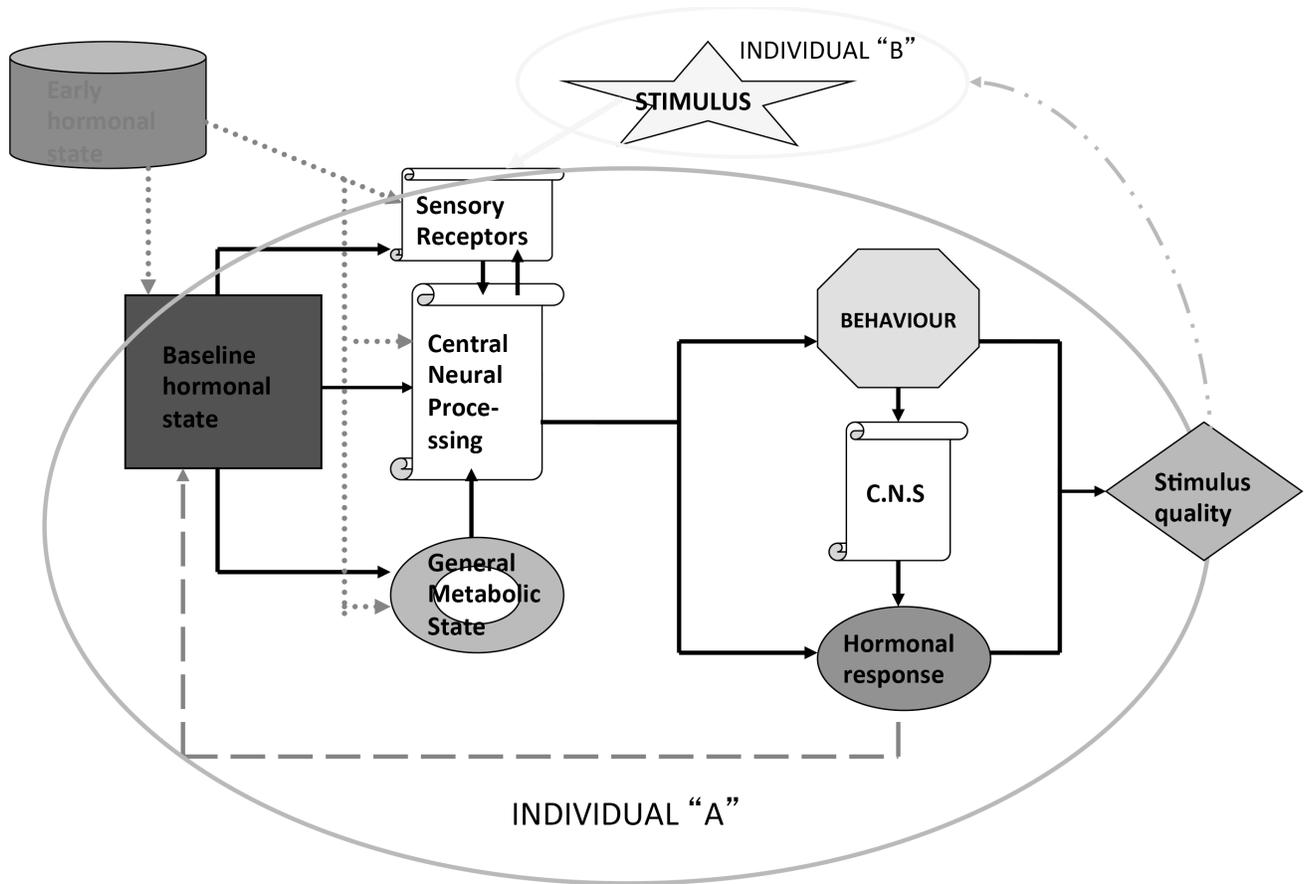
19. Hormone effects on behavior depend upon context.

k

20. Behavioural/environmental context also alters hormone release.

k

21. Neuroendocrine mechanisms have been conserved to provide biologically adaptive body/brain/behaviour coordination.



Leshner model (1978)

PSYC/CHYS 4P56 - MATURATION AND DEVELOPMENT Jan-Apr 2017

Lectures: Mon 8:00-10:00 in PL 409

Seminar 1: Tues 8:00-9:00 am in MCD300 Seminar 2: Mon 10:00-11:00 am in MCC303

Instructors

Instructors: **S. Segalowitz & S. Robb**

Office: PL600E, ssegalowitz@brocku.ca

Tel : (905)688-5550, ext 5446

Office Hours: Tues 3:00-4:30 or by appointment

Teaching Assistant

Sean Robb (sean.robbs@brocku.ca, ext 5511, PL616)

Office hours: Mon 11:00-11:30 & Tues 9:00-9:30

or by appointment

“Maturation” is a term often used to refer to physical growth during development, although it can also be used to refer to mental growth. Developmental psychology has traditionally focused on the influences from experience onto mental growth, although clearly there are biological factors involved too. In this course, “maturation and development” refers to an amalgam that reflects the extremely rapid changes in developmental psychology during the last 20 years, incorporating new findings from developmental neuroscience and pediatric medicine (while the same issues apply to adult development and aging, we will focus primarily on child and adolescent growth because of time limitations). Partly because this field is changing so rapidly, there is no suitable textbook available for the entire curriculum, so we have organized the course around a series of readings taken from various sources. A large number of books are on reserve (check out the reserve list) and we will try to make as many as possible readings available electronically as possible. However, because there is no single source for you to consult, the lectures, readings and seminar materials are all critical in this course. The lectures are very important as they will provide the theoretical integration. If you must miss a lecture, be sure to get lecture notes from someone. For this reason, we encourage students to find someone in the course with whom to work.

Weekly Readings: Some readings are marked “Lecture” and are for general background (not on all weeks). The “Seminar” readings are for the seminar discussions and thought pieces (see below). The required weekly readings are available from Reserve and Sakai (either PDFs or web access links). Some of the readings are chapters in books that are on Reserve. The assigned reading is for the week under which it is listed. Please let us know *immediately* if you find that some item that should be on Reserve or Sakai is not available, or if the web links do not work. For some of the links, you may need to be on campus.

Note: Unless you have backgrounds in both developmental psychology and neuroscience, you will probably find that the readings will sometimes involve ideas and terms you are not familiar with. Here are some ways to not be left behind: Wikipedia is usually very accurate for constructs in psychology and neuroscience. For brain anatomy, check the book of medical illustrations by Netter (on reserve). For those of you who need a bit of a refresher on the brain, you can read the appropriate section in a text for a lifespan developmental course, and the first 2 chapters of Jetha & Segalowitz that is listed for Week 2. Also, a summary of the issues in embryology can be a useful background to the way we think in this course, i.e., that we need to understand both the fixed mechanical and the flexible experiential aspects of growth. Chapter 8 in Richard Dawkins’ book *The greatest show on earth* (on reserve) is readable and entertaining. The book is about evolution and is a response to specific objections raised by anti-evolutionists, but the chapter on embryology is well focused on that.

Evaluation structure:

In-class mid-term test Feb 13/17	15%
Final exam	30%
Seminar presentation + weekly thought pieces (5% + 14%)	19%
KT/KM presentation	10%
Term paper (due 4:00 p.m. Apr 7 2017)	26%

The in-class test and exam will include definitions, diagrams and short answer questions. The last date for withdrawal from this course without academic penalty is Mar 10, 2017. You will be able to receive 15% of your final grade by Mar 3, 2017.

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Seminars will be of two different types that serve to foster and facilitate two skill sets that directly relate and translate to applications of psychology inside and outside of academia. Both types are based on the critical questions, *Where do we go from here?* and *Does this finding (or perspective) lead to useful thinking about development, about how we consider bringing resources to development? concerns across the lifespan*

Presenters: For most of the seminars, we will ask that the presenters focus on the model or theoretical position presented (or implied) in the paper rather than focus on the data and results as is often typical in other seminars. Your job is to present what you see as the authors' model and assumptions and the implications and limitations of these, i.e. whether you think the conclusions drawn by the authors are valid or more limited than they suggest and whether you would like to see the research go further in this area and therefore it will require some time for developing the depth of critical thinking required to accomplish this task. Please use your (last) resource and **weeSw"Shw" w#Shw#dw'ee!** prior to your presentation (1 week prior to the first week's presenters). Then post a short write up of your position on the paper three days in advance for your seminar to view and begin building probing questions. You are to present these arguments within 10-15 minutes to the seminar and then lead a discussion (and if necessary defend your position, 10 minutes max). **#** with your classmates about these arguments. As indicated below, your seminar co-ordinator will also post the ideas and concerns ahead of the seminar so you can see what they think before you present. It is important to note that this discussion is **not a competition** and marks will not be dependent on "winning" but rather, depth of thought. As a result, it is not particularly important that you hold onto your position indefinitely. There will be 2-3 and sometimes 10 presenters each week depending on the seminar size.

Audience: If you are not presenting in a particular week, you are to read the articles and respond in a one-page "thought piece" uploaded to Sakai with points concerning each "seminar" article. You can address the points made by the presenters for that week if you have thoughts on their summaries. Only a few sentences are required for each article as marks will be based on quality of material, not quantity. This must be **=" 12 Sedw a#dw 12=adedw %10:00 am on the day prior to your seminar** in order to give the presenter and others time to read your thoughts on the papers. In seminar, you will then have the opportunity to further discuss and elaborate on your points. When you can, please focus on how one can use the researchers' model for applications to the real world (e.g. for its implications in development, or in pathology or for how we understand brain function). You can relate this to material you have learned in other courses. Compare and discuss these points – bring a copy with you and a copy to hand to your seminar leader. Again, it is important to remember this is not a competition. Marks are allocated for your Sakai post and active participation in discussion. The thought piece should fit on one page double-spaced.

Skills Fostered: Employers (and adult schools) that seek scientific expertise are not only looking for someone who can evaluate methodology or synthesize research, but also someone who is able to think critically about the conceptual and theoretical issues within a field or discipline and *to see the implications of the research*.

Knowledge Translation and Mobilization Project:

Knowledge translation⁷ involves the process of moving research from the lab (and research journals) into a form where it can be read by those outside of the field and the public at large. This often requires some simplification to boil down information into central tenets and core messages, removing scientific jargon that often hinders understanding and subsequent utility of this knowledge. Knowledge mobilization⁷⁵ on the other hand, is an active process of moving scientific knowledge into active use (typically in an applied application) in medicine, education, industry, etc.). Often these in applied fields are unable to keep up with the high pace of ever-changing research or they are unable to sort through the research in a meaningful way.

Here is an example of how important it is to think about how knowledge is translated and mobilized:

In the 1950 and 1960s, “autism” (now known as Autism Spectrum Disorder) was seen to be the result of “maternal neglect” (Ettelheim, 1959). Treatment strategies were highly focused around this “causal” model, leaving many parents feeling that they were the cause of their child’s symptomatology. In 1964, Rimland (being a parent of an autistic child himself) demonstrated a genetic contribution to the etiology of autism through twin studies. His work sparked not only a new era of researching “biological” etiologies for autism, but also a profound knowledge-translation effort to educate researchers, practitioners, and the public at large. This serves as an example of why knowledge translation is such an important task.

Presenters: For three of the weeks this term, the seminars will consist of a knowledge translation or mobilization initiative based on the general topic of that specific week. In groups of 10 to 15 people, you will (for one of these weeks) develop a project that addresses each of the stages of the Knowledge & Translation Planning Template (see Sakai for the template).

Note that the core essential areas (out of the 2 listed) that need to be addressed: (1) what is your goal? (provide a rationale justification – why is this important) (2) what is your core message? (0# who is your audience? = what resources/expertise do you have available to you? and? * what? &? 7 5 k strate? y (e.g. info? aphic? social media? conferences? mass media campaign, etc. # will you? use? You? will have 25 minutes to present your project, provide demonstration of your product, and answer questions/provide rationale for approaches utilized. This is a project that will take some time to develop so be sure to meet with your partners well in advance to plan out one another’s roles and how to proceed in the development of this project. Use your (last) resource for this project and feel free to contact them. We will set up the groups by the second week. If you keep your initial presentation to 5 minutes at most, there is plenty of time for questions and follow-up.

Audience: If you are not presenting in a particular week, you are to read the articles and hand in a thought piece as in the other weeks addressing issues and implications of the research.

Skills Fostered: We will be highly sought after in many different jobs, both within and outside of academia (e.g. industry, government, etc.). More and more, research institutions and agencies are requiring that researchers take into consideration how they will be effective in the real world. Research serves a minimal utility if it only goes to a peer-reviewed journal publication.

Midterm Test and Final Exam:

You will receive study questions from which both the midterm and final exam will be constructed. These will help you to structure your studying in the course.

Term Paper:

DUE DATE: The essay is to be handed in by **4:00 pm Friday April 7** (into PL600E or in the Essay Box in the Department if after hours). There will be a penalty of 2% per day for all late papers.

The term paper is to be a written version of your KT/KM presentation but *expanded to include an introduction that is more like the usual summary of literature on the topic*, supporting the model that you are using. Be sure to explore new as well as older classic papers in the literature. It is critical to clearly articulate the model that derives from the literature, just as you would have done for the KT/KM presentation. You are free to include, of course, a final section outlining evidence or arguments contrary to the theme you are supporting just to show you are aware of limitations that have been articulated by doubters of the model you are supporting. This Introduction is to be no more than 6 or 7 pages (doubled spaced, font size 12, 1 inch (2.5 cm) margins, as usual). Although it is fine to use secondary sources in your literature review, also be sure to include some of the primary sources. (A secondary source is a chapter or journal article that reviews what others have written in the field.) Secondary sources are very valuable, but are one step removed from the original research report and therefore are sometimes at risk for misrepresentation (or oversimplification).

This Introduction is to be followed by a write up of your KT/KM seminar presentation (using the template). There is no formal page limit for this section but it will be read with respect to how well it fulfills the template sections. Note that you are welcome to alter what your team presented at the seminar given further ideas you have had and given the feedback on your presentation. This includes graphics. Do not feel that you

need to cover the same focus as your teammates. In this way, we expect the essays from the team members to be personalized but realize there will be overlap.

Use APA style formatting (version 5 or 6), especially for references. Check with an APA journal (e.g., *Psychological Bulletin* or *Developmental Psychology*) if in doubt how something should be formatted or check the APA Manual.

**All written assignment to be submitted as hard copy, online on Sakai, and to Turnitin.com (class ID: 14295259 password: braindev).
If you have a principled objection to using Turnitin.com,
please see the instructor for an alternative.**

**Both hard copy and Turnitin copy are due: 4:00 pm April 7, 2017.
Late penalty: 2% per day.**

Library resources:

Online journals: You must differentiate between *online* scholarly sources available through the internet and “internet sources”. Many scholarly journals are available online and are the same as those found in hard copy in the stacks. Our library has stopped getting many hard copy versions and only gets them online.

Internet sources: These are not the peer-reviewed, scholarly sources of the type appropriate for this essay. You may use them to get ideas but *must* follow up on those ideas through standard scholarly journals. *Much of what is on the internet is wrong, misleading, out-of-date, or terribly biased!* Such material has no place in a scholarly paper, and you need to be able to tell the difference. The fundamental problem is that this material is not *peer-reviewed*, i.e., criticized by other researchers first and revised so that errors or unjustified biases are removed. Regular scholarly journals (like the list below) are peer-reviewed. Popular magazines and newspapers (Time, Maclean’s, Globe and Mail, Discover, Psychology Today, etc) are not peer-reviewed and are not acceptable as sources but they may lead you to find the original sources of information. (The only acceptable exceptions occasionally are *Scientific American*, *American Scientist*, and *New Scientist*, but these normally give original references so you can follow up to the peer-reviewed articles - do so!) Your best strategy for this paper is to simply ignore non-refereed internet sources, and you should follow up literature searches, journal papers and their references instead. The only exception to this is the issue of definitions and basic facts; Wikipedia is pretty good and also are some scholarly nonrefereed sources, such as the neuroscience centres associated with McGill, the Rotman Research Institute (in Toronto), Harvard, Stanford, etc.

Online literature search sources: By far, the best sources are **PsychInfo** and **PubMed**. PsychInfo covers all psychology journals in the world, and PubMed covers all medical journals (the two overlap somewhat). You can get full abstracts from these and can then get the full papers, either online, in the library, or through interlibrary loan. If you are having difficulty getting hold of a crucial paper, talk to us about it. We may have it. Note that tracking down resources takes time. Getting the materials together for your paper will take 3 to 4 weeks at least - plan for it!

Some of the journals available through the Brock Library that have articles relevant to our topics on a regular basis are the following: *Developmental Neuropsychology*, *Developmental Cognitive Neuroscience*, *Cerebral Cortex*, *Developmental Science*, *Brain Injury*, *Cortex*, *Neuropsychologia*, *Brain and Cognition*, *Brain and Language*, *Journal of Learning Disabilities*, *Child Development*, *Developmental Psychology*, *Development and Psychopathology*, *Developmental Science*, *Biological Psychology*, *Journal of Clinical and Experimental Neuropsychology*, *Journal of Child Psychology and Psychiatry*, *Cognitive Brain Research*, *Trends in Neurosciences*, *Trends in Cognitive Sciences*, *Neuroscience and Biobehavioral reviews*, *Neuropsychology*, *Science*, *Nature*, *Nature Neuroscience*, *Nature Reviews: Neuroscience*; *Laterality*, *Journal of the International Neuropsychological Society*, *Social Cognitive and Affective Neuroscience*.

A word on plagiarism from the Dean: *Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Polices" entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.*

Academic misconduct includes plagiarism, which involves presenting the words and ideas of another person as if they were your own, and other forms of cheating, such as using crib notes during a test. The penalties for academic misconduct can be very severe. A grade of zero may be given for the assignment or even for the course, and a second offense may result in suspension from the University. Students are also reminded that the Student Development Centre (Schmon Tower, Room 400) offers free workshops on writing and study skills and on avoiding plagiarism.

If you have any questions concerning what constitutes plagiarism or fair use of materials, ask the instructor or TA, but here are some common sense rules:

- (i) Almost never quote directly from another paper.** The only appropriate uses of word-for-word quotes (and these must be placed within quotation marks with the page reference given in the text, e.g. Smith, 2001, p. 47) is when you are focusing on the author's way of expressing the idea rather than the idea itself.
- (ii) Always put the idea into your own words.** This is **your** essay. If something is not in your own words, the reader has no way to know whether you understand it or not, and may assume you don't. Besides, using another's words now and then cause very disjointed writing.
- (iii) Always take notes in your own words** otherwise later you won't know which were your words and which were the author's.
- (iv) The rise in the use of the Internet** has increased the incidence of plagiarism, the ease of checking, and the chances of getting caught. It has also increased the level of concern by instructors. It's not worth taking the chance!

Respectful Work and Learning Environment Policy:

Brock University's "Respectful Work and Learning Environment Policy" applies to all students, course participants, staff, faculty and volunteers of Brock University. The purpose of this policy is to

- Develop and support a work and learning culture that values diversity and inclusion, fosters respect, and does not tolerate prejudice, discrimination, harassment and/or bullying;
- Outline rights, responsibilities and types of behaviour which fall within the scope of this policy;
- Make provision for support services, including training and awareness initiatives, to promote a respectful work and learning environment; and
- Outline procedures for handling and resolving complaints when this policy is breached by discrimination, harassment and/or bullying.

The policy may be viewed at <http://www.brocku.ca/secretariat/admin/>.

Personal Safety:

For those staying late in the evening, BUSU offers a "foot patrol" to safely escort students to their vehicles. Call extension 4700 to request assistance.

Psychological aspects of Bilingualism

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SEM 1 Tues 5-6 Brent Dryczewycz; SEM 2 Fri 11-12 Avery Keithk

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Please Note: I will check e-mail on Sakai twice each week. I will not answer complex questions via e-mail, but will address such questions during class time. Please address e-mails to Dr. Dwivedi (It is a bad habit to send e-mails that begin with 'Hey There!')

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Teaching Assistants k k

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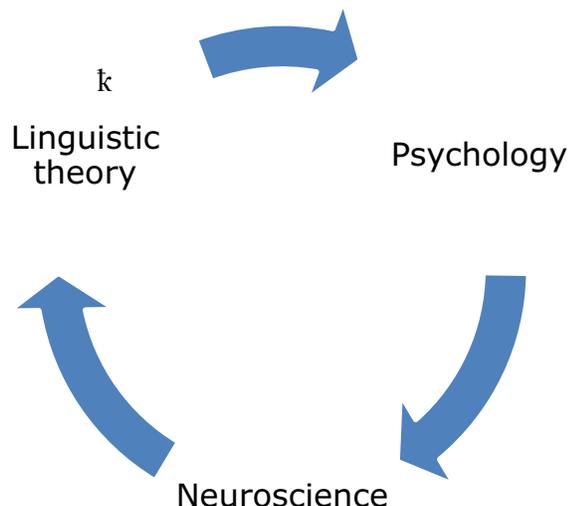
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Content and Objectives

The aim of this course is to introduce students to the psychological aspects of Bilingualism. G "IGilll°kI amininglDA-~ -A" -aClnodelk' lbi ingBalkan, BagekC" DDgkinkAGnk' k neBC ~, niAH laC^ iA~ AB'k' kan, Bag". Through active learning, this course aims to enhance research, collaborative, and oral communication skills. Regular class attendance is essential. Students will form *groups* in seminar and present articles to their respective seminar. Groups will be provided in-class meeting time most weeks, making it essential that you arrive prepared. There will be two experiential assignments to this class. One will be for students to get up in front of class and speak for under 2 mins in foreign language. The other exercise examines point of view in Bilingualism.k

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- **Note what you are expected to ask questions during lecture.** Don't leave asking KB Dn DA lkaAC—E" Bmig^ AnoAC membeCkD D, k° DaC, laAeaDkonek A" CDABnAk iflnoAmanElmoC, laCIG" ndeGngkDm" AingkDmilaCk" k> l9DJA F<l9DAC.kk

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Participation in experiments

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Academic Conduct

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Tentative Course Outline; please note that this is subject to change over course of term

Week	Lecture topic	Seminars	Reading
1	Monday January 6 Monday January 13	Meet TA	Ch1 & Ch2 Introduction to Bilingualism. Bilingual Research Methods
2	Monday January 20	Sem #1	
3	Monday January 27	Sem #2	Ch 4
4	Monday Feb 3	Sem #3	Ch 5
5	Monday Feb 10	Sem #4	
6	Monday Feb 17	No sem	
7	Monday Feb 24		Ch.6 Ch. 17 (pp 398-409) Ch. 7
8	Monday Mar 2	Sem #5	
9	Monday Mar 9	Sem #6	
10	Monday Mar 16	Sem #7	
11	Monday Mar 23	Sem #8	
12	Monday Mar 30	Sem #9	Ch. 10 Chapter 17, pp. 388-398
13	Monday Mar 30	Sem #10	

Midterm

Reading week

Final exam during final exam period; cumulative

Bilingualism course objectives: Theoretical understanding

- Knowledge of the theoretical models of bilingualism and the role of the brain in language processing.

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- DFFCciaA a bilingual's point of view AC B^ lhan° Donk IF" Gence"ID" l%°~ G.k
- @aHk" H ~ F° lacAH- eaGninglandkAaD" Gabl" IDkil DA, .k GAcalkAinking,k commBnicaAon,landk C BHG~ C IDkil D"ID" l%°~ Gk

Bilingualism course objectives: Dealing with a multi"lingual world

Canadian econ mic growth depends on immigration.

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As such, in your 'uture workplace you will likely interact with someone ~ is ne' to Canada, and might not be a native speaker " English or Frenc~ w

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- **Research paper presentation**
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 - 7eaGk~ GkAIFCDnAandDBmaGJ" kideaDinkak~ nciDIkGaE'k, .ICIF lainkE B@ ^ EF A" DDAK A" CD
- ; " monDAACIDkil landk~ nfidencekinkmakin, lacademi~ kFCDeNAonDonk GginallC DeaC^ landk leadingdiDBDnDk

G ^ EikIMC BHG ~ C IFaCK' kAiDclaDDk

- InkA" k° Dk" nABFC" DDnallG~ C Flac" ,kE BkGilll%IG~ CkinglinkAamDkFkE BhaH kAamk Dkil DkE BkGillkAGH.k
- =~ AkAaAE Bn"°° kAhaH lakGafAandlme" AGiA kE B@ADk BCh, k' i" k CDAkeaDKA" IG" "k %°~ C kE BFCDeNAk

NotesonVCreatingw~ respectfulLearningw^# ironmentw

PSYC 4P63 – Human Psychophysiology – Winter 2013

Psychology Department, Brock University

Course Instructor:

Professor Kimberly Cote, PhD

Office: MC B319

Office Hours: after class or by appointment

Phone number: 905-688-5550, ext. 4806

Email: **Use Sakai email only**

Teaching Assistants:

Kevin MacDonald and Bryce Hunt

Office: Sleep Lab, MC B416

Email: km11pv

Email: bh07ui

Lectures: Mondays 12:00-14:00, WH204

Seminars: M 16:00-17:00 and T 14:00-15:00

COURSE DESCRIPTION

“Psychophysiology is the study of relations between psychological manipulations and resulting physiological responses, measured in living organisms, to promote understanding of the relation between mental and bodily processes” (Andreassi, pg.2). In the first part of this course, we will cover basic principles of psychophysiology and various physiological systems. First, we will take an in-depth look at psychophysiological measurement of brain mechanisms and function through studying electroencephalography (EEG), event-related potentials (ERPs), and brain imaging techniques. We will then learn about the pupillary (eyes), skeletomotor (muscles), electrodermal (skin), cardiovascular (heart), and respiratory (lungs) systems as they relate to human behaviour. At the end of the course, we will explore applications of these basic principles through delivering presentations and engaging in discussion on topics relevant to nervous system disorders, environmental psychophysiology and psychopathology. Seminars will be devoted to a course project on the detection of deception using psychophysiological methods.

COURSE OBJECTIVES

After completing this course, you should be able to:

1. Understand the methods used and the types of research questions addressed in the field of Psychophysiology;
2. Understand relations between human behaviour and electrical activity of the brain (EEG, ERPs), the motor response system (EMG), and peripheral measures of physiological activity (EDA, EOG, HR);
3. Become familiar with methods and applications of brain imaging techniques (PET, fMRI, MEG);
4. Be able to critically evaluate the literature and discuss applications of Psychophysiology.

COURSE ADMINISTRATION

Sakai: is an online course information delivery system that will be used in the management of this

course. Sakai uses the same account and password as the my.Brocku.ca portal. On your course **Sakai**, you may view the course syllabus, assigned articles, some lecture slides, and important announcements.

E-Mail Policy: Please e-mail the Professor through the link on Sakai (i.e., messages tool). Expect 2-3 days before a response to your e-mail.

Evaluation and Grading: The breakdown of grading is as follows:

Class Attendance / Participation = 15%	
Quizzes (in Sakai, 10% each x 3) = 30%	
Presentation (5% Annotated Bibliography + 15% class presentation) = 20%	
Paper (10% seminar participation / lab work + 25% write-up) = 35%	
TOTAL	100

*Note: last day to withdraw from this course without academic penalty is **Friday, March 8th, 2013.***

COURSE REQUIREMENTS

Course Readings: All readings are compulsory for the course. Refer to the *Course Calendar* below for the detailed schedule. The textbook for the course is: PSYCHOPHYSIOLOGY: Human Behavior & Physiological Response, Fifth Edition. John L. Andreassi.

Class Attendance / Participation: Attendance each week is mandatory, and active participation is expected. Class attendance and participation is worth 15% of your final grade. *Missed classes will be excused only in cases of documented personal/medical emergencies.*

Quizzes: There will be three quizzes, each worth 10% of your final grade. The quizzes will cover material from the textbook. They will be administered on Sakai and must be completed by specific dates (see calendar below). These are open book tests which are expected to be completed independently. *Makeup tests will be permitted only in cases of documented personal/medical emergencies. If you miss a test, you will be given a grade of zero, unless you provide the appropriate documentation.*

Seminars: The seminar will be devoted to a course project on lie detection, including discussion of articles, data collection and analysis, and tutorials on interpretation of data. Attendance is mandatory. Note: you will be required to schedule time outside of class to participate in the data collection and analyses phases of the project, and you may (or may not) be asked to have the electrodes and sensors applied while you participate in the experiment. See additional information below on writing assignment. Seminar attendance, participation, and laboratory work (e.g., competence in data collection and analysis, engagement, inquiry) will constitute 10% of your final grade. *Missed classes will be excused only in cases of documented personal/medical emergencies.*

Presentations: Presentations will be given in groups of (about 4) students during the last 3 weeks of class (two topics covered per class). The presentation is worth 20% of your final grade. See topics and timetable below. *Missed presentations will be given a grade of zero, unless you provide the appropriate documentation.* The entire class is expected to read the assigned chapter for a given week, however, presenters must also read additional material. An annotated bibliography of your independent reading must be submitted in class, one week prior to your presentation. Each group leads a 20-30 minute

presentation followed by a 15-20 minute discussion. All group members must participate equally and are responsible for a successful class discussion. **The content of presentations should be an overview of current research on your topic using multiple psychophysiological methods** (e.g., imaging, EEG, EKG etc methods in studying post-traumatic stress disorder). The bibliography is worth 5% of your final grade (or ¼ of your presentation grade). *Failure to submit an annotated bibliography one week prior to your presentation will result in a grade of zero for the bibliography.*

Paper: For this course, you will participate in a lie detection experiment, analyze the data, and write a report. The report must be a well-written APA style laboratory report and must be submitted to Turn-it-in for plagiarism detection. **It is due on Monday, April 8th, 2013, by 4pm and is worth 25% of your final grade. The late policy is a loss of 10% of the assignment grade per day.** The paper will be graded on content (e.g., understanding of theoretical issues and psychophysiological methods), quality of writing, and appropriate use of primary sources. Please note that data collection will take place in groups; however, your written report must be independent work. Do NOT share your written assignment with other students. Take note of the University's policy on plagiarism below.

Plagiarism:

From the Dean's Office: Because academic integrity is vital to the well-being of the university community, Brock University takes academic misconduct very seriously. Academic misconduct includes plagiarism, which involves presenting the words and ideas of another person as if they were your own, and other forms of cheating, such as using crib notes during a test or fabricating data for a lab assignment. The penalties for academic misconduct can be very severe. A grade of zero may be given for the assignment or even for the course, and a second offence may result in suspension from the University. Students are urged to read the section of the Brock University Undergraduate Calendar that pertains to academic misconduct. Students are also reminded that the Student Development Centre (Schmon Tower, Room 400) offers free workshops on writing and study skills and on avoiding plagiarism.

Turin-it-in Procedures for Essay: Each student must enrol themselves into the course at www.turnitin.com. **The class ID for Psyc 4P63 is 5753851; the class enrolment password is "Grumpy"**. Note: you must hand in a hard copy of your essay to the Professor (Office in MC B319), as well as submit an identical electronic copy to Turnitin.com; failure to turn in an identical copy automatically results in a grade of zero. Your essay will be compared against other essays and articles, including papers posted on other websites. *The hard copy and the electronic copy are BOTH due on the assignment due date; if either copy is late, the full late penalty will apply.*

If you do not wish to submit your paper to Turnitin.com, there is an alternative available. You will be asked to submit copies of all of your papers listed in the Reference section, your summary notes for each of the articles (indicating the page number in the article where you found each point), and you will be asked to provide page numbers for every citation in your paper. In addition, you will be required to meet with the professor to explain, discuss, and defend your paper in detail. To choose this alternate assignment, you must make an appointment with the professor prior to the deadline to discuss your concerns about using Turnitin.com.

Possible Presentation Topics to sign up for (only 2 of 3 topics will run; maximum of 4 students per group):

Presentation THEME 1 – Nervous System Disorders

Class Reading: Andreassi, Chapter 18 (p. 438-448); Chapter 19 (p.464-480)

1. Parkinson's Disease
2. Epilepsy
3. Alzheimer's Disease

Presentation THEME 2 – Psychopathology

Class Reading: Andreassi, Chapter 18 (p. 449-458)

1. Anxiety Disorders
2. Depression
3. Schizophrenia

Presentation THEME 3 – Environmental Psychophysiology

Class Reading: Andreassi, Chapter 20

1. Alcohol
2. Heroin and Methadone
3. Marijuana

COURSE CALENDAR

Jan-7 **Introduction to the course**
Text Reading: Andreassi, Chapter 1

Jan-14 **Fundamentals of Psychophysiology**
Text Reading: Andreassi, Chapter 2-3

***** Quiz 1 – to be complete on Sakai, between Jan 14 & 21 classes *****

Jan-21 **Electroencephalography (EEG)**
Text reading: Andreassi, Chapters 4 & 5

Jan-28 **Event-related potentials (ERPs) I**
Text Reading: Andreassi, Chapters 6 & 7

Feb-4 **Event-related potentials (ERPs) II**
Text Reading: Andreassi, Chapters 8

Feb-11 **Brain Imaging**
Text Reading: Andreassi, Chapter 9

***** Quiz 2 – to be complete on Sakai, between Feb 11 & 25 classes *****

*******FEB 18-22nd Reading Week *******

Feb-25 **Motor Systems**
Text Reading: Andreassi, Chapter 10

Mar-4 **Electrodermal, Eye Movement and Pupillary systems**
Text Reading: Andreassi, Chapters 11 – 13

Mar-11 **Cardiovascular and Respiratory Systems**
Text Reading: Andreassi, Chapters 14 – 16

***** Quiz 3 – to be complete on Sakai, between Mar 11 and 18 classes *****

Note: Annotated Bibliographies are due in class one week prior to your presentation

Mar-18 **Presentations – Nervous System Disorders**
Text Reading: Andreassi, Chapter 18 (p. 438-448); Chapter 19 (p.464-480)

Mar-25 **Presentations – Psychopathology**
Text Reading: Andreassi, Chapter 18 (p. 449-458)

Apr-1 **Presentations – Environmental Psychophysiology**

Text Reading: *Andreassi, Chapter 20*

***** Paper Due Monday April 8th, 2013, directly to Professor Cote in the Psyc Dept (and to turn-it-in), by 4pm *****

SEMINAR CALENDAR

Week of: Topic:

Jan-7 No seminar

Jan-14 Introduction to Course Project
Reading: Andreassi text, Chapter 17 (p. 420-428).

Jan-21 Discussion of Lie Detection literature
Readings (on Sakai):

1. Furedy, J. J., Posner, R. T., & Vincent, A. (1991). Electrodermal differentiation of deception: perceived accuracy and perceived memorial content manipulations. *International Journal of Psychophysiology, 11*, 91–97.
2. Mertens, R., & Allen, J. J. B. (2008). The role of psychophysiology in forensic assessments: Deception detection, ERPs, and virtual reality mock crime scenarios. *Psychophysiology, 45*, 286–298.
3. Langleben, D. D., & Moriarty, J. C. (2012). Using Brain Imaging for Lie Detection: Where Science, Law, and Policy Collide. *Psychology, Public Policy, and Law*. Advance online publication. doi: 10.1037/a0028841

Jan-28 Tour of Electrophysiology Laboratory (Go to: Sleep Lab, MC B416)

Feb-4 ** appointments for **data collection** outside seminar time

Feb-11 ** appointments for **data collection** outside seminar time

Feb-18 **Reading week**

Feb-25 Group Discussion of Data (Go to: Sleep Lab, MC B416)

Mar-4 ** appointments for **data analysis** outside seminar time

Mar-11 ** appointments for **data analysis** outside seminar time

Mar-18 Question/Answer on Methods and Results

Mar-25 Question/Answer on Methods and Results

Apr-1 No seminar (TA has office hours for consultation - time TBA)

you need to give yourself time to think about what you are reading, and you need to not do it at the last minute. Once you get into this way thinking, it is actually quite easy.

Written comments should be posted to your akai section by noon Thursday in the appropriate Forum and Topic. This will give all of us time to think about issues raised by others. Be ready to discuss your comment because others may find it interesting and want to hear more about it, and will have had time to read it. We have found that the comments are often very good and form a solid basis for discussion and learning about the topic. You will receive feedback on your comments. Seminars will follow the lecture each week. You do not need to hand in a comment page for the week you lead the seminar.

The weekly comments are worth quite a bit because this discussion is a primary way to learn the material in the course, so think about what you will say as you do the readings. You may miss one week's comments without penalty (out of 10). If you write these thought pieces for all 4/5 seminar weeks, we will pick the 10 with the highest marks. They will total 22.5% each. This is an important aspect of the course!

Comments sent in late will receive no mark since they must precede the discussions and submissions, although we will be happy to give feedback on your ideas at any time.

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Oral Seminar Presentation: 7.5%

When you lead a seminar, present your thoughts on the readings. Take only 15-10 minutes. Do not simply give a summary of a chapter/section or reading. If you do that, your seminar leader may interrupt you and as you discuss your thoughts on the topic, not the content of the reading which everyone will have read. Think of yourself as a discussion facilitator, who is getting the discussion going. To do this, select a few points that seem to you to be most interesting from your weekly comments and the comments of the others in the class (this will require you to reserve time before your seminar to review others' submissions, and say why they are important (what insights you gain from them) and be ready for questions. This does not mean you must have all the answers! You will be marked on the clarity of your insights. For most seminars, we need to assign 3 presenters; the second will start at the 25 minute point. The two presenters should discuss ahead their presentations so as to not overlap too much. You must discuss with your K how you are going to go about your seminar presentation well ahead of time!

K

Mid-term Exam 5%: In-class, Feb 13.

study questions will be circulated ahead; the test will draw from the study questions.

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Term Paper 7/10%

The term paper is to focus on your research topic for your Honours Thesis. (If you are not doing a thesis this year, please see Prof. Egalowitz immediately.) A separate detailed handout will follow. Make an appointment with Prof. Egalowitz to discuss your term paper. ***+#, 11 January or early February** in order to make sure that you have a good start on it. Note: This paper takes more planning than the usual essay and you need to be well into your planning by the end of January. A preliminary summary of your paper details to follow, is due February 20, after which the topic and approach may not be changed. A more detailed sketch details to follow, is due March 6. The term paper is due 5:00 pm April 3, 2018. Late papers are deducted each day late. Any individual extensions will be for documented medical reasons only. Usually expect that you may need to meet with your K for the course instructor multiple times for your paper. We don't mind at all! **Submit your term paper 3 ways: (1) to Turnitin.com for class ID 7062705 and password: William James), (2) K email to the instructor as an attachment, and (3) hand in a hard copy. If you object to uploading your assignments to Turnitin.com for any reasons, please notify the instructor to discuss alternative submissions.**

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Final Exam 25%

Format essay questions to be given out in advance but the exams closed-book.

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Last date for withdrawal from the course without academic penalty is Jan 20. Mid-Term grades will be uploaded to aakai by Jan 6.

PSYCH 4P92K Some Success TipsK

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Allow plenty of time for readings because the material issues the story of psychology is so complex. Do not be surprised if you find that some original source papers require a second reading because the writing style and the language are sometimes unfamiliar. Historical readings there are very different approaches in different eras of psychology, so the relevance to contemporary psychology is not always so clear, so do talk to the professor for your thoughts about the questions. **Raise the issues in seminar. If you are having difficulty with a section, other classmates may too.** The professor will not enjoy your class sessions, debates about course materials. For further information on a particular topic, consult the very excellent story texts on Reserve of the library.

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The format of the weekly written comments will help prepare you for the term's final exam. Do you comment every week; your comments are the easiest way to raise issues and your course. As you do your readings, think about the material that you need to write about. Your comments will help you focus on really learning the material, and also get you used to writing to people. Feel free to express your views, reactions in seminar. The freer the discussion, the better, but of course be ready to receive friendly disagreement as well. You've been in psychology for a while, so your point of view is informed, but of course be prepared to hear other informed views too!

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It's so intellectually challenging for everyone, some aspects will be new because we cover almost all of psychology. You understand the relevance of the story of psychology to the present will grow as you proceed. You keep up with the readings, lectures, and weekly written comments, attend seminars. **R\$O\$O.\$* :the material is cumulative!** Be sure you've done the readings before the lecture for that week. Lectures will presuppose you've read the text. Readings will guide your directions on issues. Keep your PowerPoint slides available on a USB drive - usually before the lecture (sometimes only just!). Use a recorder if you wish, but be sure to take notes as well. Don't rely on recordings alone because you will miss information from the audio only. It's only good for checking up on details for two.

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3. The story of psychology requires some extra effort, but the effort will pay off, will inform greatly your honours thesis, other projects, and your development later on in your professional use of psychology.

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4. The library's story of psychology textbooks are excellent. If you want to fill gaps on a particular topic, start there. However, we've reserved excellent volumes with specific focus (see the list below). They are on reserve except for those with restricted access.

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Academic Accommodation Statement:

As part of Brock University's commitment to a respectful work and learning environment, the University will make every reasonable effort to accommodate all members of the university community with disabilities. If you require academic accommodations related to a documented disability to participate in this course, you are encouraged to contact services for students with Disabilities in the student Development Centre (4th floor, Chmonk Tower, ex.k(\$)*. You are also encouraged to discuss any accommodations with the instructor well in advance of due dates and scheduled assessments.

Academic Accommodation due to Religious Obligations:

Brock University acknowledges the pluralistic nature of the undergraduate and graduate communities such that accommodations will be made for students who, by reason of religious obligation, must miss an examination, test, assignment deadline, laboratory or other compulsory academic event. Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructor(s) for alternative dates and/or means of satisfying requirements well before the date of the course component.

Medical Exemption Policy

The University requires that a student be medically examined in Health services or by an off-campus physician prior to an absence due to medical reasons from an exam, lab, test, quiz, seminar, assignment, etc. The Medical Certificate can be found at: <http://www.brocku.ca/health-services/policies/exemption>.

Academic Integrity

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult section VII, "Academic Misconduct", in the Academic Regulations and University Policies entry in the Undergraduate Calendar, available at <http://brocku.ca/webcal> to view a fuller description of prohibited actions, and the procedures and penalties.

Academic misconduct includes plagiarism, which involves presenting the words and ideas of another person as if they were your own, and other forms of cheating, such as using crib notes during a test. The penalties for academic misconduct can be very severe. A grade of zero may be given for the assignment or even for the course, and a second offense may result in suspension from the University. Students are also reminded that the Writing and Learning Development Center (Chmon Tower, Room 400) offers free workshops on writing and study skills and on avoiding plagiarism.

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ww ww Seminar: Mar 7 w

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8. Mar 7 Social Psychology: its origins in the Gestalt movement w Text: Chapter 7 w
(Mesmer, Binet, Milgram)k

kk Asch, Solomon E. (1955). Opinions and social pressure. *Sci Amer* 93(5), 31-35. w

ww Festinger, L., & Carlsmith, J. M. (1959). Cognitive consequences of forced compliance. *Journal of Abnormal and Social Psychology*, 52(2), 203-210. w

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kk Assignment: Hand in final term paper topic and sketch: 5:00 March w.k

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9. Mar 10 Freud and Psychodynamics (and ancient choes)k

ww ww Text: Chapter 6 (Freud)k

kk Freud, S. (1910). The origin and development of psychoanalysis. *American Journal of Psychology*, 21, 181-190. w

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kk Hvrnstein, !kA. (1992). The r'turn of the repr'ssed: America's problematic r'j0onship with psychoanalysis, 1909-1960. *American Psychologist*, 47(10), 1025-28. k

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kk Heidbreder4E!k=Y6&P7k Scientific psychology 4 Even psychologies (pp. 18-34). Nrw Y'rk: Century!kk

k J@ell, S. (1920). *Suppressed Desires!* Nrw Y'rk: Dodd, Mead & Cylk

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w *The Century of the Self:* <http://www.informationclearinghouse.info/article12642.htm> -kkk8k0f

<http://www.youtube.com/watch?v=IyPzG@SYyKM&fr@mr=rj@dk>

ww ww Seminar: Mar 10 w

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10. Mar 11 Personality theoryk

ww Text: Chapter 7 (Allport, Maslow), 15 (applied)k

ww ww Seminar: focus on Applied and Clinical Psychologyk

kk Further: Hunt4M!k=Y6&P7k Chapter 18: Us'rs and Misus'rs of Psychology 4 *The story of psychology* (pp. 599-633). Nrw Y'rk: D'ubleday!k

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11. Mar 18 Developmental and Humanistic Psychology w Text: Chapters 10 w
(Binet, Piaget)k

ww Piaget, J. (1930). *The child's conception of physical causality.* Harcourt: Neww
York. Chapter 7 and/or w focus on the interview method with children. w

ww Further: kHhit4k9!kHk=Y6*6Mktiv@on reconsidered: the concept of comp'rtence. *Psychol Rev*, 58(4)
297-333. (Skimk@j4k nyst development@j4k parts@ intrv'section (297-305), child playk=&Y18%&>k
and summary 328-330).

kk Seminar: Mar 10 w

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12. Apr 0 Cognitive Psychology, the Cognitive Revolution, and the New Neuroscience w
Text: Chapter 14 (Babbage, Turing, Weisser) w w

kk kk Further: Chomsky (1959). A review of #! . Skinner. *Verbal Behavior: Language*, 35=4k%F8*+!kk
kk Tolman, E!k=6: Cognitive maps in r@ and men. *Psychol Rev*, *(4), 189-208. k
kk kk Drury (1896). The reflexk@ concept in psychology! *Psychol Rev*, 3(4), 357-370.k
kk **Term paper: Due April 0~) (~ 5:00pm.w**
ww Seminar: Aprww
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%K The Department expects that any person appointed to the Department Recruitment Committee, as described above, will be familiar with the discipline of Psychology. The Department encourages members to attend all events related to the hiring process.

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In addition to the above, the Department will take the following steps with a view to eliminating barriers to employment of designated groups:

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Recruitment:

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- + K Advertise the position widely in a variety of media, including the Department web site, the Canadian Psychology Association newspaper, the *Journal of Psychology*, and the *University Affairs*;
- K Advertise the position to the Chairs of Canadian Departments of Psychology via the CCDP mailing list, asking those Chairs to encourage appropriate persons in designated groups to apply;
- K Advertise the position in any other venues that are directed specifically toward designated group members of the discipline (e.g., through relevant sections of CPA), as indicated in Article 4.1(e)(iii) of the Collective Agreement.

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Selection:

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- + K Consider carefully all applications from self-identified members of designated groups, according to the required qualifications as indicated in the advertisement and the merit considerations spelled out in Article 4.1. This step is to ensure that all such applications can be considered for inclusion on the short-list;
 - K In drawing up the short-list of applicants to be interviewed, consider carefully all applicants from designated groups who meet the required qualifications (see above). This step is to ensure that such applicants whose qualifications might warrant inclusion on the short-list are given proper attention;
 - K Ensure that all candidates selected to the short-list are made to feel welcome during the interview process;
 - K In accordance with Article 4.1 + R # (i) of the Collective Agreement, recommend for appointment a person from a designated group, where that person is equally qualified as the best candidate, or is not substantially apart in qualifications from the best candidate (except under the conditions specified in Article 4.1 of the collective agreement, whereby an applicant who is the spouse of a member will be recommended unless another applicant is demonstrably superior);
- %K As indicated in Article 4.1 + R (b) of the Collective Agreement, the Department's commitment to employment equity is not intended to prevent the department from recommending for appointment the best available qualified applicant.
4. K When there is a directive from the university or government that specifies ED target groups must be hired for a given position (e.g., Canada Research Chair appointments in memo dated Aug 4⁶⁷, 2019), then those procedures will be followed for advertising and hiring.

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Current number of probationary and tenured members in the Department of Psychology, as well as the number of self-identified members of each designated group.

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Faculty \$ ' mb'%&wD'Sg+a(' dvG%#p&w'+ * k**

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The Department of Psychology currently has full-time faculty (probationary and tenured), as well as five Faculty on retirement incentive leave (two till December 1st and three until June 1st). In terms of the designated groups as defined by the Collective Agreement between Brock University and the Brock University Faculty Association, the number of members in each group (self-identified in the case of "Aboriginal peoples" and "persons with disabilities" and

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- ?K Women
- ?K Aboriginal
- ?K Disabilities
- ?K Visible Minority
- ?K <=&>

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Faculty will complete the annual on-line annual report form by the end of August or date specified by the Dean's office.

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Members of the Psychology Department acknowledge the need to document and substantiate teaching performance and one method is through student evaluation of teaching. Following are the procedures used to conduct teaching evaluations:

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+ Teaching evaluations will be conducted at the end of the semester (typically the course instructor and teaching assistants). The main principle is that the instructor or whoever is being evaluated should not handle the completed evaluation forms. Normally, the instructor will display the instructions for completing the forms on an overhead projector; meanwhile, the instructor will ask some students in the class to distribute and collect the evaluation forms. The designated students should then distribute the evaluation forms to the class. The instructor (and/or TAs) may help with distributing the evaluation forms, but should then leave the classroom while the students are completing the forms. The designated students should collect the forms when all of the other students are finished, and then (in full view of the students) put the forms into the envelope(s) and sign the envelope(s). The envelopes should be clearly marked with the instructor's and course name. They should then be retrieved by the instructor. At the end of the class the envelope(s) will be taken directly to Psychology Administrative office or placed in the essay box.

k

In the case of very small courses, such as graduate courses, but also any small undergraduate course, extra steps will be taken to preserve the anonymity of the students. For example, students can be instructed to appoint a secretary among themselves and then discuss the course, with the secretary recording all opinions in a single submission.

k

All undergraduate teaching evaluation forms to be used for summative evaluation will have a common core of questions (comparison of course with other Brock courses, comparison with other Brock instructors, and overall rating of the instructor).

k

For each member's annual report, data must be included for all courses with five or more students.

k

Forms must be constructed so as not to solicit information that could potentially allow for the identification of any individual respondent.

k

Sealed envelopes are to be kept by the Department Chair or Chair's designate until after final marks for the course have been submitted to the Registrar's Office. The Department Chair or Chair's designate should arrange for the manual or Scantron scoring of forms using personnel not associated with the course or course instructor.

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Ordinarily teaching evaluations are to be administered during the last two weeks of class.

k

Once the data for each course are tallied, the Department Chair or Chair's designate will provide the instructor with the results of the analysis. The Chair will not have access to the evaluations themselves or the data. Reporting of results for each scaled item is to include the number of students responding to each response category, the mean, median and standard deviation of the responses. Evaluations are property of the instructor but may be used by the instructor to provide evidence of teaching success in their annual report.

k

These same guidelines apply when formative teaching evaluation instruments are administered during the last two weeks of class. Two exceptions are that i) students are to be advised that, in contrast to the forms used for summative evaluation purposes, these forms will be seen immediately by the course instructor, and ii) the original forms will be delivered directly to the course instructor without having been reviewed, scored or analyzed by the chair.

k

The department will provide undergraduate honours thesis students an evaluation form to evaluate thesis supervisors. Each time at least five evaluations have been collected, they will be submitted to the supervisor for review. Until at least five have accumulated, completed forms will be sealed and held in a file in an administrative assistant's office.

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The Department will not schedule Departmental events, including meetings, colloquia, and recruitment visits on major religious holidays affecting faculty members.

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and student representatives. It is the responsibility of faculty members and student representatives to inform the Chair of the dates of major religious holidays. This information should be provided during July of each year, prior to the scheduling of Departmental events.

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The Department will follow the guidelines of the Collective Agreement (Article #) in making decisions regarding promotion and tenure.

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The Department will only recommend converting limited-term appointments to tenure-track positions, following the "exceptional appointments" provisions of the Collective Agreement, when the following conditions are met:

(a) The motion to convert is circulated at least 30 calendar days prior to the vote on the motion and not between June 1 and Labour Day;

(b) The vote is to be held by secret ballot at a meeting of the Department, with absentee votes permitted;

(c) The majority of votes are in favour of the motion.

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XV. v%#&pp#*+('dv faculty. v

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Faculty members will only be granted cross-appointment to Psychology under extraordinary circumstances:

a) The faculty member has a strong commitment to being a full member of the department, including participation in department meetings.

b) The department has a strong desire to have the faculty member be a full member of the department, including participation in department meetings.

c) The faculty member provides evidence of being a strong graduate student supervisor, for example including: external funding, strong publication record, record of successful primary supervision of graduate students (e.g., student success post-graduation; student publication record), commensurate with career stage.

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1. Associate membership will be granted to faculty members who are (upon request) deemed to be suitable for supervision of graduate students in the psychology program. Access to graduate students will thereafter be considered on a case-by-case basis, with priority given to core members of the department.

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The following criteria will be used to evaluate applications for Associate Membership:

• Strong publication record

• Funding commensurate with research program

• Good fit with research interests of potential students and with the department

• Strong record of successful supervision (e.g., publication rates of student; degree completed on time; post-graduation employment) commensurate with career stage

k

able and willing to offset increased workload by participating in graduate student committees, comprehensive exam committees.
Endorsed by at least 5 E. of votes

k

Associate faculty members must have a co-supervisor from the Department of Psychology for each B~ student until supervision of their first B~ student in psychology is complete and for each PhD student until supervision of their first PhD student in psychology is complete. Thereafter, co-supervision is at the discretion of the department. Associate faculty may supervise honours theses and directed studies without a co-supervisor.

k

2. Affiliated faculty. Affiliated members will not be considered for, or vetted based on, potential graduate student supervision, but can be considered/vetted for affiliation with the department for other purposes (e.g., teaching, supervising undergraduate students).
Affiliated faculty may supervise honours theses and directed studies without a co-supervisor.

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3. Adjunct faculty. Adjunct faculty may supervise directed studies with a co-supervisor.

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XVII. ~~Faculty & Adjunct Faculty~~

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Psychology undergraduate honours thesis students must be supervised by psychology department faculty, cross-appointed faculty, or faculty with associate/affiliate status.

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JA⁰⁰, Department service.

It is normally expected that all full-time Faculty contribute regularly to Department service tasks. Service preferences will be surveyed each year. The Chair will coordinate service and make the list of service by all Faculty available to the Department each year. Service to the University, union, or outside organization does not count towards Department service.

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JA^{0A}, Unscheduled teaching.

The normal expectation for unscheduled teaching and the upper boundary is outlined in the Department Normal Workload Standard (C5F# document). When the upper boundary is exceeded (as per Article 1.1 in the Collective Agreement), alterations to teaching load for the subsequent year will be listed in the Annual Workload Plan (submitted in March).

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APPENDIX D - Draft Calendar Entry

Honours B.Sc. in Psychology

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E?: @SKE?: : < *k

AC@CSB1: U)lori Chemistry(SCB: U)lori Physics(SCP: U)#k

Mathematics of Data Management(MDM: U)lori Advanced Functions(MB, : U)lori Calculus and Vectors (MCV: U)#k

&% "e(ui"ed 'f, %de*%e*% "i*^ %e B.A. program. k

Year 1

8PSYCkY90

8B1" kPY6Y4B1" kPY6%#k

8MATBkPY6I #k

- 1.0 humanities context credit

8kY! Elective credits (CBEMkPY6Y4kPY6%te recommended to increase possibility of other science courses taken later as electives**)

Not required in B.A. program; Not recommended in B.A. program

k

Year 2

8PSYCk%&kk

8PSYCkR&F4P&I #k

- 1.0 credit from among PSYCkBY%4R20, PSYCkR:6 #kk

8k! credit from PSYCkBY*4P%*4PSYCkR30, PSYCkR:*k

8PSYCkR01

- 1.0 elective credit (PBYSkR02 recommended)

in B.A. program students are required to take .5 credits from this set of ~ courses k

Year 3

8PSYCkP&6kk

8PSYCk&40 or PSYCkP30) #k

- 2.0 of PSYCkP05, 3P06, 3PY+4PY64R&:4kR&I4kR&+4PS*4kP:F4kP*Y4kR&64kR60, 3PF*4kRFI4k

&PF+4kR%4R%4kR+I4B1"* kR0%4kR"* kR01 ##k

8kY! Elective credits

Students, who elect to take "!" #S%&complete ' elective credit.

Students in Bonours B! ! program are required to take &40

##k Available but not required in B! ! program

k

Year 4

Thesis option

8PSYCk:, (Bonours Thesis)

8PSYCk:FXX(Literature Research and Seminar)

k

8PSYCK:P6%k

- 1.0 credit from PSYCK: P05, 3P06, 3PY+4P64R&:4kR&I4kR&+4P&*4kP:F4kP*Y4R&64kR60, 3PF*4k
&PFI4kR&F+4kR%4kR*4kR+I4kP%%4R&:4kP:64k:P**4PSYCK:P*F4kP60, 4PF&4kI"* kP03, B1"* k

&P60, B1"* k&F: #kk

8kY!&lectivecreditk

#Available4kbutnotrequired4k!B!^ !programkk

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Library Research Option #k

8PSYCK:, (LibraryResearch)k

8PSYCK:P6%k

- 1.0 credits from PSYCK&20, 3P05, 3P06, 3PY+4P64R&:4kR&I4kR&+4P&*4kP:F4kP*Y4R&64k
&P60, 3PF*4kRFI4kR&F+4kR%4kR*4kR+I4kP%%4R&:4kP:64k:P**4PSYCK:P*F4kP60, B1"* k&P03,

B1"* k&P60, B1"* k&F: k

- 1.0 credit from any PSYCK numbered above 390

8kY!&lectivecreditk

#NotavailableinB!^ !programkk

k

Honours B.Sc. in Psychology with Co-op

Year 1

8PSYCKY90

8B1" kPY6Y4R1" kPY6%#k

8MATBkY6I #k

- 1.0 humanities context credit

8kY!&lectivecredits(ChemkPY6Y4R6%&recommendedtoincreasepossibilityofkk
other science courses taken later as electives**)

Not required in B.A. program; Not recommended in B.A. program k

w

Year 2

8PSYCK 0. 90

8PSYCK%%&kk

8PSYCK&F4P&I #k

- 1.0 credit from among PSYCK&Y%4R20, PSYCK&B:6 #kk

8k!&creditfromkPSYCK&Y*4R%*4PSYCK&B30, PSYCK&B:*k

8PSYCK&B01

- 1.0 elective credit (PBYSk&B02 recommended)k

in B.A. program students are required to take .5 credits from this set of ~ courses k

k

Spring/Summer Session:

8PSYCK 0. 01 andk%01 k

k

Year 3

8PSYCK&6kk

k

8PSYC&40 or(PSYC&30) #k

- 2.0 of(PSYC&05, 3P06, 3PY+4P&64&&:4k&I4k&&+4P&4k&P:F4k&*Y4k&64k&60, 3PF*4k&FI4k&
&PF+4k&FI4k&F+4k&FI*4k&P+I4k&P** k&60%4k&I** k&60I ##k
8kY!#lectivecreditsk

Students, who elect to take "!" #&%&complete' elective credit. StudentsinkBonoursk!^ !programk
arekrequiredkto takek&40

##k Available4butnotrequired4inkB!^ !programk

k

Spring/SummerkSession:

8PSYC 0. 02 andk%02

k

Yearwv**

Thesis option

8PSYC:, (BonourskThesis)k

8PSYC:, (LiteraturekResearchkandkSeminar)k

8PSYC:P6%k

- 1.0 creditkfrom(PSYC&20, 3P05, 3P06, 3PY+4P&64&&:4k&I4k&&+4P&4k&P:F4k&*Y4k&64k&60,
&PF*4k&FI4k&F+4k&FI*4k&P+I4k&P%%4k&I&:4k&P:64k&P**4PSYCk:P*F4k&P60, 4PF&4k&I** k&03,

B1"* k&60, B1"* k&6F: #k

8kY!#lectivecreditk

Available4butnotrequired4inkB!^ !programk

Library Research Option #k

8PSYC:\$\$ (LibrarykResearch)k

8PSYC:P6%k

- 1.0 creditskfrom(PSYC&20, 3P05, 3P06, 3PY+4P&64&&:4k&I4k&&+4P&4k&P:F4k&*Y4k&64k&60,
&PF*4k&FI4k&F+4k&FI*4k&P+I4k&P%%4k&I&:4k&P:64k&P**4PSYCk:P*F4k&P60, B1"* k&03,

B1"* k&60, B1"* k&6F: k

- 1.0 creditkfromlanykPSYCknumberedkabove 390

8kY!#lectivecreditk

#NotkavailablekinkB!^ !programk

Spring/SummerkSession:

8PSYC 0. 03 andk%03

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B.Sc. with Major in Psychology Program

Year 1

PSYC 100

BI 101

MATB 101

- 1.0 humanities credit

Elective credits (CBEM 106% recommended to increase possibility of other science courses taken later as electives)

Not required in B.A. program; Not recommended in B.A. program

w

Year 2

PSYC 200 & 201

PSYC 200 & 201

- 1.0 credit from among PSYC 200, PSYC 201

credit from PSYC 200, PSYC 201, PSYC 202

PSYC 201

- 1.0 elective credit (PBYS 202 recommended)

in B.A. program students are required to take .5 credits from this set of courses

w

Year 3

PSYC 300 & 301

PSYC 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400

PF 400 & 401

From PSYC credits numbered 300 / 301 and/or from BI 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400

2.0 elective credits

Available but not required in BI program

Year 4

- 2.0 credits from PSYC 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500

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- 1.0 credits from any PSYC above 390

PSYC: P07 (Transition to Work)

Elective credits

Available but not required in BI program

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Of the total number of elective credits students must choose 10 credits (including first year Context credit) from disciplines outside of Psychology

)) 10 credit Honours degree programs a maximum of eight credits may be numbered α 00 to α 667 at least three credits must be numbered α 90 or above 7 at least three credits must be numbered α 90 or above 7 and the remaining credits must be numbered α 00 or above

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If the 20 credits with Major degree program a maximum of eight credits may be numbered (alpha)00 to (alpha)66 at least four credits must be numbered (alpha)90 or above and at least two credits must be numbered (alpha)90 or above and the remaining credits must be numbered (alpha)00 or above.

In some circumstances in order to meet university degree and program requirements more than 20 credits may be taken.

B.Sc. with Major in Psychology Program with Co-op

Year 1

PSYC 190

BIOL 106

MATH 101

- 1.0 humanities credit

Elective credits (Chem 104 recommended to increase possibility of other science courses taken later as electives)

Not required in B.A. program; Not recommended in B.A. program

Year 2

PSYC 0. 90

PSYC 200

PSYC 201 & PSYC 202

- 1.0 credit from among PSYC 201, PSYC 202

1 credit from PSYC 203, PSYC 204, PSYC 205, PSYC 206, PSYC 207, PSYC 208, PSYC 209, PSYC 210

PSYC 201

- 1.0 elective credit (PSYC 202 recommended)

in B.A. program students are required to take .5 credits from this set of courses

Spring/Summer Session:

PSYC 0. 01 and 01

Year 3

PSYC 300 and 400

PSYC 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400

PSYC 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400

- 1.0 from PSYC credits numbered 300 / 301 and/or from BIOL 106

- 2.0 elective credits

Available but not required in B.A. program

Spring/Summer Session:

PSYC 0. 02 and 02

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APPENDIX w Faculty CV&w

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Un3gr Rgview

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Postdoctoral Fellows

- 2014 Jo 2015: J=GHBGEA(Do? k AAcHLek (<oHAA>)k
- 2015 Jo 2016: DLDEGGB oGDk(Do? k AAcHLek (<oHAA>)k

Thg g

- 2019: PhDw&!B eJhoJ8JoDeA)k
- w MAwJ!RoJe<A7Hons.wY)k
- 2018: wPhDwA!5 oAke-8 EeG)7Hons.w*)k
- 2017: PhDk(B !k<oF=e)7MAk(Jo< LDk(o? e<A)k
- 2016: Hons.k(*)k
- 2015: PhDk(C!5 o<Jh)7MAk(C!7 L=JhE<4&!B eJhoJ)7Hons.k(:)w
- 2014: Hons.k(&)k k
- 2013: Hons.k(%&)k k

Current Students and Anticipated Graduation

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- JeDDEHRoJe<A(A=F=A, 2022)k
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ANGELA D. EVANS

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1812k irIsaacBrockWay.(k)(Catharines,k*(L2S13A1k k k k k k k
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CURRENT POSITION:

Associate Professor 2012k, B456578
953 648:578; <k>6 @;0;> HD4; @IG7@A546@8

Assistant Professor 2011k, k/75 2012>w w w w w w wk
953 648:578; <k>6 @;0;> HD4; @IG7@A546@8

Note: maternity leave April ^ 313-November 2013 and March 2015-November 2015k

Adjunct Faculty 67/ 64k2013k, B456578w w w w k
953 648:578; <k>6 @;0;> H 5B@>k @ 5@IG7@A546@8
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ACADEMIC POSITIONS:

Associate Chair
Department of Ps· cholog· , Brock University· k(Jul· k' ° k, present)k

Postdoctoral Research Fellow Septemberw, k, Junek ° w w w w w wk
Gould School of Law, University of Southern Californiak
Supervisor: Dr. KThomas% onk

Researcher with Laidlaw Research Centre (Augustk ° k, Decemberk ° k
Institute of Child Stud· , University of Torontow
k

EDUCATION:

University of Toronto ° ° ° k
Human Development and Applied Ps· cholog· , Ontario Institute for Studies in Educationk
Ph.D. thesis advisor: Dr. Kang Leek
Thesis title: k°The development of deceptive behaviours in 2- to 3- year-olds»k
kk

M.A. Wilfrid Laurier University k ° ° ° k
Social and Developmental Ps· cholog· , Department of Ps· cholog· k
5*(thesis advisor: Dr. Kim Robertskk
Thesis title: k°Wh· k\$ k·oung children forget where they learned information? The relation between
source monitoring, theory-of-mind understanding and suggestibility»k
k

B.A. Wilfrid Laurier University ° ° ° k
Department of Ps· cholog· k
Honours Thesis Advisor: Dr. Kim Robertsk
Thesis title: k°Paraphrasing children's reports of a staged event: Effects on eyewitness testimony»k
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RESEARCH GRANTS

Granting Agency	Dates	Value
Social Sciences and Humanities Research Council of Canada Partnership Grant HCOVD-19 and maltreatment workers PI: Shanna Williams (University) Co-Is: Angela Evans, Kaila Bruer, Heather Pricek	* => K' " k	\$24,490k
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PUBLICATIONS:w

Refereed Publications:w

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- 3 (Bender, L., Connor, K. (3, Evans, A. W. (Mirror, mirror on the wall: Increasing young children's honest behavior through inducing self-awareness) *Journal of Experimental Child Psychology* 167, 777-787. doi:10.1016/j.jecp.2017.07.002
- " (Evans, A. W. (3, Connor, K. (3, Lee, K. (3, Verbali, I. (Verbalizing commitment reduces cheating in young children) *Social Development* 27, 1-17. doi:10.1111/sode.12177
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- " (Liu, K. (3, Evans, A. W. (3, Li, B. (3, He, J. (3, Lee, K. (3, The role of honest behavior and benevolence in children's judgments of trustworthiness) *International Journal of Behavioral Development* 37, 1-11. doi:10.1016/j.ijbd.2013.07.001
- " (Brunet, R. (3, Evans, A. W. (3, Falwar, K. (3, Bala, K. (3, Lindsa, R. (3, Lee, K. (3, How children report true and fabricated stressful and non-stressful events) *Journal of Applied Social Psychology* 43, 1-11. doi:10.1111/jasp.12177
- " (Evans, A. W. (3, Lee, K. (3, Emergence of lying in young children) *Developmental Psychology* 37, 1-11. doi:10.1037/0012-1649.37.1.1
- " (Liu, J. (3, Evans, A. W. (3, Wu, K. (3, Lee, K. (3, Interfering dot-probe facilitates the detection of mock crime memories: Reaction time-based concealed information test) *Acta Psychologica* 142, 1-11. doi:10.1016/j.actpsy.2016.07.001

- 7(Li, G., Evans, A., Lee, K. (2011). Young children's tell strategies after committing a transgression. *Journal of Experimental Child Psychology*, 113, 71-81. (doi:10.1016/j.jecp.2011.07.003)
- 3(Evans, A., Lon, K. (2011). Assessing children's competence to take the oath in court: The influence of question format on children's accuracy. *Journal of Human Behavior*, 36, 939-947. (doi:10.1016/j.hbeh.2011.09.003)
- (Evans, A., Brunet, R., Talwar, E., Bala, I., Lindsay, R. (2011). The effects of false repetition on children's true and false reports. *Journal of Experimental Psychology*, 140, 463-471. (doi:10.1037/a0023000)
- (Moriguchi, K., Evans, A., Hiraki, K., Lee, K. (2011). Cultural differences in the development of cognitive shifting: A West-East comparison. *Journal of Experimental Child Psychology*, 111(2), 61-63. (doi:10.1016/j.jecp.2011.02.001)
- (Evans, A., Lee, K. (2011). Verbal deception from late childhood to middle adolescence and its relation to executive functioning skills. *Developmental Psychology*, 47, 37-44. (doi:10.1037/a0023000)
- (Chiu, L., Evans, A., Lee, K. (2011). The neural correlates of prosocial-helping decisions: A ventral-related brain potentials study. *Brain Research*, 1369, 7-17. (doi:10.1016/j.brainres.2011.02.001)
- (Evans, A., Li, G., Lee, K. (2011). When all signs point to you: Lies told in the face of evidence. *Developmental Psychology*, 47, 37-44. (doi:10.1037/a0023000)
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- 1 (Bala, I., Evans, A., Bala, H. (2011). Hearing the voices of children in the Canadian criminal justice system: Recognizing capacity to facilitate testimony. *Child and Family Quarterly*, 22, 71-78. (doi:10.1007/s10826-011-9399-3)
- 7 (Evans, A., Roberts, K., Price, B., Stefek, K. (2011). The use of paraphrasing in investigative interviews. *Child Abuse & Neglect*, 34, 11-17. (doi:10.1016/j.chiabu.2011.02.001)
- 3 (Evans, A., Roberts, K. (2011). The effects of different paraphrasing styles on the quality of reports from young child witnesses. *Journal of Experimental Psychology: Crime and Applied*, 15, 53-67. (doi:10.1037/a0023000)
- (Evans, A., Lon, K., Lee, K. (2011). Complex questions asked by defense lawyers: Do not prosecutors predict convictions in child abuse trials? *Journal of Human Behavior*, 33, 1-7. (doi:10.1016/j.hbeh.2011.02.001)
- (Li, G., Evans, A., Wang, L., Lee, K. (2011). Linking the name of the collective good to developmental change. *Developmental Science*, 11, 1-3. (doi:10.1111/j.1469-7610.2011.02307.x)

Book Chapters:

- 1 (Evans, A., Lee, K. (2011). Moral development: Deception. In R. Killen, & M. T. H. (Eds.), *Handbook of Moral Development* (2nd Edition). Psychology Press.
- 7 (Lee, K. (2011). Becoming a moral relativist: Children's moral conceptions of honest and dishonest in different social contexts. In B. Banajik, & G. Gelman (Eds.), *Navigating the Social World: What Infants, Children, and 3 Other Species Can Teach Us*. Oxford Scholarship online. (doi:10.1093/acprof:oso/9780195303030/00000003)
- 3 (Evans, A., Roberts, K. (2011). Children's information sources: The relations between source monitoring, mental-state understanding and knowledge acquisition in young children. In K. Kelle, & H. (Eds.), *Applied Memory*. Nova Scotia Publishers. (doi:10.1007/978-1-954335-1-1)

- ° (Roberts, K., & Evans, A. W. (2019). Protecting alleged victims of child abuse in adult-based judicial systems. In K. Neill, K. Zingales, & H. #. (Eds.), *Children's Rights Theory and Policy and Practice*. Toronto, Ontario, Canada: Kluwer Press.
- ° (Bala, N., & Evans, A. W. (2019). Courtroom procedures: Questioning of child witnesses: Social science research. In K. Neill, K. Zingales, & H. #. (Eds.), *Child Witness Electronic Bench Book*. National Judicial Institute (NJIB). \$E99 (nji/ebbb/EBB_install/)

Manuscripts under review:

- 7 (W. Lie, B., Cobble, C., McWilliams, K., & Stoltenberg, I. C. (2020). Understanding of Polysomnographic Implications. *Journal of Experimental Child Psychology*.
- 3 (Connor, K., Weins, R., & Lie, W. (2020). Differences in cues used by younger adults in detecting deception: Making credibility judgements on children's reports of true and false events. *Law and Behavior*.
- ° (McWilliams, K., Williams, C., Stoltenberg, I. C., & Lie, W. (2020). Revisiting the resubmitted: Examining variability in maltreated children's willingness to admit ignorance of "pepper" questions. *W and Human Behavior*.
- ° W. Lie, B., Stoltenberg, I. C. (2020). Children's understanding of "How" questions. *International Journal of Behavioral Development*.

Manuscripts in preparation:

- 7 (McWilliams, K., W. Lie, B., Stoltenberg, I. C., & Evans, A. W. (2020). Children's understanding of asking versus telling. *Journal of Experimental Child Psychology*.
- 3 (Stoltenberg, I. C., W. Lie, B., McWilliams, K., & Evans, A. W. (2020). The nice policeman helped me remember: Children's developing understanding of implicatures. *Journal of Experimental Child Psychology*.
- ° (Connor, K., Judges, R., Lee, K., & Evans, A. W. (2020). Younger and older adults' detection of fraudulent emails. *Journal of Experimental Child Psychology*.
- ° (Evans, A. W., Lie, W., & Stoltenberg, I. C. (2020). Evasive behaviors in 7-ear-old's concealment of a minor transgression. *Journal of Experimental Child Psychology*.

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#- & & - PRESENTATIONS:

- 1 (Merriwether, H., Stoltenberg, I. C., & McWilliams, K. (2020). Adult temporal judgments and interpretations of children's temporal judgments. Paper presented at the Annual Conference of the American Psychological Society, New Orleans, LA.
- 7 (W. Lie, B., Stoltenberg, I. C., McWilliams, K., & Evans, A. W. (2020). Children's acquiescence to implied coaching questions. Paper presented at the Annual Conference of the American Psychological Society, New Orleans, LA.
- 73 (McWilliams, K., Williams, C., Stoltenberg, I. C., & Lie, W. (2020). Investigating pseudotemporal questions: Children's temporal misinterpretation of "telling me" prompts. Paper presented at the Annual Conference of the American Psychological Society, New Orleans, LA.
- ° (W. Lie, B., McWilliams, K., Stoltenberg, I. C., & Lie, W. (2020). Did our Mom ask you to tell me? Children's difficulty distinguishing between "ask" and "tell". Paper presented at the Annual Conference of the American Psychological Society, New Orleans, LA.
- ° (Connor, K., Lie, W., & Stoltenberg, I. C. (2020). Younger and older adults' tendency to detect different deception and credibility cues when evaluating children. Paper presented at the Annual Conference of the American Psychological Society, New Orleans, LA.
- ° (Lie, W., & Stoltenberg, I. C. (2020). Linguistic cues to deception in maltreated and non-maltreated children's reports. Paper presentation at the Annual Conference of the American Psychological Society, New Orleans, LA.
- (Lie, W., Willoughb, K., & Stoltenberg, I. C. (2020). Longitudinal associations between loneliness, friendship quality, and depressive symptoms during adolescence. *Dahl, K. (Ed.), Honesty in Adolescents and Young Adults: Uses, Consequences, and Interventions*.

- Biennial Meeting for the Society for Research on Adolescence, San Diego, CA conference cancelled due to COVID-19 pandemic (k)
- 6 (k · @#", k · Willoughb · k · k H6(#, k (k (2020, k ("%' (Does · ing · to · parents · influence · adolescent · development? · longitudinal · k · dishonest · relationship · quality · k · depression [Poster] (Biennial Meeting for the Society for Research on Adolescence, San Diego, CA conference cancelled due to COVID-19 pandemic (k)
- 7 (k Bruer, k ·, H6(#, k (k ·, k Price, B (k ("%' , k 2020), Methods for promoting truthful disclosures from peers disclosure recipients · k · witnesses (Presented · k (McWilliams Chair (From Children's Reports to Jurors' Perceptions: Promoting Honest, Detailed (· Objective Evidence (The American · # · cholog · -Law Society Annual Conference, New Orleans, LA (k
- 8 (H6(#, k (k (k · on, k (k (k ("%' , k · (Evasive Behaviors in · - · Year-Olds Concealment of (k Minor Transgression (Presented · k (Gongolai Chair (Children's Reluctance to Disclose Sexual Abuse: Conceptualization, Identification, (· Case Outcomes (The American · # · cholog · -Law Society Annual Conference, New Orleans, LA (k)
- 9 (Price, B (k H6(#, k (k (k ("%' , k · - (With support children accurately sequence within-event components (Paper presented in (Stol · enberg Chair (Be · ond the Child's Allegation: How to Elicit Forensicall · Relevant Details, American · # · cholog · -Law Society Annual Conference, Portland, OR (k
- 10 (k · Connor, k (k ·, k H6(#, k (k (k ("%' , k · - (Perceptions of older adult jurors: Uncovering barriers for older adults' · participation (Paper presented (The American · # · cholog · -Law Society Annual Conference, Portland, OR (k
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- understanding of truth and cultural divergences in their subsequent moral evaluations. At the biannual meeting of the Society for Research in Child Development, Boston, Massachusetts. k
- 9 Roberts, K. & Evans, K. & Parker, C. (March, 2006) Tagging an event to its source and encoding improves children's source monitoring. Paper presented at the 31st Annual Meeting of the Society for Research in Child Development, Boston, Massachusetts. k
- 10 Evans, K. & Roberts, K. (July, 2009) Protecting alleged victims of child abuse in adult-based judicial systems. Paper presented at the Children and Young People's Rights in Civil and Criminal Courts. Symposium at Investment and Citizenship: Towards a Transdisciplinary Dialogue on Children and Youth Rights. St. Catharines, Ontario. k
- 11 Evans, K. & Roberts, K. (October, 2009): The relationship between children's mental-state understanding, source-monitoring skills, and suggestibility. Paper presented at the C. Roebers Chair. Influences of the Accuracy and Completeness of Children's Event Reports. Symposium at the biennial meeting of the Cognitive Development Society, San Diego, California. k
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- 13 Evans, K. & Roberts, K. (June, 2009): What do children really remember? The effects of paraphrasing on children's memory reports. Poster presented at the Canadian Psychological Association Conference, Hamilton, Ontario. k
- 14 Roberts, K. & Evans, K. (June, 2009): Understanding the origin of specific informative experiences contributes to the development of children's reality monitoring. Poster presented at the Canadian Psychological Association Conference, Hamilton, Ontario. k

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Note: # = erlinks are referred to articles and interfiles when a faila Gekk

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| The Brock News   | Mar 2020  | <a href="#">Online student examines how parents are talking to kids about COVID-19</a> |
| The Brock News   | Mar 2020  | <a href="#">Researchers adapt to COVID-19 disruptions in their work</a>                |
| The Conversation | Sept 2020 | <a href="#">Children's lies are deceptive &amp; complex</a>                            |
| CHCH             | Jul 2020  | <a href="#">Brock psychologist awarded grant for research into lying</a>               |
| BBCK             | Jul 2020  | <a href="#">Liar, Liar</a>                                                             |
| New York Times   | Jan 2021  | <a href="#">/ Your Child Lying to You? That's Good</a>                                 |
| CBC              | Jul 2020  | <a href="#">Want our kids to do as they're told? Try this, say new study</a>           |

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| ThekBostonkGlobe                         | April,k)~9 k     | <a href="#">DoMomandDadhavelakclue?kApparentl·kNot,k</a>                                      |
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VirginRadioVancouver,kk  
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toconvictionsinkchildabusektrials

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**TEACHING & RESEARCH**

□ KSabbatical 2017-2018 academic year

**Instructor Positions:**

| # \$%' ^ ! " ( ##')                                                                        | Y''' \$                                                                                           | D''& \$!' "(/University                                |
|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| Critical Thinking<br>(PSYC=) k                                                             | 0~9J~6 k                                                                                          | - · cholog· /BrockUniversit·k                          |
| Development of Deception<br>(PSYC=41:J=-=) k                                               | 0~J~( k<br>0~(J~ = k<br>0~=J~< k<br>0~<J~: k<br>0~:J~9 k<br>0~9J~6 k<br>0~1J0~ k<br>0~ J00 k<br>k | - · cholog· kBrockUniversit·k                          |
| Social Development<br>(PSYC/CHYSk=-66 k                                                    | 0~(J~ = k<br>0~=J~< k<br>0~:J~9 k<br>0~9J~6 k<br>0~1J0~ k<br>0~ J00 k<br>k                        | - · cholog· kBrockUniversit·k                          |
| Honours Thesis Seminar<br>(PSYCk- = k                                                      | 0~J~( k<br>0~(J~ = k<br>0~<J~: k<br>0~1J0~ k<br>k                                                 | - · cholog· kBrockUniversit·k                          |
| Developmental Focal Area Reading Seminar<br>(PSYCkB9~J6B9~ k<br>3courseco-ordinator        | 0~J~( k<br>0~(J~ = k<br>0~<J~: k<br>0~9J~6 3k<br>0~1J0~ k<br>0~ J00 3k<br>k                       | - · cholog· kBrockUniversit·k                          |
| Investigative Interviewing Seminar<br>(LAWk)~ k<br>(co-iaKBM LedkwithHBkThomakOyoA~k       | 0~)J~~ k                                                                                          | GouldSchoolofLaw/Universit·kofk<br>SouthernCaliforniak |
| - · chological Foundations of Learning and<br>Development (Bachelors of Education) Program | 0~)J~1 k                                                                                          | OISE/Universit·kofkTorontok                            |

## Invited Talks

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| Title                                                                                             | Date      | Session                                                                                           |
|---------------------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------------------------------------------|
| <i>The Influence of the Cultive Confessionals 9-12-year-olds Honesty &amp; Conceal Transgress</i> | January 6 | The Invention of Language, Logic and Cognition<br>Lorent Centre<br>Leiden University, Netherlands |
| <i>Children's lie-telling behaviour &amp; its Developmental Psychology Colloquium Series</i>      | November  | Developmental Psychology Colloquium Series<br>Wilfrid Laurier University                          |
| <i>The Development of Deceptive Intent in Toddlers &amp; Teens</i>                                | December  | Child and Youth Studies Colloquium Series<br>Brock University                                     |

## Presentations to Community at Large

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| Title                                                                                      | Date      | Session                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Interviews &amp; Child Assessments Implementing Best Practices</i>                      | June 1    | Professional Development Seminar for the Niagara Regional Police, Family and Children Services & the Kristen French Child Advocacy Centre of Niagara. Held at Brock University |
| <i>Investigative Interviewing Child Assessments</i>                                        | January 1 | Law Society of Ontario training session on Intimate Partner Violence and Arbitration                                                                                           |
| <i>Firefighters &amp; children's developing skills through their lie-telling behaviour</i> | January   | Knowledge Dissemination Session<br>Kiwaniis Aquatics Centre<br>St. Catharines, ON                                                                                              |
| <i>Does Your Child Tell Lies? The Development of Lie-telling Behaviour</i>                 | March 6   | Knowledge Dissemination Session<br>Earl Grey Centre<br>St. Catharines, ON                                                                                                      |
| <i>2 Sessions &amp; Paraphrasing Investigative Interviews</i>                              | March     | Professional Training Seminar<br>Stewart House Rape Treatment Centre<br>Santa Monica, CA                                                                                       |
| <i>The Development of Lie-telling</i>                                                      | April 1   | Professional Development Seminar<br>Ministry of Child and Youth Services<br>Toronto, ON                                                                                        |

W

**Professional Development Courses/Workshops Taken on Teaching:**

W

| <i>Course Title</i>                                                                         | <i>Date</i>             | <i>University</i>          | <i>Professor/Instructor</i>        |
|---------------------------------------------------------------------------------------------|-------------------------|----------------------------|------------------------------------|
| Teaching Dossier Institute                                                                  | August 2010             | Brock University           | Centre for Pedagogical Instruction |
| Wikipedia in the Classroom                                                                  | June 2010               | Brock University           | Drs. Obar, Simmons and Bradle      |
| Getting the Most Out of Multiple-choice Questions                                           | Nov 2010                | Brock University           | David DiBattista                   |
| Psychological Foundations of Teacher Education: Effective Curriculum and Pedagogical Design | Fall & Winter 2006-2007 | OISE/University of Toronto | Steven Katk                        |

W

**Student Supervision:**

Since 2008 I have supervised over 100 paid research assistants and volunteers

| <i>PhD students</i>                                      | <i>Dates</i> |
|----------------------------------------------------------|--------------|
| Victoria McKrack                                         | 2010-present |
| Alison McConnell                                         | 2011-present |
| Breanne W. Liek                                          | 2011-present |
| <b>Master's students</b>                                 |              |
| Victoria McKrack                                         | 2006-2007    |
| Alison McConnell                                         | 2009-2010    |
| Breanne W. Liek                                          | 2009-2010    |
| Jasmine Bender                                           | 2007-2008    |
| <b>Honours Thesis Students (3<sup>rd</sup> year)</b>     |              |
| Georgia Eller                                            | 2007-2008    |
| Michaela Weinsk                                          | 2011-2012    |
| Stephanie Rooke                                          | 2011-2012    |
| Tori McKrack                                             | 2009-2010    |
| Amanda Krause                                            | 2009-2010    |
| Christina Laptskai                                       | 2008-2009    |
| Alison Doucher                                           | 2008-2009    |
| Elora Gartle                                             | 2007-2008    |
| <b>Independent Studies Student (4<sup>th</sup> year)</b> |              |
| Elisa Keller                                             | 2007-2008    |
| <b>Teaching Apprentice Mentor (graduate level)</b>       |              |
| Claire Matthews (PSYC 66 Social Development)             | Winter 2011  |
| Chloe Ham (PSYC 66 Social Development)                   | Winter 2010  |
| <b>Co-op Student</b>                                     |              |
| Alexandra Cvetich                                        | 2008-2009    |
| Trisha-Lee Halama                                        | 2007-2008    |

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**STUDENT THESIS COMMITTEES:**

**Students**

**Dates**

|                                     |              |
|-------------------------------------|--------------|
| Akif Eltahirk                       | 2019-present |
| Anita T welek                       | 2019-present |
| Sophia Theirr k                     | 2019-present |
| Tessa Ma' achowsk PhD committee     | 2018-present |
| Claire Matthews, PhD committee      | 2017-present |
| Ta' lor Heffer, PhD committee       | 2017-present |
| Claire Matthews, K!~ k committee    | 2016 k       |
| Ta' lor Heffer, K!~ k committee     | 2016 k       |
| Thalia Strooboscher PhD committee   | 2019 k       |
| Thalia Strooboscher K!~ k committee | 2019 k       |
| Matt Horner K!~ k committee         | 2019 k       |

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**Students**

**Dates**

|                                                                                                                                              |                 |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| <b>Atiyeh Mojdehi</b> w<br>Department of Educational & Counselling k · chk<br>McGill University k<br>Thesis Advisor: Dr. Victoria Talwar     | October 2019 k  |
| <b>Paraskevi Engarhos</b> w<br>Department of Educational & Counselling k · chk<br>McGill University k<br>Thesis Advisor: Dr. Victoria Talwar | January 2019 k  |
| <b>Talia Carl</b> w<br>Developmental k · cholog · k<br>Macquarie University k · dne · k Australia k<br>Thesis Advisor: Dr. Ka · k Busse · k  | November 2019 k |
| <b>Corrie Wendetti</b> w<br>Developmental k · cholog · k<br>Carleton University k<br>Thesis Advisor: Deepthi Kamawark                        | January 2019 k  |
| <b>Kaylee Willemson</b> w<br>Developmental k · cholog · k<br>Wilfrid Laurier University k<br>Thesis Advisor: Dr. Kim Roberts k               | June 2019 k     |

**UNIVERSITY COMMITTEES and SERVICE:**

| <i>Committee</i>                                                         | <i>Date of Service</i>                   |
|--------------------------------------------------------------------------|------------------------------------------|
| · ched Brock Newsletter Editor                                           | ( ) = k present k                        |
| · cholog Department                                                      | k                                        |
| Department Social Media Coordinator                                      | ( ) 1 k present k                        |
| Lifespan Area Representative                                             | ( ) < k ( ) ~: k                         |
| Brock University                                                         | ( ) 9 k ( ) ~ 6 k                        |
| Member of the Space Committee, k                                         | ( ) < k, ( ) ~: k                        |
| Brock University                                                         | k                                        |
| Member of the Graduate Committee, k                                      | ( ) ~ ( k ( ) ~ 9 k                      |
| Brock University                                                         | k                                        |
| Volunteered to provide peer support for SSHRC Insight Applicant          | ( ) < k                                  |
| Brock University Graduate Studies and Research                           | k                                        |
| Member of the Hiring Short-list Committee, k                             | ( ) ~ = N ( ) ~ N ( ) ( ) k              |
| Brock University                                                         | k                                        |
| Member of the SSHRC CGSI Master's/PhD Central Adjudication Committees, k | ( ) ~ < " ( ) ~: " ( ) ~ 9 " ( ) ~ 1 " k |
| Brock University                                                         | ( ) ~ " ( ) ( ) k                        |
| Graduate Student Representative on Faculty Council, k                    | ( ) ) 9 k, ( ) ) 1 k                     |
| 8 / ° # University of Toronto                                            | k                                        |

**& 4, & ~ - % \* UNIVERSITY COMMITTEES and SERVICE:**

| <i>Position</i>                                                          | <i>Date of Service</i>  |
|--------------------------------------------------------------------------|-------------------------|
| Canadian Child Interviewing Research Team (CCIRT) k                      | Jan ( ) ~ 1 k present k |
| <b>Co-Director</b>                                                       | k                       |
| Development ( ) ~ 1 k, k Canadian Developmental Psychology Conference    | Mar ( ) ~ 9 * ( ) ~ 1 k |
| <b>Program Co-Chair for \$% &amp; conference</b>                         | k                       |
| ! - ! Division 6 (Developmental Psychology) k                            | Jan ( ) ~ < * ( ) ~ 9 k |
| <b>Early Career Network Representative</b>                               | k                       |
| \$, \$ ) ~ v ~ s ~ ~ - 8 Development ^ , psychology 9                    | Jan 2013-2014 k         |
| <b>Program Chair for the \$% &amp; Convention in Honolulu, Hawaii</b>    | k                       |
| \$, \$ ) ~ v ~ s ~ ~ - 8 Development ^ , psychology 9                    | Jan ( ) ~ ( * ) ~ = k   |
| <b>Program Co-Chair for the \$% &amp; Convention in Orlando, Florida</b> | k                       |

**PROFESSIONAL SOCIETY MEMBERSHIPS:**

| <i>Society</i>                                                                               | <i>Date of Membership</i> |
|----------------------------------------------------------------------------------------------|---------------------------|
| American Psychological Association                                                           | 2004-present              |
| International Division of Developmental Psychology Society for Research in Child Development | 2004-present              |
| American Psychological and Law Society                                                       | 2008-present              |
| Cognitive Development Society                                                                | 2004-present              |
| Canadian Psychological Association                                                           | 2004-present              |

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**Journals**

|                                             |
|---------------------------------------------|
| Applied Cognitive Psychology                |
| British Journal of Developmental Psychology |
| Canadian Psychology                         |
| Child Development                           |
| Developmental Psychology                    |
| Developmental Science                       |
| Infant and Child Development                |
| Journal of Behavioral Development           |
| Journal of Experimental Child Psychology    |
| Journal of Moral Education                  |
| Law and Human Behavior                      |
| Merrill-Palmer Quarterly                    |

**Conferences**

|                                                      |
|------------------------------------------------------|
| American Psychological-Law Society Convention        |
| American Psychological Association Annual Convention |
| Developmental Psychology 1                           |
| Society for Research in Child Development Conference |

**Research Grants**

|                                                                                         |
|-----------------------------------------------------------------------------------------|
| Fonds de recherche en culture (FRBSC) Postdoctoral Fellowship (Jan, 2009)               |
| American Psychological-Law Society Earl K. Career Professional Grant-In-Aid (Mar, 2010) |
| National Science Foundation Law and Social Sciences Program (October, 2010)             |



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## **Dr. Caitlin Emma Victoria Mahy**

Correspondence language: English

### **Contact Information**

The primary information is denoted by (\*)

#### **Address**

Primary Affiliation (\*)

1812 Sir Isaac Brock Way  
Psychology Department  
Brock University  
St. Catharines Ontario L2S 3A1  
Canada

#### **Telephone**

|            |                               |
|------------|-------------------------------|
| Mobile (*) | 905-3485335                   |
| Work       | 1-905-6885550 extension: 6151 |

#### **Email**

|          |                        |
|----------|------------------------|
| Personal | caitlinmahy@gmail.com  |
| Work (*) | caitlin.mahy@brocku.ca |



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## Dr. Caitlin Mahy

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### Language Skills

| Language | Read | Write | Speak | Understand | Peer Review |
|----------|------|-------|-------|------------|-------------|
| English  | Yes  | Yes   | Yes   | Yes        | Yes         |
| French   | Yes  | No    | No    | No         | No          |

### Degrees

- 2012/9                      Doctorate, Developmental Psychology, University of Oregon  
Supervisors: Louis Moses, 2009/1 - 2012/8
- 2008/12                    Master's Thesis, Developmental Psychology, University of Oregon  
Supervisors: Louis Moses, 2007/9 - 2008/12
- 2007/6                      Bachelor's Honours, Psychology Research Specialist, University of Toronto  
Supervisors: Philip Zelazo, 2006/9 - 2007/5

### Recognitions

- 2018/1 - 2018/1            Faculty of Social Sciences Untenured Researcher Award - 750  
Brock University  
Prize / Award  
This award is given to excellent untenured researchers through the Faculty of Social Sciences at Brock University
- 2014/1 - 2014/12         Editor's Choice Article, Cognitive Development  
Cognitive Development  
Honor  
My article published in 2011 was selected as the Editor's choice.

### User Profile

Research Specialization Keywords: cognitive development; prospective memory

### Employment

- 2018/7                        Associate Professor  
Psychology, Brock University  
Full-time  
Tenure Status: Tenure

|                  |                                                                                                                                      |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| 2014/7 - 2018/6  | Assistant Professor<br>Psychology, Brock University<br>Full-time, Assistant Professor<br>Tenure Status: Tenure Track                 |
| 2013/7 - 2014/6  | Research Associate<br>Psychology, University of Geneva<br>Full-time<br>Tenure Status: Non Tenure Track                               |
| 2013/7 - 2014/6  | Research Associate<br>Psychology, University of Oregon<br>Full-time<br>Tenure Status: Non Tenure Track                               |
| 2012/9 - 2013/6  | Postdoctoral Fellow<br>Psychology, University of Geneva<br>Full-time<br>Tenure Status: Non Tenure Track                              |
| 2009/9 - 2010/8  | Developing Mind Lab Manager<br>Psychology, University of Oregon<br>Full-time<br>Tenure Status: Non Tenure Track                      |
| 2009/9 - 2010/8  | Assistant to the Department Head<br>Psychology, University of Oregon<br>Full-time<br>Tenure Status: Non Tenure Track                 |
| 2006/6 - 2007/8  | Research Assistant<br>Neuroscience and Mental Health, The Hospital for Sick Children<br>Full-time<br>Tenure Status: Non Tenure Track |
| 2006/9 - 2007/7  | Research Assistant<br>Psychiatric Services, University of Toronto<br>Part-time<br>Tenure Status: Non Tenure Track                    |
| 2000/10 - 2006/6 | Children's Sports Skills Instructor<br>Toronto Parks and Recreation                                                                  |
| 2005/1 - 2005/6  | Research Assistant<br>Psychology, University of Toronto<br>Part-time<br>Tenure Status: Non Tenure Track                              |

## Research Funding History

### Awarded [n=7]

|                                        |                                                                                                                                                                                                                       |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2018/5 - 2023/5<br>Principal Applicant | Ontario Early Researcher Award, Grant<br><b>Funding Sources:</b><br>Ontario Ministry of Research and Innovation (ON)<br>Total Funding - 150,000<br>Portion of Funding Received - 150,000<br>Funding Competitive?: Yes |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                              |                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2017/6 - 2022/5<br>Co-investigator                           | SSHRC Insight Grant, Grant<br><b>Funding Sources:</b><br>Social Sciences and Humanities Research Council of Canada (SSHRC)<br>Insight Grant<br>Total Funding - 211,966<br>Portion of Funding Received - 0<br>Funding Competitive?: Yes                         |
| 2019/10 - 2021/10<br>Principal Applicant                     | Council for Research in the Social Sciences (CRISS) Seed Grant, Grant<br><b>Funding Sources:</b><br>Brock University<br>Total Funding - 2,992<br>Portion of Funding Received - 2,992<br>Funding Competitive?: Yes                                              |
| 2014/4 - 2019/4<br>Principal Applicant                       | NSERC Discovery Grant, Grant<br><b>Funding Sources:</b><br>Natural Sciences and Engineering Research Council of Canada (NSERC)<br>Discovery Grants<br>Total Funding - 145,000<br>Portion of Funding Received - 40<br>Funding Competitive?: Yes                 |
| 2016/6 - 2018/5<br>Principal Applicant                       | SSHRC Insight Development Grant, Grant<br><b>Funding Sources:</b><br>Social Sciences and Humanities Research Council of Canada (SSHRC)<br>Insight Development Grant<br>Total Funding - 48,998<br>Portion of Funding Received - 30<br>Funding Competitive?: Yes |
| 2015/10 - 2017/10<br>Principal Applicant                     | Council for Research in the Social Sciences (CRISS) Seed Grant, Grant<br><b>Funding Sources:</b><br>Brock University<br>Total Funding - 2,000<br>Portion of Funding Received - 2,000<br>Funding Competitive?: Yes                                              |
| 2014/10 - 2016/10<br>Principal Applicant                     | Council for Research in the Social Sciences (CRISS) Seed Grant, Grant<br><b>Funding Sources:</b><br>Brock University<br>Total Funding - 2,000<br>Portion of Funding Received - 2,000<br>Funding Competitive?: Yes                                              |
| <b>Completed [n=2]</b><br>2014/9 - 2016/9<br>Co-investigator | Swiss National Science Foundation, Grant<br><b>Funding Sources:</b><br>Swiss National Science Foundation (SNSF)<br>Total Funding - 258,000<br>Portion of Funding Received - 258,000<br>Funding Competitive?: Yes                                               |

2015/12 - 2016/2  
Principal Applicant

Co-investigator : Dr. Matthias Kliegel

Brock SSHRC Institutional Grant, Grant

**Funding Sources:**  
Brock University  
Total Funding - 3,962  
Portion of Funding Received - 100  
Funding Competitive?: Yes

**Declined [n=1]**

2014/9 - 2016/8  
Principal Investigator

SSHRC Banting Postdoctoral Fellowship, Fellowship

**Funding Sources:**  
Social Sciences and Humanities Research Council of Canada (SSHRC)  
Total Funding - 140,000  
Portion of Funding Received - 0  
Funding Competitive?: Yes

**Student/Postdoctoral Supervision****Bachelor's Honours [n=9]**

2018/9 - 2019/4  
Principal Supervisor

Emma Stallwood (Completed) , Brock University  
Thesis/Project Title: The development of children's future-oriented cognition  
Present Position: Honours Thesis Student

2018/9 - 2019/4  
Principal Supervisor

Chelsey Masson (Completed) , Brock University  
Thesis/Project Title: The role of cognition and emotion on young children's future thinking.  
Present Position: Honours Thesis Student

2017/5 - 2018/4  
Principal Supervisor

Lydia Lavis (Completed) , Brock University  
Thesis/Project Title: Why do young children forget to carry out their intentions? Testing retrospective memory and executive explanations  
Present Position: Honours Thesis Student, Brock University

2017/5 - 2018/4  
Principal Supervisor

Christine Koktavy (Completed) , Brock University  
Thesis/Project Title: A test of two explanations for children's poor performance on the Pretzel task: Self and other differences in episodic foresight  
Present Position: Honours Thesis Student, Brock University

2015/9 - 2016/4  
Principal Supervisor

Sarah Mitchinson (Completed) , Brock University  
Thesis/Project Title: The development of young children's spontaneous episodic future thinking  
Present Position: Masters Student, Wilfrid Laurier University

2015/9 - 2016/4  
Principal Supervisor

Lindsey Gerrard (Completed) , Brock University  
Thesis/Project Title: Investigating the relationship between a continuous measure of false belief understanding and inhibition in young children  
Present Position: Graduate Student, Ontario Institute for Studies in Education

2014/9 - 2015/5  
Principal Supervisor

Katelyn Brausewetter (Completed) , Brock University  
Thesis/Project Title: The effect of perspective and verbal ability on children's episodic foresight  
Present Position: Teacher's College Student, Brock University

- 2013/9 - 2014/6  
Co-Supervisor Madeline Weissman (Completed) , University of Oregon  
Thesis/Project Title: Young children's episodic future thinking  
Present Position: Applying to Law School
- 2013/9 - 2014/5  
Co-Supervisor Hannah Mohun (Completed) , University of Victoria  
Thesis/Project Title: The role of working memory and subvocal rehearsal in preschoolers' prospective memory  
Present Position: Clinical Psychology PhD student, University of Victoria

**Master's Thesis [n=3]**

- 2019/9 - 2021/7  
Principal Supervisor Samantha Moeller (In Progress) , Brock University  
Student Degree Expected Date: 2021/7  
Thesis/Project Title: Adults' impressions of forgetful children: Effects of memory type, domain, and developmental stage  
Present Position: MA student
- 2018/9 - 2020/7  
Principal Supervisor Lydia Lavis (Completed) , Brock University  
Thesis/Project Title: The role of children's metacognition in predicting prospective and retrospective memory performance  
Present Position: MA student
- 2015/9 - 2017/8  
Principal Supervisor Tessa Mazachowsky (Completed) , Brock University  
Thesis/Project Title: The Development of the Children's Future Thinking Questionnaire: Establishing Validity and Reliability  
Present Position: Masters Student, Brock University

**Doctorate [n=1]**

- 2017/9 - 2022/6  
Principal Supervisor Tessa Mazachowsky (In Progress) , Brock University  
Student Degree Expected Date: 2022/6  
Thesis/Project Title: The development of children's future oriented behaviour  
Present Position: PhD student

**Editorial Activities**

- 2019/1 - 2020/12 Editorial Board Member, Cognitive Development, Journal
- 2016/1 - 2020/12 Member of the Editorial Board, Journal of Experimental Child Psychology, Journal
- 2016/1 - 2018/12 Consulting Editor, Developmental Psychology, Journal
- 2013/6 - 2014/7 Managing Guest Editor, Journal of Experimental Child Psychology, Journal

**International Collaboration Activities**

- 2014/8 - 2016/8 Co-Investigator, Switzerland  
Collaborating with Dr. Matthias Kliegel on a grant awarded to study the training of executive functions in the development of intentional behaviour.

**Committee Memberships**

- 2020/7 - 2023/6 Committee Member, Jean Piaget Society Board of Directors, Jean Piaget Society
- 2018/7 - 2021/6 Chair, Undergraduate Committee, Brock University  
Undergraduate Program Director for the Department of Psychology at Brock University

|                 |                                                                               |
|-----------------|-------------------------------------------------------------------------------|
| 2016/6 - 2019/6 | Committee Member, Jean Piaget Society Board of Directors, Jean Piaget Society |
| 2014/9 - 2016/9 | Committee Member, Social Science Research Ethics Board, Brock University      |

## Other Memberships

|                   |                                                   |
|-------------------|---------------------------------------------------|
| 2008/10 - 2014/12 | Member, Cognitive Development Society             |
| 2008/1 - 2014/12  | Member, Jean Piaget Society                       |
| 2007/9 - 2014/12  | Member, Society for Research in Child Development |

## Presentations

- (2020). A failure to replicate the effect of thirst on adults' induced-state episodic foresight. American Psychological Association, virtual, United States  
Invited?: No, Keynote?: No
- (2019). Examining children's episodic foresight on the Picture-book task using open-ended and forced-choice questions. Society for Research in Child Development, Baltimore, United States  
Invited?: No, Keynote?: No
- (2019). How do conflict and perspective affect children's future thinking?. Cognitive Development Society, Louisville, United States  
Invited?: No, Keynote?: No
- (2019). A meta-analysis on children's event-based prospective memory performance. Society for Research in Child Development, Baltimore, United States  
Invited?: No, Keynote?: No
- (2019). Developing an understanding of others' emotion states: Relations among affective theory of mind measures in early childhood. Jean Piaget Society Meeting, Portland, United States  
Invited?: No, Keynote?: No
- (2019). Assessing "generative" forms of future thought and their underlying mechanisms in young children. Society for Research in Child Development, Baltimore, United States  
Invited?: No, Keynote?: No
- (2019). Examining the relation between prospective memory and executive function using parent-report measures. Society for Research in Child Development, Baltimore, United States  
Invited?: No, Keynote?: No
- (2019). Young children's memory and metacognition. Jean Piaget Society Meeting, Portland, United States  
Invited?: No, Keynote?: No
- Mazachowsky TR, Lavis L. (2018). Why do preschoolers' forget to carry out future intentions? Contributions of retrospective memory and executive attention. Jean Piaget Society, Amsterdam, Netherlands  
Invited?: No, Keynote?: No
- Zuber S, Kliegel M. (2018). How the different facets of executive functioning contribute to focal, nonfocal, and time-based prospective memory during childhood. Jean Piaget Society, Amsterdam, Netherlands  
Invited?: No, Keynote?: No
- Atance CM, Rutt JL. (2018). How psychological distance and conflict affect children's future-oriented reasoning. Jean Piaget Society, Amsterdam, Netherlands  
Invited?: No, Keynote?: No
- Koktavy C, Mazachowsky TR. (2018). Thirst biases young children's predictions about their future selves by not future others. Development 2018, St Catharines, Canada  
Invited?: No, Keynote?: No

13. Mazachowsky TR. (2018). Constructing the Children's Future Thinking Questionnaire: The reliability, validity, and refinement of a parent-report measure of young children's future-oriented cognition. Jean Piaget Society, Amsterdam, Netherlands  
Invited?: No, Keynote?: No
14. Atance CM, Moses LJ. (2017). Delaying gratification for self and other: The role of theory of mind. Cognitive Development Society, Portland, United States  
Invited?: No, Keynote?: No
15. Mazachowsky TR, Mahy CEV. (2017). Assessing the validity of the Children's Thinking Questionnaire: The development of a parent-report on children's future-oriented cognition. Society for Research in Child Development, Austin, United States  
Invited?: No, Keynote?: No
16. Mahy CEV, Mazachowsky TR. (2017). "Don't forget what you are going to do!": The impact of different types of reminders on preschooler's prospective memory performance. Jean Piaget Society, San Francisco, United States  
Invited?: No, Keynote?: No
17. Mohun HM, Mahy CEV, Mueller U, Moses LJ. (2016). The effect of subvocal rehearsal disruption on young children's prospective memory. Annual Northwest Cognition and Memory Meeting, Vancouver, Canada  
Invited?: No, Keynote?: No
18. Mazachowsky TR, Mahy CEV. (2016). "My child saves money in a piggy bank for future purchases": The construction of a reliable parent-report questionnaire on young children's future oriented cognition. Jean Piaget Society, Chicago, United States  
Invited?: No, Keynote?: No
19. (2016). Factors that influence the development of young children's future-oriented cognition. Southern Society for Philosophy and Psychology, Louisville, United States  
Invited?: Yes, Keynote?: No
20. Mohun HM, Mahy CEV, Mueller U, Moses LJ. (2016). Prospective memory in preschool children: The role of subvocal rehearsal. Jean Piaget Society, Chicago, United States  
Invited?: No, Keynote?: No
21. Zuber S, Mahy CEV, Kliegel M. (2016). How the different facets of executive functioning contribute to focal, nonfocal and time-based PM during childhood. Prospective Memory Workshop 2016, Saint-Legier, Switzerland  
Invited?: Yes, Keynote?: No
22. Celebi S, Atance C, Mahy C. (2015). The development of spontaneous episodic future thinking in preschoolers. Fourth National Psychology Outside the Box Conference, Ottawa, Canada  
Invited?: No, Keynote?: No
23. Mahy C. (2015). Differential developmental trajectories of episodic foresight in early and middle childhood: The role of current-future state conflict. Invited talk at the University of Waterloo, Waterloo, Canada  
Main Audience: Researcher  
Invited?: Yes, Keynote?: No
24. Mahy C, Atance C, Moses L, Kopp L. (2015). The effect of psychological distance on the development of episodic foresight in early childhood. Society for Research in Child Development, Philadelphia, United States  
Invited?: No, Keynote?: No
25. Brausewetter K, Mahy C. (2015). The influence of perspective, inhibition, and verbal ability on young children's episodic foresight. Jean Piaget Society Meeting, Toronto, Canada  
Invited?: No, Keynote?: No

26. Mahy C, Atance C, Bernstein D. (2015). False belief performance and inhibitory control: Different relations depending on continuous or discrete measurement?. Jean Piaget Society Meeting, Toronto, Canada  
Invited?: No, Keynote?: No
27. Mahy C. (2015). Young children's future preferences are strongly influenced by their current physiological state. Brock Research Celebration, St Catharines, Canada  
Invited?: Yes, Keynote?: No
28. Zuber S, Mahy C, Kliegel M. (2015). Training executive functions and the development of intentional behavior in children. 14th Congress of the Swiss Psychological Society, Geneva, Switzerland  
Invited?: No, Keynote?: No
29. Mahy C. (2014). Remembering to carry out future intentions: The role of executive processes in young children's prospective memory performance. University of Ottawa Brownbag, Ottawa, Canada  
Invited?: Yes, Keynote?: No
30. Mahy C. (2014). Young children's future preferences while faced with a current state of thirst. Association for Psychological Science, San Francisco, United States  
Invited?: No, Keynote?: No
31. Mahy C. (2014). The development of prospective memory in early childhood: An executive framework. Tufts University Job Interview, Boston, United States  
Invited?: Yes, Keynote?: No
32. Mahy C, Mueller U, Mohun H, Moses L. (2014). The role of working memory and subvocal rehearsal in young children's prospective memory. Fourth International Conference on Prospective Memory, Naples, Italy  
Invited?: No, Keynote?: No

## Broadcast Interviews

- |                            |                                                                                                                         |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 2015/08/20 -<br>2015/08/20 | Kids in JK and SK-Brock researcher, The Larry Fedoruk Show, AM 610 CKTB                                                 |
| 2015/05/11 -<br>2015/05/11 | Is your young child forgetful? Brock University is looking to find out why., The Scott Thompson Radio Show, AM 900 CHML |

## Text Interviews

- |            |                                                                                            |
|------------|--------------------------------------------------------------------------------------------|
| 2017/04/20 | Brock prof tackles what it means to raise a child well, The Brock News                     |
| 2015/08/14 | Children in JK and SK at different stages of development: Brock researcher, The Brock News |
| 2015/05/27 | Inside the quirky memory of a child, St Catharines Standard                                |
| 2015/04/29 | Brock researcher examines children's memory, seeks participants, The Brock News            |

## Publications

### Journal Articles

1. Mahy CEV, Moses LJ, O'Brien B, Castro A, Kopp L, Atance CM. (2020). The roles of perspective and language in young children's delay of gratification performance. Journal of Experimental Child Psychology. Published  
Refereed?: Yes

2. Lavis L, Mahy CEV. (2020). "I'll remember everything no matter what!": Young children's predictions and postdictions of their prospective and retrospective memory and relations with executive functioning and metacognitive monitoring. *Journal of Experimental Child Psychology*.  
Submitted  
Refereed?: Yes
3. Mahy CEV, Masson C, Krause A, Mazachowsky TR. (2020). The effect of episodic future simulation and motivation on young children's induced-state episodic foresight. *Cognitive Development*.  
Revision Requested  
Refereed?: Yes
4. O'Connor AM, Campbell KL, Mahy CEV. (2020). Younger and older adults' prospective memory: The role of delay task difficulty. *Aging, Neuropsychology, and Cognition*.  
Published  
Refereed?: Yes
5. Atance CM, Rutt J, Cassidy K, Mahy CEV. (2020). Young children's future-oriented reasoning for self and other: Effects of conflict and perspective. *Journal of Experimental Child Psychology*.  
Submitted  
Refereed?: Yes
6. Mazachowsky TR, Mahy CEV. (2020). Construction of the children's future thinking questionnaire: A reliable and valid parent-report measure of children's future-oriented cognition. *Developmental Psychology*.  
Published  
Refereed?: Yes
7. Mazachowsky TR, Atance CM, Mitchinson S, Mahy CEV. (2020). "What should you bring with you to this place?": Examining children's episodic foresight using open-ended questions. *Journal of Genetic Psychology*.  
Published  
Refereed?: Yes
8. Gallant CMM, Lavis L, Mahy CEV. (2020). Developing an understanding of others' emotional states: Relations among affective theory of mind and empathy measures in early childhood. *British Journal of Developmental Psychology*. 38: 151-166.  
Published  
Refereed?: Yes
9. Zuber S, Mahy CEV, Kliegel M. (2019). How executive functions are associated with event-based and time-based prospective memory during childhood. *Cognitive Development*. 50: 66-79.  
Published  
Refereed?: Yes
10. Atance CM, Celebi SN, Mitchinson S, Mahy CEV. (2019). Thinking about the future: Comparing children's forced-choice versus "generative" responses in the "Spoon Test". *Journal of Experimental Child Psychology*.  
Published  
Refereed?: Yes
11. Mazachowsky TR, Koktavy C, Mahy CEV. (2019). The effect of psychological distance on young children's future predictions. *Infant and Child Development*. 28  
Published  
Refereed?: Yes
12. Mahy CEV. (2018). Mind reading across the lifespan: Current themes and future challenges. *Zeitschrift fur Psychologie*. 226: 134-135.  
Published  
Refereed?: No, Open Access?: No

13. Mahy CEV, Mazachowsky TR, Pagobo JR. (2018). Do verbal reminders improve preschoolers' prospective memory performance? It depends on age and individual differences. *Cognitive Development*. 47: 158-167.  
Published  
Refereed?: Yes, Open Access?: No
14. Mahy C, Schnitzspahn K, Hering A, Kliegel M. (2018). The delay period as an opportunity to think about future intentions: Effects of delay length and delay task difficulty on young adult's prospective memory performance. *Psychological Research*. 82: 607-616.  
Published  
Refereed?: Yes, Open Access?: No
15. Mahy CEV, Bernstein DM, Gerrard LD, Atance CM. (2017). Testing the validity of a continuous false belief task in three to seven year old children. *Journal of Experimental Child Psychology*. 160: 50-66.  
Published  
Refereed?: Yes, Open Access?: No
16. Ballhausen N, Mahy CEV, Hering A, Voigt B, Schnitzspahn K, Lagner P, Ihle A, Kliegel M. (2017). Children's planning performance on the Zoo Maptask (BADs-C): Is it driven by general cognitive ability, executive functioning, or prospection?. *Applied Neuropsychology: Child*. 6: 138-144.  
Published  
Refereed?: Yes, Open Access?: No
17. Pfeifer JH, Mahy CEV, Merchant JS, Chen C, Masten CL, Fuligni AJ, Lieberman MD, Lessard J, Dong Q, Chen C. (2017). Neural systems for reflected and direct self-appraisals in Chinese young adults: Exploring the role of temporal-parietal junction. *Cultural Diversity and Ethnic Minority Psychology*. 23: 45-58.  
Published  
Refereed?: Yes, Open Access?: No
18. Mahy C. (2016). Young children have difficulty predicting future preferences in the presence of a conflicting physiological state. *Infant and Child Development*. 25: 325-338.  
Published  
Refereed?: Yes, Open Access?: No
19. Farrell A, Semplonious T, Shapira M, Zhou X, Laurence S, Willoughby T, Mahy C, Mondloch C, Evans A. (2016). Research activity in Canadian developmental psychology programs. *Canadian Psychology*. 57: 76-82.  
Published  
Refereed?: Yes, Open Access?: No
20. Mahy C, Mohun H, Mueller U, Moses L. (2016). The role of subvocal rehearsal in preschool children's prospective memory. *Cognitive Development*. 39: 189-196.  
Published  
Refereed?: Yes, Open Access?: No
21. Mahy C, Voigt B, Ballhausen N, Schnitzspahn K, Ellis J, Kliegel M. (2015). The impact of cognitive control on children's goal monitoring in a time-based prospective memory task. *Child Neuropsychology*.  
Published  
Refereed?: Yes, Open Access?: No
22. Mahy C, Moses L. (2015). The effect of retention interval task difficulty on children's prospective memory: Testing the intention monitoring hypothesis. *Journal of Cognition and Development*.  
Published  
Refereed?: Yes, Open Access?: No
23. Mahy CEV, Munakata Y. (2015). Transitions in executive function: Insights from developmental parallels between prospective memory and cognitive flexibility. *Child Development Perspectives*. (9): 128-132.  
Published  
Refereed?: Yes, Open Access?: No

24. Mahy C, Grass J, Wagner S, Kliegel M. (2014). These pretzels are going to make me thirsty tomorrow: Differential development of hot and cool episodic future thinking in early childhood?. *British Journal of Developmental Psychology*. 32: 65-77.  
Published  
Refereed?: Yes, Open Access?: No
25. Mahy C, Moses L, Kliegel M. (2014). The development of prospective memory: An executive framework. *Developmental Review*. 34: 305-326.  
Published  
Refereed?: Yes, Open Access?: No
26. Voigt B, Mahy C, Ellis J, Schnitzspahn K, Altgassen M, Kliegel M. (2014). The development of time-based prospective memory in childhood: The role of working memory updating. *Developmental Psychology*. 50: 2393-2404.  
Published  
Refereed?: Yes, Open Access?: No
27. Mahy C, Moses L, Pfeifer J. (2014). How and where: Theory-of-mind in the brain. *Developmental Cognitive Neuroscience*. 9: 68-81.  
Published  
Refereed?: Yes, Open Access?: No
28. Mahy C, Moses L, Kliegel M. (2014). The impact of age, ongoing task difficulty, and cue salience on preschoolers' prospective memory performance: The role of executive function. *Journal of Experimental Child Psychology*. 127: 52-64.  
Published  
Refereed?: Yes, Open Access?: No
29. Tahiroglu D, Moses L, Carlson S, Mahy C, Olofson E, Sabbagh M. (2014). The children's social understanding scale: Construction and validation of a parent-report theory-of-mind measure. *Developmental Psychology*. 50: 2485-2497.  
Published  
Refereed?: Yes, Open Access?: No
30. Mahy CE, Vetter N, Kühn-Popp N, Löcher C, Krautschuk S, Kliegel M. (2014). The influence of inhibitory processes on affective theory of mind in young and old adults. *Aging, Neuropsychology, and Cognition*. 21: 129-145.  
Published  
Refereed?: Yes, Open Access?: No

## Journal Issues

1. Mahy CE, Kliegel M, Marcovitch S. (2014). Emerging themes in the development of prospective memory during childhood. *Journal of Experimental Child Psychology*. (127): 7.  
Published  
Refereed?: No, Open Access?: No  
Editors: Mahy CE, Kliegel M, Marcovitch S

## Book Chapters

1. Mahy, CEV. (2020). The development of prospective memory during childhood. *The Development of Memory in Infancy and Childhood*. : 1-30.  
Submitted, Taylor & Francis  
Refereed?: No

2. Atance C, Mahy C. (2016). Episodic future thinking in children: Methodological and Theoretical Approaches. Klein S, Michaelian K, Szpunar K. Seeing the Future: Theoretical Perspectives on Future-Oriented Mental Time Travel. : 1-30.  
Published, Oxford University Press  
Refereed?: Yes



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## **Dr. Catherine Mondloch**

Correspondence language: English

### **Contact Information**

The primary information is denoted by (\*)

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## Dr. Catherine Mondloch

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### Language Skills

| Language | Read | Write | Speak | Understand | Peer Review |
|----------|------|-------|-------|------------|-------------|
| English  | Yes  | Yes   | Yes   | Yes        | Yes         |
| French   | No   | No    | No    | No         | No          |

### Degrees

- 1993/12 Post-doctorate, Child Psychology, McMaster University
- 1989/6 Doctorate, Animal Behaviour, Indiana University  
Supervisors: William Timberlake, 1983/8 - 1989/6
- 1983/4 Bachelor's, Psychology, University of Western Ontario

### Recognitions

- 2015/7 - 2016/6 2015 Award for Distinguished Research and Creative Activity - 2,000  
Brock University  
Prize / Award  
This award recognizes faculty whose distinguished research or creative activity (appropriate to the nominee's discipline and faculty) demonstrates outstanding research achievements, contributions to the training of future researchers, and consistency in scholarly or creative performance.
- 2012/4 - 2015/3 Discovery Accelerator Supplement - 120,000  
Natural Sciences and Engineering Research Council of Canada (NSERC)  
Prize / Award  
\$120,000 over 3 years

### User Profile

Research Specialization Keywords: Developmental Mechanisms, Face Perception, Human Development, Perceptual Expertise, Plasticity, Visual Deprivation, Visual Development

### Employment

- 2012/7 Associate Investigator Centre of Excellence in Cognition and its Disorders  
Psychology, University of Western Australia, Australian Research Council  
Part-time, Adjunct  
Tenure Status: Non Tenure Track

|                  |                                                                                                                                                                   |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2009/7           | Professor<br>Psychology, Brock University<br>Full-time<br>Tenure Status: Tenure                                                                                   |
| 2007/6           | Adjunct Professor<br>Psychology, OISE, University of Toronto, Ontario Institute for Studies in Education<br>Part-time, Adjunct<br>Tenure Status: Non Tenure Track |
| 2006/7 - 2009/6  | Associate Professor<br>Psychology, Brock University, Brock University<br>Full-time<br>Tenure Status: Tenure                                                       |
| 2004/7 - 2006/6  | Assistant Professor<br>Psychology, Brock University, Brock University<br>Full-time, Assistant Professor<br>Tenure Status: Tenure                                  |
| 1993/12 - 2004/6 | Research Associate<br>Psychology, McMaster University, McMaster University<br>Part-time<br>Tenure Status: Non Tenure Track                                        |
| 1993/5 - 2004/4  | Part-time Instructor<br>Psychology, McMaster, McMaster University<br>Part-time<br>Tenure Status: Non Tenure Track                                                 |
| 1989/7 - 1992/6  | Assistant Professor<br>Psychology, The Kings College, The King's University College<br>Full-time, Assistant Professor<br>Tenure Status: Tenure Track              |
| 1985/9 - 1989/4  | Sessional Instructor<br>Psychology, Indiana University<br>Part-time<br>Tenure Status: Non Tenure Track                                                            |

## Research Funding History

### Awarded [n=3]

|                                        |                                                                                                                                                                                                                                                            |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2016/4 - 2021/3<br>Principal Applicant | Expert Face Recognition: The Influence of Experience, Grant<br><b>Funding Sources:</b><br>Natural Sciences and Engineering Research Council of Canada (NSERC)<br>Total Funding - 195,000<br>Portion of Funding Received - 100<br>Funding Competitive?: Yes |
| 2019/2 - 2020/2<br>Principal Applicant | The influence of experience on neural markers of identity perception, Grant<br><b>Funding Sources:</b><br>Brock University<br>Council for Research in the Social Sciences<br>Total Funding - 3,000                                                         |
| 2014/4 - 2019/3                        | Understanding Emotions: A Developmental Perspective, Grant                                                                                                                                                                                                 |

|                                           |                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Principal Applicant                       | <p><b>Funding Sources:</b><br/> Social Sciences and Humanities Research Council of Canada (SSHRC)<br/> Insight Grant<br/> Total Funding - 314,100<br/> Portion of Funding Received - 314,100<br/> Funding Competitive?: Yes</p>                                                                                                                                                                                        |
| <br>                                      |                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Completed [n=6]</b>                    |                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2011/4 - 2016/3<br>Principal Applicant    | <p>The Nature and Development of Expert Face Processing, Grant</p> <p><b>Funding Sources:</b><br/> Natural Sciences and Engineering Research Council of Canada (NSERC)<br/> Discovery Grant<br/> Total Funding - 200,000<br/> Portion of Funding Received - 200,000<br/> Funding Competitive?: Yes</p>                                                                                                                 |
| 2012/4 - 2015/3<br>Principal Investigator | <p>The Nature and Development of Expert Face Perception (DAS), Grant</p> <p><b>Funding Sources:</b><br/> Natural Sciences and Engineering Research Council of Canada (NSERC)<br/> Discovery Accelerator Supplement<br/> Total Funding - 120,000<br/> Portion of Funding Received - 120,000<br/> Funding Competitive?: Yes</p>                                                                                          |
| 2014/4 - 2015/3<br>Co-applicant           | <p>Oscillatory and event-related neural activity during visual perception and short-term memory across the lifespan, Grant</p> <p><b>Funding Sources:</b><br/> Natural Sciences and Engineering Research Council of Canada (NSERC)<br/> Research Instruments and Tools<br/> Total Funding - 65,000<br/> Portion of Funding Received - 0<br/> Funding Competitive?: Yes</p> <p>Principal Applicant : Stephen Emrich</p> |
| 2009/9 - 2014/8<br>Principal Investigator | <p>The Development of Face Perception, Grant</p> <p><b>Funding Sources:</b><br/> Canada Foundation for Innovation (CFI)<br/> Leaders Opportunity Fund<br/> Total Funding - 470,023<br/> Portion of Funding Received - 470,023<br/> Funding Competitive?: Yes</p>                                                                                                                                                       |
| 2013/2 - 2014/1<br>Principal Applicant    | <p>Council for Research in the Social Sciences (CRISS) Research Grant, Grant</p> <p><b>Funding Sources:</b><br/> Brock University<br/> Council for Research in the Social Sciences<br/> Total Funding - 1,825<br/> Portion of Funding Received - 1,825<br/> Funding Competitive?: Yes</p>                                                                                                                              |
| 2010/4 - 2013/3<br>Principal Investigator | <p>Sensitivity to Emotional Expressions, Grant</p> <p><b>Funding Sources:</b><br/> Social Sciences and Humanities Research Council of Canada (SSHRC)</p>                                                                                                                                                                                                                                                               |

Standard Research Grant  
 Total Funding - 118,900  
 Portion of Funding Received - 118,900  
 Funding Competitive?: Yes

## Student/Postdoctoral Supervision

### Bachelor's Honours [n=17]

|                                          |                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2018/9 - 2019/4<br>Principal Supervisor  | Meryl Ocha (In Progress) , Brock University<br>Student Degree Expected Date: 2019/6<br>Thesis/Project Title: How does face race impact the impact of first impressions when faces are subsequently encountered?<br>Present Position: Honours Thesis Student                                                             |
| 2018/8 - 2018/12<br>Principal Supervisor | Pauline Guertler (In Progress) , Friedrich Schiller University Jena (Germany)<br>Student Degree Expected Date: 2019/6<br>Thesis/Project Title: The Impact of Face Race on Categorical Perception of Identity (Visiting scholar for 4 months)<br>Present Position: Honours Student (Jena)                                |
| 2018/8 - 2018/12<br>Principal Supervisor | Camille Maennig (In Progress) , Friedrich Schiller University Jena (Germany)<br>Student Degree Expected Date: 2019/6<br>Thesis/Project Title: The Impact of Face Race on Categorical Perception of Identity<br>Present Position: Honours Student (Jena)                                                                 |
| 2017/10 - 2019/8<br>Principal Supervisor | Shelby Howlett (In Progress) , Brock University<br>Student Degree Expected Date: 2019/4<br>Thesis/Project Title: Lab Manager plus independent study investigating face learning<br>Present Position: Honours Student at Brock                                                                                           |
| 2016/9 - 2017/5<br>Principal Supervisor  | Katrina Perdue (Completed) , Brock University<br>Thesis/Project Title: Snap Judgements: How Face Characteristics Impact Leadership Ratings in Male vs Female Faces<br>Present Position: Employed in Field                                                                                                               |
| 2016/1 - 2017/5<br>Principal Supervisor  | Emily Davis (In Progress) , Brock University<br>Thesis/Project Title: The slow development of face learning: A role for ensemble coding<br>Present Position: MA student at Brock University                                                                                                                             |
| 2015/1 - 2016/4<br>Principal Supervisor  | Kariann Gracey (Completed) , Brock University<br>Thesis/Project Title: Research Apprentice: Emotion Perception<br>Present Position: Unknown                                                                                                                                                                             |
| 2015/1 - 2016/4<br>Principal Supervisor  | Kariann Gracey (Completed) , Brock University<br>Thesis/Project Title: Research Apprentice: Emotion Perception<br>Present Position: Unknown                                                                                                                                                                             |
| 2014/9 - 2016/8<br>Principal Supervisor  | Kristen Baker (Completed) , Brock University<br>Thesis/Project Title: How do adults and children learn a new face?<br>Present Position: MA student in my lab (effective Sept 2016)                                                                                                                                      |
| 2013/9 - 2018/8<br>Principal Supervisor  | Harmonie Chan (In Progress) , Sir Winston High School; Brock University<br>Thesis/Project Title: Completed Mentorship Plus Program in my lab, completed a full-year independent study in 2016-17; 2 USRA fellowships (2017, 2018)<br>Present Position: Graduate student at McMaster University & part time RA in my lab |

- 2013/9 - 2014/4  
Principal Supervisor Rebecca Judges (Completed) , Brock University  
Thesis/Project Title: Do individual differences in shyness predict the extent to which body postures influence perception of facial expressions?  
Present Position: PhD student; OISE
- 2013/5 - 2013/8  
Principal Supervisor Julie Billing (Completed) , Brock University  
Thesis/Project Title: USRA: Attention to faces in dynamic scenes  
Present Position: Unknown
- 2013/1 - 2017/6  
Principal Supervisor Gabriela Salgado (Completed) , Brock University  
Thesis/Project Title: Research Assistant: Influence of Body Movements on Perception of Facial Expressions  
Present Position: Postgrad Program, Human Resources
- 2012/1 - 2014/8  
Principal Supervisor Breanna Elliotson (Completed) , Brock University  
Thesis/Project Title: Research Assistant; Expert Face Perception  
Present Position: Completed MSW program; employed in field
- 2011/11 - 2013/8  
Principal Supervisor Amanda George (Completed) , Brock University  
Thesis/Project Title: Effect of changing orientation on recognition of own- and other-race faces  
Present Position: Completed MA; unknown
- 2011/10 - 2013/8  
Principal Supervisor Anne Hackland (Completed) , Brock University  
Thesis/Project Title: USRA: Children's sensitivity to normality in young versus older adult faces  
Present Position: completed Occupational Therapy program; unknown
- 2011/9 - 2012/9  
Principal Supervisor Jasmine Mian (Completed) , Brock University  
Thesis/Project Title: Do children encode identity independently of expression?  
Present Position: Completed MSc, unknown

**Master's Thesis [n=3]**

- 2016/9 - 2018/8  
Principal Supervisor Kristen Baker (Completed) , Brock University  
Thesis/Project Title: Attentional Mechanisms Underlying Face Learning  
Present Position: PhD student in my lab, Brock University
- 2014/9 - 2017/8  
Principal Supervisor Claire Matthews (Completed) , Brock University  
Thesis/Project Title: Honours: The Influence of Variability on Expert Face Recognition;  
MA: Development of Face Recognition--Domain Specific/Domain General  
Present Position: PhD student in my lab
- 2012/9 - 2014/9  
Principal Supervisor Thalia Semplonius (Completed) , Brock University  
Thesis/Project Title: An Investigation of the Role of Attention in the Cross-Race Effect:An Ecological Approach  
Present Position: Employed in Industry

**Doctorate [n=4]**

- 2018/9 - 2022/9  
Principal Supervisor Kristen Baker (In Progress) , Brock University  
Student Degree Expected Date: 2022/8  
Thesis/Project Title: The process by which a face becomes familiar: Cognitive and Neural Mechanisms  
Present Position: PhD student in my lab
- 2017/9 - 2021/8  
Principal Supervisor Claire Matthews (In Progress) , Brock University  
Student Degree Expected Date: 2021/8  
Thesis/Project Title: The Impact of Experience on Face Learning and Recognition  
Present Position: PhD student in my lab

- 2013/9 - 2017/8  
Principal Supervisor Xiaomei Zhou (Completed) , Brock University  
Thesis/Project Title: The own-race recognition advantage  
Present Position: Postdoctoral Fellow, Ryerson University
- 2008/9 - 2014/9  
Principal Supervisor Lindsey Short (Completed) , Brock University  
Thesis/Project Title: The role of experience in the organization and refinement of face space  
Present Position: Assistant Professor, Redeemer University

**Post-doctorate [n=4]**

- 2015/6 - 2018/5  
Principal Supervisor Abbie Coy (Completed) , Brock University  
Thesis/Project Title: Development of Sensitivity to Facial Displays of Emotion: Context Effects  
Present Position: Postdoctoral Fellow at Brock University, Brock University Postdoctoral Fellow
- 2013/9 - 2015/7  
Principal Supervisor Sarah Laurence (Completed) , Brock University  
Thesis/Project Title: The influence of variability in appearance on face recognition  
Present Position: Lecturer, Keele University
- 2012/1 - 2016/5  
Principal Supervisor Valentina Proietti (Completed) , Brock University  
Thesis/Project Title: Visiting PhD student 2012 (from Italy); Completed Postdoctoral fellowship in my lab  
Present Position: Assistant Professor at Trinity Western University
- 2012/1 - 2014/6  
Principal Supervisor Nicole Nelson (Completed) , Brock University  
Thesis/Project Title: The development of sensitivity to facial expressions  
Present Position: Assistant Professor, Queensland University

**Diploma [n=4]**

- 2016/9 - 2017/2  
Principal Supervisor Olha Wloch (Completed) , Holy Cross Secondary School  
Thesis/Project Title: How does a newly encountered face become familiar: Comparing own-vs. other-race faces  
Present Position: Undergraduate Student
- 2015/9 - 2016/2  
Principal Supervisor Ally Zakic (Completed) , A. N. Myer Secondary School  
Thesis/Project Title: Judging and Remember Identity in Older Adult Faces  
Present Position: Undergraduate student, Queens University
- 2014/9 - 2015/2  
Principal Supervisor Katie Jany (Completed) , Sir Winston Churchill High School  
Thesis/Project Title: Highschool Mentorship Student. The influence of facial age and face race on one's ability to recognize that two images belong to the same person: An eye-tracking study. Won CPA award  
Present Position: Undergraduate Student
- 2012/9 - 2013/1  
Principal Supervisor Jessica Lopez (Completed) , Sir Winston Churchill High School; Brock University  
Thesis/Project Title: High School Mentorship student: Recognizing faces in scenes  
Present Position: Undergraduate at Brock University

**Event Administration**

- 2012/11 - 2013/4  
Co-Organizer, SRCD Face Processing Pre-Conference Workshop, Conference, 2013/4 - 2013/4
- 2012/10 - 2012/12  
Organizer & Host, Golden Horseshoe Face Perception Conference, Conference, 2012/12 - 2012/12

## Editorial Activities

2011/1 - 2015/12 Associate Editor, Journal of Experimental Child Psychology, Journal

## Organizational Review Activities

2015/1 - 2015/2 Reviewer, Trent University  
Review of Psychology Programs

## Knowledge and Technology Translation

2014/1 - 2014/2 Expert in Face Recognition, Consultation Service  
Group/Organization/Business Serviced: To Catch a Killer  
Target Stakeholder: General Public  
Outcome / Deliverable: I served as an expert for one episode of To Catch a Killer (English). I used my expertise in face recognition to eliminate one suspect in a cold case.  
Evidence of Uptake/Impact: This show has aired multiple times. I was subsequently contacted by Fifth Estate about helping to find a missing person.  
References / Citations / Web Sites: <http://ownca.oprah.com/shows/to-catch-a-killer.aspx>  
Activity Description: I compared a composite sketch to photographs of two suspects and explained to the investigators and the public why it was unlikely that one of the two suspects was the individual drawn at the time the crime was committed.

## International Collaboration Activities

2018/12 - 2022/12 Collaborator, Australia  
I am collaborating with Dr. Linda Jeffrey, Dr. Claire Sutherland, and Dr. Louise Ewing (UK) on the development of first impressions.

2015/4 - 2022/12 Collaborator, Australia  
I am collaborating with Dr. Nicole Nelson (University of Queensland) investigating the development of emotion perception

2015/5 - 2021/12 Collaborator, Germany  
I am collaborating with Prof. Stefan Schweinberger and Prof. Juergen Kaufmann. We are adapting their method to test sensitivity to shape vs. texture cues to identity and to investigate whether the other-race effect impacts categorical perception of identity

## Presentations

1. Mondloch CJ, Matthews, CM, & Howlett, S. (2019). The development of emotion perception: evidence from an unconstrained sorting task. Vision Sciences Society, St. Pete Beach, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
2. Baker KA, & Mondloch CJ. (2019). The dynamics of face learning: Insights from similarity ratings. Vision Sciences Society, St. Pete Beach, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No

3. Matthews CM, Ritchie KL, Laurence S, & Mondloch CJ. (2019). The importance of within-person variability in appearance in adults' and children's face learning. Vision Sciences Society, St. Pete Beach, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
4. Laurence S, Ralph N, De Carvalho E, Proietti V, & Mondloch CJ. (2019). Learning newly encountered faces from variable images in adults and children. Vision Sciences Society, St. Pete Beach, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
5. Zhou X, Chen C, Mondloch CJ, Chien SH, & Moulson, M. (2019). Perceptual experience and within-person variability affect the magnitude of the other-race effect. Vision Sciences Society, St. Pete Beach, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
6. Mondloch CJ. (2019). What I do on my 'summer vacation': Fun facts about faces and how we discovered them. Men's Group Dinner Meeting, St. Catharines, Canada  
Main Audience: General Public  
Invited?: Yes, Keynote?: Yes
7. Mondloch CJ, & Coy A. (2018). Representing facial expressions in visual working memory: A novel adaptation of the continuous response paradigm. Vision Sciences Society, St. Pete Beach, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
8. Matthews\* CM, Chan\* HSJ, & Mondloch CJ. (2018). Face learning across the lifespan: Insights from children and older adults. Development 2018, St. Catharines, Canada  
Main Audience: Researcher  
Invited?: No, Keynote?: No
9. Nelson NL, & Mondloch CJ. (2018). Integrating facial, postural, and vocal cues to emotion. Annual Conference of the Australasian Society for Experimental Psychology, Hobart, Australia  
Main Audience: Researcher  
Invited?: No, Keynote?: No
10. Mondloch CJ, Gerada\* A, Proietti\* V & Nelson NL. (2018). Can you keep a secret or fight red dragons? Children's use of subtle facial displays of emotion to make trait judgements of trustworthiness and dominance is not adult-like. Annual Conference of the Australasian Society for Experimental Psychology, Hobart, Australia  
Main Audience: Researcher  
Invited?: No, Keynote?: No
11. Mondloch CJ. (2018). Don't throw the baby out with the bath water: Integrating traditional and contemporary approaches to face recognition. Australian Research Council's Centre of Excellence in Cognition and its Disorders Workshop on Person Perception, Perth, Australia  
Main Audience: Researcher  
Invited?: Yes, Keynote?: Yes
12. Baker\* K, & Mondloch CJ. (2018). Building a representation of newly encountered faces: A role for context?. Vision Sciences Society, St. Pete Beach, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
13. Mondloch CJ, Gerada\* A, Proietti\* V, & Nelson NL. (2018). Using subtle facial displays of emotion to make implicit trait judgments: Children are not adult-like. Development 2018, St. Catharines, Canada  
Main Audience: Researcher  
Invited?: No, Keynote?: No

14. Mondloch CJ. (2018). Perceiving identity in own- and other-race faces: New insights about why our perception of identity in other-race faces is so error-prone. Psychology Department Colloquia, University of Western Australia, Perth, Australia  
Main Audience: Researcher  
Invited?: Yes, Keynote?: No
15. Mathewson KJ, Maurer D, Mondloch CJ, Saigal S, Van Lieshout RJ, & Schmidt LA. (2018). Face-processing in adults born at extremely low birth weight (ELBW). Development 2018, St. Catharines, Canada  
Main Audience: Researcher  
Invited?: No, Keynote?: No
16. Matthews\* CM, Chan\* H, & Mondloch CJ. (2018). Recognizing faces despite variability in appearance: Learning mechanisms are largely intact in older adults. Vision Sciences Society, St Pete Beach, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
17. Mondloch CJ, Matthews\*, CM, Baker\* K, Davis\*, E, & Zhou\* X. (2018). Recognizing identity in candid photographs: The development of mechanisms underlying face learning. Development 2018, St. Catharines, Canada  
Main Audience: Researcher  
Invited?: No, Keynote?: No
18. Mondloch CJ, Matthews\* CM, & Davis\* E. (2017). The slow development of face learning during childhood: A role for ensemble coding?. Society for Research in Child Development, Austin, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
19. Baker\* K, Zhou\* X, Matthews\* C, Wloch\* O, & Mondloch CJ. (2017). How does a newly encountered face become familiar: The role of experience with own- vs. other-race faces. Association for Psychological Science, Boston, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
20. Gerada\* A, Mondloch CJ, & Proietti\* V. (2017). The effect of emotional expressions on implicit judgments of trustworthiness and dominance in children and adults. International Convention of Psychological Science, Vienna, Austria  
Main Audience: Researcher  
Invited?: No, Keynote?: No
21. Laurence\* S, Matthews\* CM, Proietti\* V, Zhou\* X, & Mondloch CJ. (2017). The effect of attention to identity on processing other-age and other-ethnicity face. International Convention of Psychological Science, Vienna, Austria  
Main Audience: Researcher  
Invited?: No, Keynote?: No
22. (2017). Recognizing faces: How experience shapes face representations (Organized Symposium). International Convention of Psychological Science, Vienna, Austria  
Main Audience: Researcher  
Invited?: No, Keynote?: No
23. Coy\* A, & Mondloch CJ. (2017). The precision of visual working memory for facial expressions: A novel adaptation of the continuous response paradigm. Association for Psychological Science, Boston, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No

24. Matthews\* CM, & Mondloch CJ. (2017). Identity matching of other-race faces: Strengths and limitations of multi-image training. Face Recognition at its Best, London, United Kingdom  
Main Audience: Knowledge User  
Invited?: Yes, Keynote?: No
25. Matthews\* CM & Mondloch CJ. (2017). Are you there? Exposure to multiple photos improves identification in a line-up, but only if the target is present. Association for Psychological Science, Boston, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
26. (2017). Levels of experience: <?>How experience with individuals and groups affects identity matching. Face Recognition at Its Best, London, United Kingdom  
Main Audience: Knowledge User  
Invited?: Yes, Keynote?: No
27. Matthews\* CM, Baker\* K, Laurence S, & Mondloch CJ. (2017). The influence of variability in appearance on children's perception of identity. Society for Research in Child Development, Austin, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
28. Mondloch CJ, Gerada\* A, & Proietti\* V. (2017). Picking trustworthy and strong partners: Children's use of subtle emotional cues is not adult-like. Society for Research in Child Development, Austin, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
29. Mondloch CJ, Baker\* K, Matthews\* CM & Laurence S. (2017). Getting to Know You: How faces become familiar to children and adults. Presentation to International Convention of Psychological Science, Vienna, Austria  
Main Audience: Researcher  
Invited?: No, Keynote?: No
30. Zhou\* X, Itz ML, Kaufmann JM, Schweinberger SR, LeBlanc\* C, & Mondloch CJ. (2017). The use of shape and texture cues in face learning and recognition is not modulated by the other-race effect. Association for Psychological Science, Boston, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
31. Matthews\* C, Mondloch C. (2016). Improving other-race face recognition: Modifying representations in multi-dimensional face space. Vision Sciences Society, St. Pete Beach, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
32. (2016). Here's looking at you: Experience influences adults' and children's ability to learn new facial identities. Invited address given at two universities: University of York (UK) and Friedrich-Schiller-University of Jena (Germany), York, United Kingdom  
Main Audience: Researcher  
Invited?: Yes, Keynote?: Yes
33. Laurence\* S, Proietti\* V, Mondloch C. (2016). Dustin Hoffman then and now: The age invariance of familiar face representations is dependent on experience. Vision Sciences Society Meeting, St Pete Beach, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
34. Baker\* K, Laurence\* S, Mondloch CJ. (2016). How does a newly encountered face become familiar?. Vision Sciences Society Meeting, St Pete Beach, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No

35. Coy\* A, Mondloch C. (2016). Emotion specificity of gaze cueing in a danger vigilance context. Vision Sciences Society, St. Pete Beach, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
36. Zhou\* Z, Mondloch C, Emrich S. (2016). The own-race recognition advantage is attributable to visual working memory: Evidence from a continuous-response paradigm. Vision Sciences Society Meeting, St. Pete Beach, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
37. Laurence\* S, & Mondloch CJ. (2015). "That's my teacher!": Children's recognition of familiar and unfamiliar faces in images containing natural variability. Vision Sciences Society, Florida, United States  
Invited?: No, Keynote?: No
38. Zhou\* X, Laurence\* S, & Mondloch CJ. (2015). Perception of identity: Robust representation of familiar other-race faces despite natural variation in appearance. Vision Sciences Society, St Pete Beach, United States  
Invited?: No, Keynote?: No
39. Short\* L, Proietti\* V, & Mondloch C. (2015). Representing young and older adult faces: shared or age-specific prototypes?. Vision Sciences Society, St. Pete Beach, United States  
Invited?: No, Keynote?: No
40. Zhou\* X, Mondloch, C & Emrich S. (2015). Perceptual experience influences the precision of visual working memory for own- and other-race faces: Evidence from a continuous-response paradigm. Person Perception Workshop hosted by DFG Research Unit "Person Perception" (Organized by Stefan Schweinberger), Jena, Germany  
Main Audience: Researcher  
Invited?: Yes, Keynote?: No
41. Laurence\* S, Proietti\* V, & Mondloch C. (2015). Paul McCartney yesterday and today: Age-dependent representations for familiar faces in young and older adults. Person Perception Workshop hosted by DFG Research Unit "Person Perception" (Organized by Stefan Schweinberger), Jena, Germany  
Main Audience: Researcher  
Invited?: Yes, Keynote?: No
42. Mondloch CJ, Laurence\* S, & Zhou\*, X. (2015). Are those all pictures of the same person? The influence of experience on recognizing identity despite natural variation in appearance. Australasian Experimental Psychology Conference, Sydney, Australia  
Invited?: No, Keynote?: No
43. Mondloch CJ & Zhou\* X. (2015). Reduced sensitivity to variation in normality and attractiveness for other-race faces. Vision Sciences Society, St. Pete Beach, United States  
Invited?: No, Keynote?: No
44. Mondloch CJ. (2015). Representing faces: Lessons from around the world and across the lifespan. Australian Research Council's Centre of Excellence in Cognition and its Disorders Workshop on Person Perception, Perth, Australia  
Invited?: Yes, Keynote?: Yes
45. Mondloch CJ, Laurence\* S, Zhou\* X, Baker\* K, & Matthews\* C. (2015). Building a face space: The contributions of inter-person and intra-person variability. Person Perception Workshop hosted by DFG Research Unit "Person Perception" (Organized by Stefan Schweinberger), Jena, Germany  
Main Audience: Researcher  
Invited?: Yes, Keynote?: Yes
46. Mondloch CJ. (2015). Let's face it: Person perception varies across categories. Invited address at Queensland University, Brisbane, Australia  
Invited?: Yes, Keynote?: No

47. Mondloch CJ, & Nelson\* N. (2014). Looking for emotion cues: Allocation of attention varies with age, emotion, and whether stimuli are static or dynamic. Canadian Society for Brain, Behaviour, and Cognitive Science, Toronto, Canada  
Main Audience: Researcher  
Invited?: No, Keynote?: No
48. Mondloch CJ. (2014). Walk this way: Bodies influence adults' and children's perception of facial expressions. Emotion Preconference, Society for Personality & Social Psychology, Austin, United States  
Main Audience: Researcher  
Invited?: Yes, Keynote?: No
49. Mondloch CJ, Semplonius\* T, Short\* LA, & Proietti\* V. (2014). Own-race and young faces receive preferential attention but this may not explain why they are recognized more accurately. Society for Personality and Social Psychology, Austin, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
50. Mondloch CJ & Short\* L. (2014). New insights about cross-race and cross-age effects. Invited Address at University of Texas, Dallas, Dallas, United States  
Main Audience: Researcher  
Invited?: Yes, Keynote?: No
51. Short\* L & Mondloch CJ. (2014). A developmental examination of perceptual tuning for young versus older adult faces. Canadian Society for Brain, Behaviour, and Cognitive Science, Toronto, Canada  
Main Audience: Researcher  
Invited?: No, Keynote?: No
52. Nelson\* NL & Mondloch CJ. (2014). Seeing a spider or feeling afraid? Visual attention to facial expressions varies with the task. Emotion Preconference, Society for Personality and Social Psychology, Austin, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
53. Laurence\* S, Zhou\* X, & Mondloch CJ. (2014). They all look different to me: Examining factors that affect the ability to perceive identity in ambient images. Canadian Society for Brain, Behaviour, and Cognitive Science, Toronto, Canada  
Main Audience: Researcher  
Invited?: No, Keynote?: No
54. Nelson\* NL, Mondloch CJ, & Russell JA. (2013). An expression of 'Pax': Re-examining children's 'recognition' of expressions. Biennial meeting of the International Society for Research in Emotion, Berkeley, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
55. Maurer D, Mondloch CJ, Lewis TL, Segalowitz S, de Heering A, Grady C, & Dywan J. (2013). The effects of visual deprivation on the development of face expertise: Lessons from bilateral congenital cataracts. Society for Research in Child Development, Seattle, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
56. Nelson\* NL, & Mondloch CJ. (2013). Recognizing expressions: Are static displays good enough?. Vision Sciences Society Meeting, Naples, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No

57. Proietti\* V, Macchi Cassia\* V, & Mondloch CJ. (2013). Visual recognition of the “silent generation”: Understanding the recognition advantage for young versus older adult faces. Vision Sciences Society Meeting, Naples, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
58. Mondloch, C.J. (2013). The development of face perception: Roles of experience. Society for Research in Child Development, Seattle, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
59. Short\* LA, Hackland\* A, & Mondloch CJ. (2013). Detecting normality in faces of various ages: A bias for young adult faces. Society for Research in Child Development, Seattle, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
60. Short\* L, Proietti\* V, Semplonius\* T, & Mondloch CJ. (2013). Differential attentional allocation and subsequent recognition for young versus older adult faces. Vision Sciences Society Meeting, Naples, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
61. Semplonius\* T & Mondloch CJ. (2013). Increasing attentional competition and uncertainty: An ecological approach to the cross-race effect. Vision Sciences Society Meeting, Naples, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
62. Nelson\* N, Russell J, & Mondloch CJ. (2013). Recognizing facial expressions: Static displays are good enough. Society for Research in Child Development, Seattle, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
63. Short\* LA, Lee K, Zhang W, Fu G, & Mondloch CJ. (2013). The organization of 5-year-olds’ face space: Early experience does not drive the development of category-specific face prototypes. Society for Research in Child Development, Seattle, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No

## Broadcast Interviews

- |                            |                                                                                                               |
|----------------------------|---------------------------------------------------------------------------------------------------------------|
| 2016/04/26 -<br>2016/04/26 | Recognizing Other-Race Faces -- In response to age discrepancy in South Sudanese man, Morning Show, CBC Radio |
| 2015/02/05 -<br>2015/02/05 | Recognizing Own- vs. Other-Race faces, Taking Niagara by Storm, TV Cogeco                                     |
| 2014/01/07 -<br>2014/07/01 | Identity Matching for an Unsolved Crime, To Catch a Killer, OCEAN                                             |

## Publications

### Journal Articles

1. Matthews C. M., & Mondloch, C. J. Learning and recognizing facial identity in variable images: New insights from older adults. *Cognition.. Cognition.*  
Submitted  
Refereed?: Yes
2. Fong, F.T.K., Mondloch, C.J., & Nelson, N.L. (2020). Interactive situations reveal more about children's emotional knowledge. *Journal of Experimental Child Psychology.*  
Published  
Refereed?: Yes, Open Access?: Yes
3. Matthews+, C.M., Thierry+, S.M., & Mondloch, C.J. (2020). Recognizing, discriminating, and labeling emotional expressions in a free-sorting task: A developmental story. *Emotion.*  
Published  
Refereed?: Yes
4. Davis, E. E., Matthews, C. M., & Mondloch, C. J. (2020). Ensemble coding of facial identity is not refined by experience: Evidence from other-race and inverted faces. *British Journal of Psychology.*  
Published  
Refereed?: Yes, Open Access?: Yes
5. Mathewson KJ, Maurer D, Mondloch CJ, Saigal S, Van Lieshout RJ, Schmidt LA. (2019). Visual configural processing in adults born at extremely low birth weight. *Developmental Science.* early view  
Published  
Refereed?: Yes, Open Access?: No
6. Coy\*, A.L., Nelson, N.L., & Mondloch, C.J. (2019). No Experimental Evidence for Emotion-Specific Gaze Cueing in a Threat Context. *Cognition & Emotion.* 33: 1144-1154.  
Published  
Refereed?: Yes, Open Access?: No
7. Nelson, N.L., & Mondloch, C.J. (2019). Children's perception of emotions in the context of live interactions: Eye movements and emotion judgements. *Behavioural Processes (Special Issue).* 164: 193-200.  
Published  
Refereed?: Yes, Open Access?: Yes
8. Proietti\* V, Laurence S, Matthews\* CM, Zhou\* X, & Mondloch CJ. (2019). Attending to identity cues reduces the own-age but not the own-race recognition advantage. *Vision Research.* 157: 184-191.  
Published  
Refereed?: Yes, Open Access?: Yes
9. Mondloch, C.J., Gerada\*, A., Proietti\*, V., & Nelson, N.L. (2019). The influence of subtle facial expressions on children's first impressions of trustworthiness and dominance is not adult-like. *Journal of Experimental Child Psychology.* 180: 19-38.  
Published  
Refereed?: Yes, Open Access?: No
10. Baker\*, K.A., & Mondloch, C.J. (2019). Two sides of face learning: Improving between-identity discrimination while tolerating more within-person variability in appearance. *Perception.*  
Submitted  
Refereed?: Yes, Open Access?: No

11. Mathews\*, CM & Mondloch, CJ. (2018). Finding an unfamiliar face in a line-up: Viewing multiple images of the target is beneficial on target-present trials but costly on target-absent trials. *British Journal of Psychology*. 109: 758-776.  
Published  
Refereed?: Yes, Open Access?: No
12. Zhou\* X, Mondloch CJ, & Emrich, SM. (2018). Encoding differences affect the number and precision of own-race versus other-race faces stored in visual working memory. *Attention, Perception, & Psychophysics*. 80(3): 702-712.  
Published  
Refereed?: Yes, Open Access?: Yes
13. Zhou\* X, Matthews\* CM, Baker\* KA, & Mondloch CJ. (2018). Becoming familiar with a newly encountered face: Evidence of an own-race advantage. *Perception*. 47: 807-820.  
Published  
Refereed?: Yes, Open Access?: No
14. Nelson, NL & Mondloch, CJ. (2018). Children's visual attention to emotional expressions varies with stimulus movement. *Journal of Experimental Child Psychology*. 172: 13-24.  
Published  
Refereed?: Yes, Open Access?: Yes
15. Matthews, C.M., Davis, E.E. (2018). Getting to know you: The development of mechanisms underlying face learning. *Journal of Experimental Child Psychology*. 167: 295-313.  
Published  
Refereed?: Yes, Open Access?: No
16. Short, L.A., Mondloch, C.J., deJong, J., & Chan, H.\*. (2018). Evidence for a young adult face bias in accuracy and consensus of age estimates. *British Journal of Psychology*.  
In Press  
Refereed?: Yes, Open Access?: No
17. Matthews\*, CM & Mondloch, CJ. (2018). Improving identity matching of newly encountered faces: Effects of multi-image training. *Journal of Applied Research in Memory and Cognition*. 7(2): 280-290.  
Published  
Refereed?: Yes, Open Access?: No
18. Nelson NL, & Mondloch CJ. (2017). Adults' and children's perception of facial expressions is influenced by body postures even for dynamic stimuli. *Visual Cognition*. 25(4-6): 563-574.  
Published  
Refereed?: Yes, Open Access?: No
19. Baker, K.A., Laurence, S., Mondloch, C.J. (2017). How does a newly encountered face become familiar? The effect of within-person variability on adults' and children's perception of identity. *Cognition*. 161: 19-30.  
Published  
Refereed?: Yes, Open Access?: No
20. Zhou\*, X. & Mondloch, C.J. (2016). Recognizing "Bella Swan" and "Hermione Granger": No own-race advantage for recognizing photos of famous faces. *Perception*. 45(12): 1426-1429.  
Published  
Refereed?: Yes, Open Access?: No
21. Laurence\*, S. & Mondloch, CJ. (2016). That's my teacher!: Children's ability to recognize personally familiar and unfamiliar faces improves with age. *Journal of Experimental Child Psychology*. 143: 123-138.  
Published  
Refereed?: Yes, Open Access?: No

22. Zhou\*, X., Short\*, L., Chan\*, H., & Mondloch, C.J. (2016). Judging normality and attractiveness in faces: Direct evidence of a more refined representation of own-race, young adult faces. *Perception*. 45: 973-990.  
Published  
Refereed?: Yes, Open Access?: Yes
23. Zhou, X., Short, L.A., Chan, H.S.J., Mondloch, C.J. (2016). Judging Normality and Attractiveness in Faces: Direct Evidence of a More Refined Representation for Own-Race, Young Adult Faces. *Perception*. 45(9): 973-990.  
Published  
Refereed?: Yes, Open Access?: No
24. Laurence S\*, Zhou\* X, & Mondloch CJ. (2015). The flip side of the other-race coin: They all look different to me. *British Journal of Psychology*. 107: 374-388.  
Published  
Refereed?: Yes, Open Access?: No
25. Semplonius\* T, & Mondloch CJ. (2015). Attentional biases and recognition accuracy: What happens when multiple own- and other-race faces are encountered simultaneously?. *Perception*. 44: 52-70.  
Published  
Refereed?: Yes, Open Access?: No
26. Short\* L, Semplonius\* T, Proietti\* V, & Mondloch CJ. (2015). Differential attentional allocation and subsequent recognition for young and older adult faces. *Visual Cognition*. 22: 1272-1295.  
Published  
Refereed?: Yes, Open Access?: No
27. Proietti\* V, Macchi Cassia V, Mondloch, CJ. (2015). The own-age face recognition bias is task dependent. *British Journal of Psychology*. 106: 446-467.  
Published  
Refereed?: Yes, Open Access?: No
28. Short\* LA, Proietti\* V, & Mondloch CJ. (2015). Representing young and older adult faces: Shared or age-specific prototypes?. *Visual Cognition*. 23: 939-956.  
Published  
Refereed?: Yes, Open Access?: No
29. Short\* LA, Mondloch CJ, & Hackland\* A. (2015). Attractiveness judgments and discrimination of mommies and grandmas: Perceptual tuning for young adult faces. *Journal of Experimental Child Psychology*. 129: 1-11.  
Published  
Refereed?: Yes, Open Access?: No
30. Grady C, Mondloch CJ, Lewis TL, & Maurer D. (2014). Early visual deprivation from congenital cataracts disrupts activity and functional connectivity in the face network. *Neuropsychologia*. 57: 122-139.  
Published  
Refereed?: Yes, Open Access?: No
31. Short\* LA, Lee K, Fu G, & Mondloch CJ. (2014). Category-specific face prototypes are emerging, but not yet mature, in 5-year-old children. *Journal of Experimental Child Psychology*. 126: 161-177.  
Published  
Refereed?: Yes, Open Access?: No
32. Fu G, Mondloch CJ, Ding X-P, Short\* L, Sun L, Lee K. (2014). The neural correlates of the face attractiveness aftereffect: A Functional Near-infrared spectroscopy (fNIRS) study. *NeuroImage*. 85: 363 – 371.  
Published  
Refereed?: Yes, Open Access?: No

33. Cote KA, Mondloch CJ, Serveeva\* V, Taylor\* M, & Semplonius\* T. (2014). Impact of total sleep deprivation on behavioural neural processing of emotionally expressive faces. *Experimental Brain Research*. 232: 1429-42.  
Published  
Refereed?: Yes, Open Access?: No
34. Mondloch CJ, Nelson\* NL, & Horner\* M. (2013). Asymmetries of influence: Differential effects of body postures on perceptions of emotional facial expressions. *PLoS ONE*. 8(9): e73605  
Published  
Refereed?: Yes, Open Access?: Yes
35. Mondloch CJ, Segalowitz SJ, Lewis TL, Dywan J, Le Grand R, & Maurer D. (2013). The effect of early visual deprivation on the development of face detection. *Developmental Science*. 37: 148-153.  
Published  
Refereed?: Yes, Open Access?: No
36. Mondloch CJ, Horner\* M, & Mian\* J. (2013). Wide eyes and drooping arms: Adult-like congruency effects emerge early in the development of sensitivity to emotional faces and body postures. *Journal of Experimental Child Psychology*. 114: 203- 216.  
Published  
Refereed?: Yes, Open Access?: No
37. Mondloch CJ, Lewis TL, Levin AV, Maurer D. (2013). Infant face preferences after binocular visual deprivation. *International Journal of Behavioral Development*. 37: 148-153.  
Published  
Refereed?: Yes, Open Access?: No
38. Short\* LA, Mondloch CJ. (2013). Aging faces and aging perceivers: Young and older adults are less sensitive to deviations from normality in older than in young adult faces. *Perception*. 42: 795 - 812.  
Published  
Refereed?: Yes, Open Access?: No

## Books

1. Santrock JW, Mackenzie-Rivers A, & Mondloch CJ. (2020). *Essentials in Lifespan Development*, 1st Canadian Edition.  
Revision Requested, McGraw-Hill  
Refereed?: Yes

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Professor, Department of Psychology and Centre for Neuroscience.  
(Associate Professor 2004-2006; Full Professor 2006)  
(Canada Research Chair in Behavioural Neuroscience, Tier 1, 2004-2009, renewed 2009-2013); k

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Associate member of the Department of Biological Sciences.  
Member of the Environmental Sustainability Research Centre, Centre for Neuroscience, and the Lifespan Centre  
k  
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<https://www.cherylmccormickneurosciencelab.com>

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1991k McMaster University, Ph.D (Psychology) Doctoral Thesis: k# neuropsychological study of sexual orientation: Neurobiological implications. (Supervisor: k"" k S.F. Witelson) k  
k  
1984k McGill University, Honours B.A., First class (Psychology) Honours Thesis: k The discrimination of form from texture in cats with neonatal lesions of the visual cortex. (Supervisor: k"" k^ k Wilkinson) k

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2003-2006k Adjunct associate professor, Boston University Medical School, Boston MA  
k  
1993-2004k Assistant professor, then Associate professor; Neuroscience Program and Department of Psychology, Bates College, Lewiston, ME, 04240.  
k  
1990-1992k Natural Sciences and Engineering Research Council Postdoctoral Fellow in the Department of Psychiatry (Douglas Hospital Research Centre), McGill University, Montreal, k"" k M.J. Meaney. k  
k  
Winter 1992k Lecturer for Introductory Psychology in the Department of Psychology, Concordia University, Montreal, B" 2 ^ k  
k  
1989-1990k Lecturer at Brock University, St. Catharines, Ontario, in the Child Studies Programme. Teaching responsibilities: Theories of Developmental Psychology and Research Design and Statistics. k

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Sept. 1983-1984k McGill University Faculty Scholar  
Sept. 1984-1986k Natural Sciences and Engineering Research Council (NSERC) Postgraduate Scholarship (I) k  
Sept. 1986-1988k NSERC Postgraduate Scholarship (II) k  
Sept. 1984-1988k Harry Lyman Hooker Scholarship, McMaster University k  
Sept. 1988-1990k Ontario Mental Health Foundation Research Studentship k

Sept. 1988-1989 Ontario Mental Health Foundation Travelling Fellowship  
 August 1990 American Psychological Association Science Directorate Award  
 Jan. 1991-1992 NSERC Postdoctoral Fellowship  
 Jan. 2004-2013 anada Research Chair in Behavioural Neuroscience, Tier 1  
 4 \* < 4 : ; A 9 w : A ; < ' w ) A : = 4 = k  
 Fall 1993 13 USE (New England Consortium for Undergraduate Science Education) Grant: D3v3345637t 4 ~ 3, 48 t48y ~4u8s3 97 ^ 3 ~ v948 3 ` 7- 4 ^ 897434y. \$33,000  
 1995-1996 NSF EPSCoR Grant: *The role of sex hormones in early development on hypothalamic-pituitary-adrenal function of adult rats* \$20,000  
 1998-1999 NIMH Grant: *An education conference for neuroscience.* \$15,000.  
 1999-2004 NIMH R13 Grant: *N.E.U.R.O.N. (NorthEast Under/graduate Research Organization for Neuroscience). An education conference for neuroscience.* \$90,000.  
 1999-2000 NSF 8#9 *Nongenomic steroid action in neuroprotection.* \$20,000  
 Jan 2004 anada Foundation for Innovation (C) Program Infrastructure Grant for the development of a behavioural neuroendocrinology laboratory at Brock University \$104,000  
 Jan 2004 Ontario Innovation Trust Distinguished Researcher Award Infrastructure for a behavioural neuroscience laboratory. \$104,000  
 June 2004-2009 NSERC Discovery Grant Organizational effects of social stress in adolescence on brain and behaviour in rats \$145,000  
 Jan 2009 anada Foundation for Innovation (C) Program Infrastructure Grant for the expansion of a behavioural neuroendocrinology laboratory at Brock University \$65,000  
 Jan 2009 Ministry of Research and Innovation Distinguished Researcher Award Infrastructure for the expansion of a behavioural neuroscience laboratory. \$65,000  
 June 2009-2012 SSHRC Standard Research Grant *Situational factors, personality traits, physiological markers, and their relevance to aggressive behaviour* \$90,000  
 June 2009-2016 NSERC Discovery Grant *The lasting influence of social stressors in adolescence on development* \$252,000  
 June 2016-2022 NSERC Discovery Grant *Adolescence: A sensitive period for shaping the adult social brain* \$366,000  
 Discovery Accelerator Supplement \$120,000  
 July 2016-2021 -@) Grant Brock Healthy Youth Project \$1,430,000 (co-investigator, K Willoughby  
 April 2019 NSERC Research Tools and Instruments Grant *Equipment to investigate social brain development in adolescence in rats* \$105,206

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- Summer1993k HowardHughesMedicalInstituteGrant(Internal):kSex differences in mineralocorticoid receptors in rats. \$12,000.k
- Summer1994k HowardHughesMedicalInstituteGrant(Internal):kThe effect of neonatal gonadectomies on corticosteroid receptors in male and female rats. \$10,000.k
- Summer1996k HowardHughesMedicalInstituteGrant(Internal):kThe influence of adrenal corticosteroids on hippocampal morphology and unction in the rat .I. \$10,000.k
- Summer1997k HowardHughesMedicalInstituteGrant(Internal):kThe influence of adrenal corticosteroids on hippocampal morphology and unction in the rat. II. \$10,000k
- Summer1998k HowardHughesMedicalInstituteGrant(Internal):kLong-term effects of neonatal isolation on the developing rat. \$10,000k
- Summer1999k HowardHughesMedicalInstituteGrant(Internal): Sites of action in 2~\* of sex hormones in the regulation of HPA unction in rats. \$10,000k
- Summer2001k HowardHughesMedicalInstituteGrant(Internal): Regulation of HPA unction % androgens in the MPOA in rats. \$10,000k
- Spring2002k HowardHughesMedicalInstituteGrant(Internal): Pilot studies of stress response of vinclozolin-treated rats. \$10,000k
- Spring2003k HowardHughesMedicalInstituteGrant(Internal): Long-term effects of neonatal corticosterone treatment. \$10,000k
- July2005k-2006k BrockUniversityInternalGrant(OfficeofResearchServices):kInternational Collaborative 4unding Initiative.k\$4000.k
- Jan2008k-2008k BrockUniversityInternalGrant(OfficeofResearchServices):kBSIG.k\$4000.k
- 2013k-Nov2014k EnvironmentalSustainabilityResearchk entre:kSeed 4unding Grant \$4000.k
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- MemberofSocietyforBehavioralNeuroendocrinologyk  
k AdvisoryBoard(2003-2005)k
- MemberoftheSouthernOntarioNeuroscienceAssociationk  
k PresidentElect2016k  
k President2017;OrganizerofSONA2017conferenceatBrockk

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- MemberoftheCollegeofReviewersfortheCanadaResearchChairsProgramk  
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- NSERCcommittee88k(LifeSciencesandBiology)andk96k(Psychology)forPGM,k? landk( kfellowshipsk  
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NSERC Discovery Grants Biological Systems and Functions Evaluation Group 502 (2012-2015)

MQ: Mental Health Research Priority MQ (July, 2016) Invited participant in a priority-setting meeting on the biology of adolescence, London, UK

NSERC Vanier CGSI Selection Committee (October 2016 - February 2020)

Ad hoc reviewer of grants & fellowships for:
National Science Foundation USA
Natural Sciences and Engineering Research Council #1, #2
National Institutes of Health USA
Canadian Institutes of Health Research
Social Sciences and Humanities Research Council #1, #2
United States/Israel Binational Science Foundation
Netherlands Organisation for Scientific Research
Netherlands National Initiative Brain and Cognition
The Israel Science Foundation
Canadian Foundation for Innovation Leadership Opportunity Fund
National Research Foundation, South Africa
Saskatchewan Health Research Foundation
Vienna Science and Technology Fund
German-Israeli Foundation for Scientific Research
Agence Nationale de la Recherche (France)
Killam program, #1, #2
Austrian Academy of Sciences

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Editor-in-Chief, *Hormones and Behavior* since July, 2019

Associate Editor for *Hormones and Behavior* Oct 2016 - June 2019

Editor for *Life*, 2013-2016

Member of the editorial board of:
Hormones and Behavior since 2000
Biology of Mood & Anxiety Disorders 2010-2015
Brain and Behavior since 2011
Neuroscience since 2012
Adaptive, Human Behavior and Physiology since 2014
Frontiers in Neuroendocrinology since 2016

Ad hoc reviewer of manuscripts for:
Addiction Biology
Animal Behaviour
Behavioral Neuroscience
Behavioural Pharmacology
Biological Psychiatry
Brain, Behavior, and Immunity
Brain Research
Cerebral Cortex
Developmental Neurobiology
Aggressive Behavior
Behavioral Ecology and Sociobiology
Behavioural Brain Research
Biological Psychiatry
Biology Letters
Brain and Cognition
Brain Research Bulletin
Developmental Brain Research
Developmental Psychobiology

- Emotion
- Endocrinology
- European Journal of Neuroscience
- Experimental & Clinical Psychopharmacology
- Frontiers in Neuroendocrinology
- Hormones and Behavior
- Integrative and Comparative Biology
- Journal of Neuroendocrinology
- Intern. J. Neuropsychopharmacology
- Journal of Experimental Psychology: General
- Journal of Neuroendocrinology
- Journal of Personality and Social Psychology
- Journal of Steroid Biochemistry and Molecular Biology
- J. Undergrad. Neuroscience Education
- Neurobiology of Aging
- Neuroendocrinology
- Neuroimage
- Neuropsychobiology
- Neuropsychopharmacology
- Neuroscience
- Neurotoxicity Research
- Pharmacology, Biochemistry, & Behavior
- Perceptual and Motor Skills
- Physiology and Behavior
- Proceedings of the Royal Society: Biological Sciences
- Progress in Neuro-Psychopharmacology & Biological Psychiatry
- Psychiatry Research
- Psychoneuroendocrinology
- Scientific Reports
- Synapse
- eNeuro
- Evolution and Human Behavior
- Frontiers in Behavioral Neuroscience
- Hippocampus
- Human Nature
- International Journal of Developmental Neuroscience
- Journal of Accounting Research
- Journal of Behavioral Decision Making
- Journal of Neurochemistry
- Journal of Personality Research
- Journal of Psychopharmacology
- Life Sciences
- Neurobiology of Stress
- Neuropharmacology
- Neuropsychologia
- Neuroreport
- Neuroscience Letters
- Perception
- Physiological and Biochemical Zoology
- Personality and Individual Differences
- Psychological Science
- Psychopharmacology
- Stress

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- University of Ottawa, Canada (2007)
- Queen's University, Canada (2008)
- Indiana University, USA (2011)
- Binghamton University, USA (2013)
- Baylor College of Medicine, USA (2013)
- Mount Allison University, Canada (2014)
- University of California, Davis, USA (2015)
- Santa Clara University, USA (2016)
- Nipissing University, Canada (2018)
- University of Albany (2019)
- UCLA, USA (2020)
- Northern Illinois University, USA (2007)
- University of Saskatchewan, Canada (2009)
- University of Cape Town, South Africa (2012)
- Dalhousie University, Canada (2013)
- University of Massachusetts, Amherst, USA (2014)
- University of Ottawa, Canada (2014)
- University of Toronto, Canada (2015)
- University of Ottawa, Canada (2016)
- SUNY/Hunter College, USA (2019)
- University of Massachusetts, Amherst, USA (2020)

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The School of Psychology at the University of Ottawa (2011)

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1. External examiner for Ph.D. candidate in the Department of Psychology, McMaster University (Dec., 2000)

- Emily Spironello: *Pregnancy disruption and urinary excretion of testosterone and 17 beta-estradiol.*
2. External examiner for Ph.D. candidate in the Department of Anatomy, Boston University Medical School (April, 2002) Raymond King: *Effect of prenatal protein deprivation on the cell cycle time of germinal cells for the fascia dentata granule cells and the effect of stress on the neurogenesis and survival of these neurons.*
1. External examiner for Ph.D. candidate in the Department of Anatomy, Boston University Medical School (September, 2002) Anthony Schwagerl: *Quantitative Histochemistry of Tyrosine Hydroxylase and Succinate Dehydrogenase in the Frontal Lobe of Young and Old Rhesus Monkey*
5. External examiner (December 2004) for M.D./Ph.D. candidate in the Department of Neuroscience, Albert Einstein Medical School, Yeshiva University. Emily Knuth: *Short-term effects and long-term consequences of neonatal activation of the HPA axis.*
6. External examiner (December 2006) for Ph.D. candidate in the Department of Psychology, Concordia University. Wendy Smith: *Stress and anxiety reactivity as a function of ovarian hormones.*
7. External examiner (September 2007) for Ph.D. candidate in the Department of Psychology, University of Ottawa. Charla Ine Barron: *Characterization of the role of corticotropin-releasing hormone and opioid peptides on hippocampal neurodegeneration and functional recovery following global cerebral ischemia in rats.*
8. External examiner (September 2007) for Ph.D. candidate in the Department of Psychology, Memorial University. Stephanie Hancock: *Stress and the development of disordered eating in rats.*
9. External examiner (October 2009) for M.Sc. candidate in the Department of Neurology and Neurosurgery, McGill University. Adina Delcorpo: *Effects of maternal care on sexual differentiation in the female rat*
10. External examiner (April 2011) for Ph.D. candidate in the Department of Psychology, Binghamton University. Courtney Vetter O'Hagen: *The role of puberty and gonadal hormones in age and sex differences in ethanol intake, ethanol sensitivity and responses to novelty in Sprague-Dawley rats.*
10. External examiner (July 2011) for Ph.D. candidate in the Department of Psychology, University of Toronto. Anna Maria Lomanoska: *The effects of early social deprivation on appetitive motivation in rats.*
11. External examiner (August 2011) for Ph.D. candidate in the Department of Psychology, Dalhousie University. Lisa Dawn Wright: *Stress responding in periadolescent rats exposed to cat odour and long-term outcomes for stress-related aspects of the adult phenotype.*
12. External examiner (April 2012) for Ph.D. candidate in the Department of Psychology, University of Toronto. Christy Burton: *Examination of age differences in incentive motivation and impulsivity as possible contributing factors to a susceptibility to the effects of drugs of abuse during adolescence.*
13. External examiner (November 2013) for Ph.D. candidate in the Department of Psychology, University of Saskatchewan. Erin Fenton: *Examining hippocampal reelin expression and neural plasticity in an animal model of depression*
14. External examiner (November 2013) for Ph.D. candidate in the Department of Psychology, University of Western Ontario. Kelly Foley: *The effects of pre- and post-natal administration of propionic acid and lipopolysaccharide on the behaviour of adolescent male and female rats*
15. External examiner (April 2014) for Ph.D. candidate in the Department of Psychology, Dalhousie University. Namrata Joshi: *Adolescent environmental challenges affect adult function in male and female Long Evans rats.*
16. External examiner (April 2015) for Ph.D. candidate in the Department of Psychology, University of British Columbia

olumbia. Tiffany Tien Yan: *Dynamic changes in adolescent endocannabinoid signaling+Relevance to stress responsivity and emotional behaviour in rats.*

17. External examiner (May 2015) for Ph.D. candidate in the Department of Psychology, Guelph University. Jennifer Lymer: *The rapid effects of the  $\beta$ -protein coupled estrogen receptor in various brain regions on learning and memory in female mice.*

18. External examiner (April 2016) for Ph.D. candidate in the Department of Psychology, University of Ottawa. Jennifer Christine MacKay: *Long-term and neuroendocrine consequences of early adversity (juvenile stress exposure), and the buffering effects of 'comfort food'.*

19. External examiner (August 2016) for Ph.D. candidate in the Department of Psychology, University of Toronto. Ashlyn Swift-Gallant: *Non-neural and neural contributions of androgen receptors to socio-sexual behaviors in mice.*

20. External examiner (October 2016) for Ph.D. candidate in the Department of Cell and Systems Biology, University of Toronto. Ayako Sasaki: *Influence of maternal high fat diet, stress and cocaine on neural mechanisms of reward and anxiety in rat offspring.*

21. External examiner (April 2017) for Ph.D. candidate in the School of Psychological Science, University of Western Australia. Dian Tan: *The face predicts the brain: An investigation of facial morphology associated with autism.*

22. External examiner (July 2017) for Ph.D. candidate in the Department of Psychology, University of Ottawa. Idu Azogu: *Role of Tyrosine-Related Kinase & Inhibition in the Mesocorticolimbic Stress and Reward Circuitries of the Adolescent and Adult Brain Following a Heterotypic Stress Regimen.*

23. External examiner (July 2018) for Ph.D. candidate in the Department of Neuroscience, University of British Columbia. Vivian Yin Lam: *Prenatal Alcohol Exposure and Chronic Stress in Adulthood: Effects on Anxiety and Depressive-Like Behavior and Central Regulation of the Neuroendocrine Stress Response.*

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1. Internal examiner (August 2013) for Ph.D. candidate in the Department of Biological Sciences, Brock University. Vonny Salim: *Functional Characterization of Monoterpenoid Indole Alkaloid (MIA) Biosynthetic Genes in *Catharanthus roseus*.*

2. Internal examiner (July 2014) for Ph.D. candidate in the Department of Biological Sciences, Brock University. Nina Slavickova: *Novel glutathione disulfide transferase function of 22 -glutaredoxins involved in disease resistance and flower development.*

1. Internal examiner (December 2014) for Ph.D. candidate in the Department of Biological Sciences, Brock University. Caitlin Rothwell: *The role of retinoic acid in long-term memory formation and synaptic plasticity in the mollus *Lymnaea stagnalis*.*

5. Internal examiner (August 2015) for Ph.D. candidate in the Department of Biological Sciences, Brock University. Holly May: *Responses to reflection in two vertebrate species.*

6. External/internal examiner (August 2020) for MSc candidate in the Department of Applied Health Sciences Brock University. Rachel Fenech: *Low-dose lithium supplementation influences GSK3 $\beta$  activity in the brains of an early, diet-induced sporadic Alzheimer's disease mouse model.*

**UNIVERSITY w ~ ~ ! w Brock University w**

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**Institutional w**

- k Social Sciences Speaker Series k ommittee Member k (2005-2006; 2006-2007) k
- k Radiation Safety k ommittee k (2005-2006; 2006-2007; 2007-2008; 2009; 2009-2010) k
- k Member of Senate k (2006-2007; 2007-2008) k
- k Senate Graduate k ommittee k (2006-2007) k
- k Senate Research k ommittee k (2007-2008) k
- k I Research Search k ommittee k (2007-2008) k
- k Animal areland Use k ommittee k (2009-2010; 2010-2011; 2011-2012; 2012-2013; 2013-2014) k
- k Francophone Advisory k ommittee k (2009-2010) k
- k Review USRA applications for Office of Research Services k (2010; 2011; 2012) k
- k ) Advisory k ommittee k (2010-2011) k
- k Presenter, NSERC Grants workshop, Office of Research Services k (2013, 2014, 2016, 2017, 2018) k
- k Internal Review of NSERC k, - grants for Office of Research Services k (2014) k
- k Senate Research and Scholarship k ommittee k (2014-2015) k
- k Internal Review of Graduate Student Scholarships for Dean of Graduate Studies k (2015, 2017, 2018) k
- k Dean of Graduate Studies Hiring Advisory k ommittee k (2015) k
- k Ad Hoc Senate k ommittee on Scholarly Publishing k (2015-2017) k
- k Faculty of Math and Science Retention k ommittee k (2015-2016) k
- k Dean of Graduate Studies review of NSERC graduate fellowships k (2016, 2017) k
- k Animal are Facility Manager search k ommittee k (2018) k
- k Joint Health and Safety k ommittee k (2019) k

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**Neuroscience Program w**

- k Member since 2004 k
- k Undergraduate Thesis coordinator k (2006-2007; 2007-2008, 2017) k
- k NSERC undergraduate rankings k ommittee k (2006-2007) k
- k Associate Director k (2012-2015) k
- k Director k (July, 2015 to Dec, 2017) k

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**Psychology Department w w**

- k Evaluator of graduate applicants for NSERC fellowships k (2004-2005; 2010-2011). k
- k Evaluator of BUSRA grants k (2004-2005). k
- k Evaluator of nominees for the Graduate Student Excellence in Research Award k (2004-2005). k
- k coordinator of department speaker series k (2006-2007) k
- k Space k ommittee k (2006-2016) k
- k Graduate Studies k ommittee k (2006-2007; 2007-2008; 2009; 2009-2010; 2010-2011; 2011-2012; 2012-2013; 2015; 2017) k
- k Behavioural Neuroscience k ommittee / Cognitive Behavioural Neuroscience k ommittee k (2004-ongoing) k
- k Graduate Progress Report k ommittee k (2015) k
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**Environmental Sustainability Research w entre w**

- k Member since 2013 k
- k Adjudication k ommittee k (Research Seed Funding and Post-Doctoral Fellowships in Sustainability Science) k (2014-2015; 2015-2016) k
- k ore member of the Sustainability Science and Society k graduate k ommittee since 2015. k
- k ESRC k4, # search k ommittee k (April 2015 to July 2015) k
- k ESRC SPBC k ommittee, member-at-large k (Jan 2017 to 2017) k
- k Interim Leader of the ESRC Transdisciplinary k @ "2 k (April 2017 to 2017) k
- k Acting Director of the ESRC k (August to September 2017) k

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WalkerCD,kMcCormickkCMk(2009)kDevelopmentofkthekestresskaxis:kMaternalandkenvironmentalkinfluences.knk  
^ kPaffletk(Eds),k*Hormones, Brain, and Behavior. #<sup>nd</sup> edition* kElsevier.k°° k1931-1974.k

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McCormickkCMk(2007)kPracticingksafekstress:k# kselectivekoverviewkofkthe neurosciencekresearch.knk@kCohenk  
andk^ kStemmerk(Eds.)k*Consciousness and Cognition: Fragments of the Mind and Brain*,kElsevier.k

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MeaneyMJ,kBhatnagarS,kLaroqueS,kMcCormickkCM,kShanksN,kSharmaS,kSmytheJW,kViauV,kPlotskykPMk  
(1996)kEarlykenvironmentkandkthe developmentkofkindividualkdifferencekinkthe hypothalamic-pituitary-  
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Journal of Developmental Neuroscience* k

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115. McCormick CM (2020). Disparities in the toll of the 2019 pandemic on publishing: Evidence from k submissions to *Hormones and Behavior*. *Hormones and Behavior*, 118:104814. k
114. McCormick CM (2020). Introduction to the special issue: 50th anniversary of *Hormones and Behavior*: Past accomplishments and future directions in behavioural neuroendocrinology. *Hormones and Behavior*, 118:104751-104751. k
113. McCormick M, Arré JM (2020). Facing off with the phalangeal phenomenon and editorial policies: A commentary on Swift-Gallant, Johnson, Di Rita and Breedlove (2020). *Hormones and Behavior*, 118:104710. k
112. Marcolin ML, Baumbach JL, Hodges W, McCormick CM (2020) The effects of social instability stress and subsequent ethanol consumption in adolescence on brain and behavioural development in male rats. *Alcohol*. 82:29—35. k
- 29 w**
111. Hodges WE, Eltahir W, Patel V, Bredewold R, Veenema AH, McCormick CM (2019) Effects of oxytocin receptor antagonism on social function and corticosterone release after adolescent social instability in male rats. *Hormones and Behavior* 104:579. k
110. Green MR, Zeidan M, Hodges WE, McCormick CM (2019) Independent regulation of the  $\alpha$ 1 axis and neuronal gene expression in adolescent and adult male rats. *Journal of Neuroendocrinology*, 31:312714. k
- w**
109. Hodges W, Louth SL, Bailey CDC, McCormick CM (2019) Adolescent social instability stress alters markers of synaptic plasticity and dendritic structure in the medial amygdala and lateral septum in male rats. *Brain Structure and Function*, 224:10000. k
108. MacDonald K, Lustig K, Geniole SN, McCormick M, Mote H (2019) Sex-hormone concentrations and reactive aggression in men and women after sleep restriction. *Aggressive Behavior*, 45:193-205. k
- w**
107. Marcolin ML, Hodges W, Baumbach JL, McCormick CM (2019) Adolescent social stress and social context influence the intake of ethanol and sucrose in male rats soon and long after the stress exposures. *Developmental Psychobiology*. 61:181-95. k
106. Zovkic VB, McCormick CM (2019) Rapid enhancement of locomotor sensitization to amphetamine by estradiol in female rats. *Physiology (Behavior)*, 203:151-59. k
- 2 w**
105. Said SA, Sedow R, Guerini C, Nark NN, Lillie L, Bukovac S, Simone JJ, Green W, McCormick CM, Stuart JA (2018) Effects of long-term dietary administration of estrogen receptor-beta agonist diarylpropionitrile on ovariectomized female R(CD-1) mice. *Geroscience* 40:393-403. k
104. Simone JJ, Baumbach JL, McCormick CM (2018) Sex-specific effects of CB1 receptor antagonism and stress in adolescence on anxiety, corticosterone concentrations, and contextual fear conditioning in adulthood in rats. *International Journal of Developmental Neuroscience*. 69:119-131. k
103. Lieberz W, Mueller-Engelmann M, Bornefeld-Ettmann P, Priebe K, Weidmann A, Fydrich T, Geniole W, McCormick M, Rausch S, Thome J, Steil J (2018) Detecting implicit signals of aggressiveness in male faces in victimized female PTSD patients and healthy controls. *Psychiatry Research*, 267:429-437. k
- w**

102. **MacDonell<sup>o</sup>**, **Geniole<sup>SN</sup>**, **McCormick<sup>ICM</sup>** (2018) Force versus fury: sex differences in the relationship among physical and psychological threat potential, the facial width-to-height ratio, and aggression. *Aggressive Behavior*, 45:512-523.
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**Invited Symposia and colloquia Speaker!**

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McCormick CM (2001) Sexually differentiated development of the hypothalamo-pituitary-adrenal axis and behaviour. Invited speaker, First World Congress on Women's Mental Health, March 2001, Berlin, Germany.

McCormick CM (2002) Sexually differentiated development of the hypothalamo-pituitary-adrenal axis and behaviour. colloquium speaker, December 2002, Department of Psychology, Brock University, St. Catharines, Canada.

McCormick CM (2002) Sculpting the brain with sex and stress. colloquium speaker, December 2002, Department of Psychology, Brock University, St. Catharines, Canada.

McCormick CM (2003) Immediate and long-term effects of neonatal isolation on stress systems. Invited speaker, Workshop on Steroid Hormones and Brain Function April 2003, Breckenridge Colorado.

McCormick CM (2003) Immediate and long-lasting effects of neonatal isolation on physiology and behavior. Invited speaker, annual conference of the American Neuroendocrine Society June 2003, Philadelphia PA

McCormick CM (2003) Stress effects on brain and behaviour over the lifespan. Symposium organizer, annual conference of Theoretical and Experimental Neuropsychology - Neuropsychologie Experimentale et Theoretique June 2003, Montreal Canada.

McCormick CM (2003) The impact of stress in the neonate on brain and behaviour development. Invited speaker, annual conference of Theoretical and Experimental Neuropsychology - Neuropsychologie Experimentale et Theoretique June 2003, Montreal Canada.

McCormick CM (2004) Is adolescence a critical period for the effects of stress? Studies of long-lasting effects of stress in adolescence on brain and behaviour in rats. colloquium speaker, March 2004, Department of Pharmacology, College of Medicine, University of York, England.

McCormick CM (2005) Adolescence as a "sensitive period": Long-lasting, sex-specific effects of exposure to chronic social stress. Invited speaker. Annual Winter Conference on Brain Research, January 2005, Breckenridge CO

McCormick CM (2005) Adolescence as a "sensitive period": Enduring, sex-specific effects of stressors on physiology and behaviour. colloquium speaker, March 2005, Dept. of Biological Sciences, Brock University.

McCormick CM (2005) "Prospects for PhDs in Neuroscience": Presentation given at the annual meeting (North Eastern Undergraduate Research Organization for Neuroscience) conference / York City (April 6).

McCormick CM (2005) Increasing the benefits and minimizing the costs of Undergraduate Student Participation in Faculty Research Programs: Experiences at an American Liberal Arts college. Presenter at the Canadian Summit on the Integration of Teaching and Research, August 2005, University of Alberta.

McCormick CM (2006) Immediate and lasting effects of social stressors in adolescence on vulnerability to drug abuse. Invited speaker, Pharmacology, Biochemistry, and Behavior conference "Adolescence: Alcohol, Drugs and Mental Disorders" January 2006, Morzine, France.

McCormick CM (2006) Social stressors in adolescence and brain function: Overview of recent data. Speaker, April 9 2006, University of Rochester Medical School.

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 McCormick CM (2006) k@' # kfunction kresponse kto lacute and k repeated k stressors. k speaker, k May 130 k 2006, k Brock k Psychology k Department k In-House k onference. k
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 McCormick CM (2007) kAdolescence k as k' sensitive k period" k to k the k effects k of k social k stressors: k@' # k function k and k vulnerability k to k drugs k of k abuse k in k rats. k colloquium k speaker, k k 2007, k Dept. k of k Biological k Sciences, k University k of k Buffalo. k
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 McCormick CM (2008) kSex-specific k vulnerability k to k stressors k in k adolescence k and k consequences k for k effects k of k drugs k of k abuse. k invited k speaker. k onversations k in k the k capital k District k of k Hormones, k Oct 23-24 k 2008, k SUNY-Albany. k
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 McCormick CM (2009) kAdolescence k as k' sensitive k period" k to k the k effects k of k social k stressors: k immediate k and k enduring k effects k on k@' # k function k and k drug-related k behaviour k in k rats. k colloquium k speaker, k Sept 2009, k Dept. k of k Psychology, k Memorial k University. k
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 McCormick CM (2010) k@' # k function k in k adolescence k and k vulnerability k to k drugs k of k abuse. k invited k speaker, k Annual k NeuroFest k onference, k SUNY k Upstate k Medical k University, k May 20. k
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 McCormick CM (2010) kAdolescence k as k' sensitive k period" k to k the k effects k of k social k stressors: k Effects k on k the k@' # k axis k and k on k hippocampal k function. k invited k speaker, k 2<sup>IS</sup> k annual k Symposium k at k the k enter k for k Neuroendocrine k Studies, k October k 22, k University k of k Massachusetts k
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 McCormick CM (2010) kFacial k width-to-height-ratio k as k a k basis k for k judgements k of k aggressiveness. k invited k speaker, k Mini-Symposium, k December k 1 k at k the k Universidad k Nacional k Autonoma k de k Mexico, k Mexico k ity, k Mexico. k
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 McCormick CM (2011) kSocial k instability k stress k in k adolescence: k Effects k on k the k@' # k axis k and k on k hippocampal k function. k colloquium k speaker, k Department k of k Psychology, k Binghamton k University, k April k 2011. k
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 McCormick CM (2011) kThe k consequences k of k stress k in k adolescence: k Relevance k of k rodent k models. k invited k speaker, k June k 2011 k conference k of k Reward k and k Adolescence k Brock k University. k
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 McCormick CM (2011) kLasting k cognitive k deficits k after k social k instability k stress k in k adolescence k in k male k and k female k rats. k Symposium k speaker, k July k 2011 k conference k of k the k International k Brain k Research k Organization, k Florence k Italy. k
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 McCormick CM (2011) kSnap k judgements k and k first k impressions: k cues k of k aggression k in k faces. k colloquium k speaker, k Nov 4, k Department k of k Psychology, k The k University k at k Albany, k K^ k
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 McCormick CM (2011) kFlying k in k the k evidence k of k face: k Trusting k instincts k in k science k and k in k first k impressions. k Keynote k speaker, k annual k conference k of k N.E.U.R.O.N, k Nov 6, k Quinpiack k University, k,^ k
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 McCormick CM (2012) kSocial k instability k stress k in k adolescence k and k natural k rewards. k Symposium k speaker, k S: k annual k Winter k onference k on k Brain k Research, k Jan 2012, k Snowbird k Utah. k
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 McCormick CM (2012) kSocial k moderation k of k stress k responses k in k adolescence k and k effects k on k social k behaviour k in k adulthood k in k rats. k colloquium k speaker, k Nov 2012, k Dept. k of k Biological k Sciences, k Brock k University. k
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- McCormick CM (2013) Social moderation of stress responses in adolescence and effects on social behaviour in adulthood in rats. Invited speaker, *Social Neuroendocrinology* preconference of the *Society for Personality and Social Psychology*, January 7, 2013, / Orleans, # k
- McCormick CM (2013) From the stressed adolescent to the anxious, depressed adult: Investigations in a rodent model. Invited symposium speaker. *Society for Research in Child Development* conference, April 2013, Seattle # k
- McCormick CM (2013) Development of the @ # axis in adolescent rats and lasting effects of exposure to stressors on emotional and social behaviour. Invited symposium speaker. 9<sup>th</sup> Annual International "Stress and Behavior" Neuroscience and Psychiatry conferences, May 6<sup>th</sup> / 9, St Petersburg, Russia. k
- McCormick CM (2013) Differential susceptibility of adolescents and adults to the immediate and lasting consequences of social instability, stress on cognitive and social behaviour in a rodent model. *Flux Conference on Developmental Cognitive Neuroscience*, Sept 9-21 2013, Pittsburgh, # k
- McCormick CM (2013) Differential susceptibility of adolescents and adults to the immediate and lasting consequences of social stressors in a rodent model. colloquium speaker, Sept 2013, Psychology Department, University of Ottawa. k
- McCormick CM (2013) " Pressures: Differential susceptibility of adolescents and adults to social stressors in an animal model. colloquium speaker, Oct 2013, Psychology Department, University of Guelph. k
- McCormick CM (2013) " Pressures: Lasting consequences of social stressors in adolescence on brain and behaviour in an animal model. colloquium speaker, Nov 2013, Psychology Department, University of Saskatchewan. k
- McCormick CM (2014) " Pressures: Lasting consequences of social stressors in adolescence on brain and behaviour in an animal model. colloquium speaker, 2 2014, Psychology Department, University of Nipissing. k
- McCormick CM (2014) " pressures and development of the social brain: investigations of adolescent-specific vulnerability in an animal model. colloquium speaker, April 2014, Medical Neuroscience Department, Dalhousie University. k
- McCormick CM (2014) Adolescence as a "sensitive period" to the effects of social stressors: Effects on social behaviour and on the @ # axis. colloquium speaker, Nov 3, 2014, University of Toronto, Mississauga. k
- McCormick CM (2014) Adolescence as a "sensitive period" to the effects of social stressors: Long-lasting effects on social behaviour. colloquium speaker, December 2, 2014, Neuroscience Program, York University. k
- McCormick CM (2015) Social and hormonal factors in differences in stress responses between adolescents and adult rats. Symposium Speaker, June 3, 2015, *International Behavioral Neuroscience Society* Conference, Victoria BC. k
- McCormick CM (2015) Hypothalamic-pituitary-adrenal responses to stressors in " and post-pubertal adolescent rats compared with adult rats. Invited symposium speaker *North American Society for Comparative Endocrinology*, June 24, Ottawa, Canada. k
- McCormick CM (2015) Men and women behaving badly: Same behaviour, different reasons. Invited speaker. *Ontario Science Centre: SEXposium*, July 8, Toronto. k

McCormick CM (2015) Social instability stress in adolescence alters social behaviour and its developmental trajectory into adulthood in rats. Invited symposium speaker, Joint conference of the *European Brain and Behaviour Society and the European Behavioural Pharmacology Society*, September 4-12 2015, Verona, Italy.

McCormick CM (2015) " Pressures: Lasting consequences of social stressors in adolescence on social and emotional behaviour. Invited speaker, #10\*-, (Canadian Biomarker Integration Network in Depression), July 7, Toronto.

McCormick CM (2017) Stress and the development of social behaviour in adolescence in rats. colloquium speaker, 2 13, Biological Sciences Department, Brock University.

McCormick CM (2017) Stressors, steroids, and the development of social behaviour in adolescent rats. Invited Keynote speaker, Oct 2, Developmental Affective Neuroscience Symposium, University of Pittsburgh.

McCormick CM (2018) Developmental and experiential factors influencing alcohol's effects on the brain. Symposium organizer, chair. *International Behavioral Neuroscience Society Conference*, Boca Raton FL, USA.

McCormick CM (2018) Gonadal hormones and the differential hypothalamic-pituitary-adrenal (HPA) responses to stressors in adolescent and adult rats. colloquium speaker, July 1, 2018, University of British Columbia.

McCormick CM (2019) Social stress and social brain development in rats. Invited seminar speaker, April 23, 2019, Physiology Department, University of Puerto Rico.

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**Sawyer MJ, Donohue SM,** kMcP oImickP B k=Y66I&N Effectslof neonatalcastLationandsexNolmonekLeatmentlonkNekstLessk  
Lresponselof adultKats!kRosteIplLesentedlatkNekB@0@ ~\_ @: 9\_ @^ 0^ 22\_ @^ 0^ 22kulMR udapest4F unJ LMK

k

**eldw AS, Donohue SM,** kMcP oImickP B 4kLMPKk=Y66I&N LostanediolkNbitskNekLeaselof coliticosteLonekduLinJ stLessk  
inKats!kRosteIplLesentedlatkNekB@0@ ~\_ @: 9\_ @^ 0^ 22\_ @^ 0^ 22kulMR udapest4F unJ LMK

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McP oImickP B 4**Sawyer MJ, Donohue SM** k=Y66I&N neonatalLeatmentkwithNtestostelonekLestLadiolkattenuatesk someeffectsk  
of neonatalK onadectomMonkNkNmotNalamic&pituitaL M ~ LenalkaxisinkadultKats!PosteIplLesentedlatkNekconfeLencek  
ofkNek^ : ^ 5 5 0 ^ 10\_ 2: ^ @^ 4NewIGleans4k !KbstLactappeaLskinSocietMfoIRNeuLoscienceKbstLacts, 23: 2038.

k

McP oImickP B 4k eNek **AKovacs** k=Y66I&N sensitizedcoliticosteLonekLeasekinLresponsektoLrepeatedLneonatalisolation!kk  
PosteIplLesentedlatkNekconfeLenceLofkNekB@0@ ~\_ @: ^ : ^ 5 5 0 % ^ 8A @^ : ! 25: ^ <^ : " 54NewIGleans4k !k

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**Oberlev C,** kMcP oImickP B 4k owk 7 4FannenbaumP B k=Y66+>LactuationskinsalivaL MtoLisolllevelsinkRelationktoLmood4k  
stLess4kndlexelcisekinlatNeteslandnon&atNetes!PosteIplLesentedlatkNekannualconfeLenceLofkNek#A 0^: @  
^ 10\_ @\_ : 0^ @\_ ^ : ^ 54NewIGleans4kK!k

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**Cushing L, DePaolow** , kMcP oImickP B 4kLMPKk=Y66+DiffeLentialeffectsklofJonadalkNolmoneLonekcoliticosteLonek  
LeasekinmaleandfemaleKats!PosteIplLesentedlatkNekannualconfeLenceLofkNek#A 0^: @ ^ 10\_ @\_ : 0^ @\_ ^ : ^ 54k  
NewIGleans4kK!k

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**Rood B,** kMcP oImickP B 4k eNek k=Y66+>Effectslof neonatalisolationlonkNkNmotNalamic&pituitaL M ~ Lenalkaxislofk  
juvenileandadultKats!kRosteIplLesentedlatkNekconfeLenceLofkNekB@0@ ~\_ @: ^ : ^ 5 5 0 % ^ 8A @^ :  
! 25: ^ <^ : " 54Gleans4kLance!k

k

**Lord J** 4F oopeIF4DavenpoItB 4k ineP 4F utentaJF4McP oImickP B k=Y66+NkuLopsMNoloJ icalkfunctioninJ link  
plepubescentkFuIneIFMdLomeLcNldLen: NeuLocoJ nitivelandneuloaffectiveplocessinJ !kRosteIplLesentedlatkNek  
confeLenceLofkNekB@0@ ~\_ @: ^ : ^ 5 5 0 % ^ 8A @^ : ! 25: ^ <^ : " 54Gleans4kLance!k

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^ eNek 4kLMP4McP oImickP k=Y66+N&LN&astkUndeLJ LduateLReseaLcNGJ anizationkfoIRNeuLosciencek€!%, !R!G!C.):  
KkmodelconfeLenceLopLomoteLneuloosciencekLaininJ !kRosteIplLesentedlatkNekconfeLenceLofkNek^ : ^ 5 5 0  
^ 10\_ 2: ^ @^ 4koskKnJ eles4R !KbstLactappeaLskinSocietMfoIRNeuLoscienceKbstLacts, 24:250.

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McP oImickP B 4**Rood B** 4k eNek k=Y66+N& neonatalisolationkalteLscoliticosteLonekLresponsektoLestLaintstLesskinjuvenilebutk  
notLadultKats!PosteIplLesentedlatkNekconfeLenceLofkNek^ : ^ 5 5 0 ^ 10\_ 2: ^ @^ 4koskKnJ eles4R !KbstLactappeaLsk  
inSocietMfoIRNeuLoscienceKbstLacts, 24:117.

k

**Weingartner K,** k eNek 4McP oImickP B k=Y66+>ImpairedpeLfoLmanceLonkobjectLecoJ nitionkaskinkadultskpleviousIMk  
stLessdLasneonates!kRosteIplLesentedlatkNekconfeLenceLofkNek^ : ^ 5 5 0 ^ 10\_ 2: ^ @^ 4koskKnJ eles4R !KbstLactk  
appeaLskinSocietMfoIRNeuLoscienceKbstLacts, 24:176.

k

**Lang K, MacLaury K, Fishery R, Weillon S, Rioux L** 4McP oImickP B k=Y66+>Effectlof Liefpeliodsklof coliticosteLonek  
tLeatmentneonatalMonkcoliticosteLonekLease4kcoliticosteLoidLceptoLs4kndMoLskwateLmazelpeloLmance!PosteLk  
pleSentedlatkNek& LannualconfeLenceLofk .7.&\$. =. 7B M&LinitMP olleJe4R &k

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^ **inkroum w** 4McP oImickP B k=Y66+>SexandsexNolmoneL effectslonkspatialandnon&spatialLmemoL Mests!kRosteLk



B K!k

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**Driscoll, Spatarow** 4McP oImickP B 4kLMP K (2000) (LoJ estinadministLationKeducespMnoticellnumbeLinkNek J LanulekaMloftNedentateJ MisinducedbMsNoIt8eImcoLticosteLonekdepletionkinmalelandkfemaleKats!PPosteIk pLesentedlatkNek:ItNannuallconfeLenceLofk .7.&\$. =. 7KpLil4WellesleMP olleJe4B K!k

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McP oImickP B 4kLMP K (2000) NeuLopLotectiveeffectsLoflandLoJ enslandlestLoJ enlinkmalelandkfemaleKats!B@0@~ @: \$~ . : 0 : % : : 8A °@ "5A 8, 2°1A4B MMinot4CD!k

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**Spatarow** 4McP oImickP B (2000) KIomatizationlandk\* 8Reductionk LeacNimpolitantmetabolismipatNwaMkfolk testosteLone.kneuLopLotectionkinank~ LenalectomMmodellofneuLodeJ eneLation!kRostelLpLesentedlatkNekannuallk confelenceLofkNek#A °0: @ °10, °@ : 0@ " : : °~57June4FoLonto4R anada!k

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**Miller** 4McP oImickP B (2000) KndLoJ en8mediatedeffectsLoflesionsLofkNekanteLioIk+ateLal>P CF&tonkstLess8inducedk colticosteLonekRelease!kRostelLpLesentedlatkNekB@0@~ @: " : : °~5 5 0 \$~ . : 0 : °10, °@ : 0@ : " 54KuJ ust4k B ~ Lid4Spain!k

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**Langw** 4kLMP K4McP oImickP B (2000) NeuLopLotectiveeffectsLofktestosteLonekinlonJ 8eImk~ LenalectomizedKats!PPosteIk pLesentedlatkNekB@0@~ @: " : : °~5 5 0 \$~ . : 0 : °10, °@ : 0@ : " 54KuJ ust4B ~ Lid4Spain!k

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**Teillon** 4McP oImickP B (2000) MenstLualicMeLlandJ endeLidiffelenceskinLspatialpelfoLmance: associationkwithNk salivaLtoLisolLevels!PPostelLpLesentedlatkNekB@0@~ @: " : : °~5 5 0 \$~ . : 0 : °10, °@ : 0@ : " 54KuJ ust4k B ~ Lid4Spain!k

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**hodes** 4McP oImickP 4PaulP 4R eltzP (2000) NoLiNeastkundeLJ LaduatekLeseLcNoLJ anizationkfoLk neuLosciencek€%4, !R!G!C.): OulLfoLtnconfeLenceLtoLpLomoteLneuLosciencekLaininJ !kRostelLpLesentedlatkNek confelenceLofkNek' : °~5 5 0 °10, 2: °@°4NewkGLeans4Nov!KbstLactLappealskinSocietMfoLkNeuLosciencek KbstLacts 30: 9.

k

**hodes** (2000) PentLallallopLeJ nanolonekiskincLeasedkinKatLpupskinLresponsektoLrepeated4kNoLtk episodesLofneonatalLisolation!kRostelLpLesentedlatkNekconfeLenceLofkNek' : °~5 5 0 °10, 2: °@°4NewkGLeans4k Nov!KbstLactLappealskinSocietMfoLkNeuLosciencekKbstLacts 30: 404.

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**Miller** (2000) KndLoJ en8mediatedeffectsLoflesionsLofkNekanteLioIk+ateLal>P CF&tonkstLess8inducedk colticosteLonekRelease!kRostelLpLesentedlatkNekconfeLenceLofkNek' : °~5 5 0 °10, 2: °@°4NewkGLeans4Nov!k KbstLactLappealskinSocietMfoLkNeuLosciencekKbstLacts 30: 80.

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**Muscatiello** 4McP oImickP B 4kLMP K (2001) TestosteLonekmaMnaveLneuLopLotectiveeffectskinank~ LenalectomMmodelk ofneuLodeJ eneLationkfollowinJk\* 8ReductionlandactionsLatk7 KP KkceptoLs!PPostelLpLesentedlatkNek\*LiNannuallk confelenceLofk .7.&\$. =. 7KpLil4WellesleMP olleJe4B K!k

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**Raskin** 4McP oImickP 4PaulP 4R eltzP (2001) NoLiNeastkundeLJ LaduatekLeseLcNoLJ anizationkfoLk neuLosciencek =C!4, !R!G!C.): OulLfiLtnconfeLenceLtoLpLomoteLneuLosciencekLaininJ !kRostelLpLesentedlatkNekconfeLenceLofkNek " : : °~5 5 0 °10, 2: °@°4SanDieJo4Nov!KbstLactLappealskinSocietMfoLkNeuLosciencekKbstLacts!k

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McP oImickP B 4kLMP K (2001) TestosteLonekmetabolismalonJ lestLoJ enicklandlandLoJ enickpatNwaMmaMbotNekimpolitantk foLkneuLopLotectionkinank~ LenalectomMmodellofneuLodeJ eneLation!kRostelLpLesentedlatkNekconfeLenceLofkNek " : : °~5 5 0 °10, 2: °@°4SanDieJo4Nov!KbstLactLappealskinSocietMfoLkNeuLosciencekKbstLacts!k

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**hwager, Lister** 4RoseneDL4McP oImickP B 4FonkissJ4R alleLJR (2001) P 8 oskimmunoLeactivitMinkNekanteLioIk cinJulateJ MisLofmalnouLisNedlandknouLisNedKatLsubjectsLfollowinJ kEstLaintLstLess!kRostelLpLesentedlatkNek confelenceLofkNek' : °~5 5 0 °10, 2: °@°4SanDieJo4Nov!KbstLactLappealskinSocietMfoLkNeuLosciencek KbstLacts!k

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**ingw** 4k empell&L4DeP assioL5 K4R lattk7 J4RoseneDL4McP oImickP B 4FonkissJ4R alleLJR (2001) P ombinedlandk independenteffectsLofpLenatalLpLoteinmalnutLitionlandkpostnatalLstLesskonneuLodeJ enesiskinkNekdentateJ MisLofk MounJ adultKats!kRostelLpLesentedlatkNekconfeLenceLofkNek' : °~5 5 0 °10, 2: °@°4SanDieJo4Nov!KbstLactL appealskinSocietMfoLkNeuLosciencekKbstLacts!k

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MoservL, w atersP, Millerw4McP oImickP B (2002) DiffeLentialeffectslof cNbnickstLesslandlestLadiolimplantslonkN8 mazelndkwateImazelpeloImancelinkmalelandfemaleKats!kRosteIplLesentedlatkNekconfeLencelofkNek' : °5 5 0 °10, 2. °@°4Gllando4Nov!KbstLactlapealsinkSocietMfoIRNeuLosciencelKbstLacts!k

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atersP4ScNaxk( 4McP oImickP B 4Kawsonk&7 . (2003) StLessleffectslonP ' landP cl8%kvelslinkmalelandfemaleKatk Nppocampi!PosteIplLesentedlatkNekItNannualconfeLencelofk .7.&.S.=. k&B M&KNeatonk polleJe4B K!k

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McP oImickP B 4GleasonE, RobertsD, k elseMf%(2003) StLesskduLinJ ipubeltMenNanceskocomotoLsensitizationk tok nicotinelinkadultfemale4butnotmale4Kats!kk °6 < 0=#: !° A5, 5": °@°2confeLencekSeptemebel4NewKYol) ICN>k on: KdolescentP lainDevelopment: VulneIabilitieslandOppoItunities!k

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atersP, WjepkemaW, Lawsonk&7 4McP oImickP B (2003) PNbnickstLessldecLeaseskNppocampalbc18%kvels4butk impLoveskspatialpelfoImancelink kwateImazelinmalelandfemaleKats!kRosteIplLesentedlatkNekconfeLencelofkNek ' : °5 5 0 °10, 2. °@°4NewIGleans4Nov. 2003 KbstLactlapealsinkSocietMfoIRNeuLosciencelKbstLacts!k

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B lkowskila4McP oImickP B (2003) PeLinatallexposuLekolowkvelslofkNelenviLonmentallantiandLoJ enk inclozolinlalteIsk sexkdiffeLentiatedkfunctions!kRosteIplLesentedlatkNekconfeLencelofkNek' : °5 5 0 °10, 2. °@°4NewIGleans4Nov!k 2003 KbstLactlapealsinkSocietMfoIRNeuLosciencelKbstLacts!k

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LewisE, SomleyB, w Nank&K4k leckneIC5 4McP oImickP B (2004) %kexecutivekfunctionlandkcoltisolKresponseskto socialk lejectionlandkpelfoImancelstLessoIs!kkRosteIplLesentedlatkNekconfeLencelofkNek' : °5 5 0 °10, 2. °@°4Bank DieJo4Oct. 2004. KbstLactlapealsinkSocietMfoIRNeuLosciencelKbstLacts!k

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RobartsD, Kopei' inak, k elseMf%4McP oImickP B (2004) LonJ &astinJ 4DiffeLentialeffectslofstLessinkadolescencekvs k adultNoodlonkocomotoLeffectslof psMnstimulantslandkon5 ( KstLesskResponses!kRosteIplLesentedlatkNek confeLencelofkNek' : °5 5 0 °10, 2. °@°4BankDieJo4Oct. 2004. KbstLactlapealsinkSocietMfoIRNeuLosciencel KbstLacts!k

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SomleyB, w Nank&K4MuiIP 4McP oImickP B (2005) PelfoImancelstLessldecLeaseskNelpLimacMeffectinkmenlandkncLeasesk tNekcencMeffectinkwomen!kkRosteIplLesentedlatkNekconfeLencelofkNek' : °5 5 0 °10, 2. °@°4WasNnJ tonkDP 4k Nov. 2005. KbstLactlapealsinkSocietMfoIRNeuLosciencelKbstLacts!k

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Secenw4Merri' w, w elmLeicNDLkMcP oImickP B (2006) 5 ( KkfunctionktoRepeatedksocialkstLessoIskduLinJ kadolescencekink malelandfemaleKats!PosteIplLesentedlatkNek' 1°° 0@=@ 0' °10, 2. °@° #22 : ° ° @B MfOonto!k

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Mathewsw) 4McP oImickP B (2006) PNbnicksocialkstLessinkadolescenkfemalekincLeaseskconditionedkplacekpeLefencek tok ampNetamine!PosteIplLesentedlatkNek' 1°° 0@=@ 0' °10, 2. °@° #22 : ° ° @B MfOonto!k

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Merri' w, Secenw4E elmLeicNDLkMcP oImickP B (2006) SocialkinstabilitMalteIsk5 ( KkResponsesktoRepeatedkstLesskduLinJ k adolescencekinkmalelandfemaleKats!PosteIplLesentedlatkNek' 3°° 0@~ @ : 9, @°° @° , @ °10, ° @ : 0@ : " 54kune4k PittsbuLJN( K!k

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Mathewsw) 4McP oImickP B (2006) PNbnicksocialkstLessinkadolescenkfemalekincLeaseskconditionedkplacekpeLefencek tok ampNetamine!PosteIplLesentedlatkNek' : °5 5 0 8°° . ° 0 : 7 @ : 0@ : " 5confeLencekJune4RittsbuLJN( K!k

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iltonw, Harrisonw, Tourountzasw 4McP oImickP B (2007) DiffeLentleffectslofk JelandlofkNbnickstLessinkbeNaviouIk inkNefoLcedkswimkestinkfemalelandmaleKats!PosteIplLesentedlatkNek' @ / ° @ #22 : ° ° @ 5 0 °10, 2. °@° k confeLencek B MfOonto!GC!k @ / ° @, 10@ : , 5 °10, : " ° : " : °@°2. . 34: F%F!k

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Mathewsw) 4McP oImickP B (2007) DiffeLenceskbetweenkadolescenklandkadultkfemalelandkmaleKatsinkampNetamine8 inducedkocomotoLactivitMandkconditionedkplacekpeLefence!PosteIplLesentedlatkNek' @ / ° @ #22 : ° ° @ 5 0 °10, 2. °@° kconfeLencek B MfOonto!GC! @ / ° @, 10@ : , 5 °10, : " ° : " : °@°2. . 34: FY&!k

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Smish C, Mathewsw) 4McP oImickP B (2007) PNbnicksocialkstLessinkadolescencekdecLeaseskankxietyMlikebeNaviouL4kLk incLeaseskisk&akinJ beNaviouL4kNkNelevated&pluskmazekinkfemalek4wNcNkastskintoladultNood!PosteIplLesentedlatk tNek' @ / ° @ #22 : ° ° @ 5 0 °10, 2. °@° kconfeLencek B MfOonto!GC! @ / ° @, 10@ : , 5 °10, : " ° : " : °@°2. 34: F%Y&k

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MathewswZ, TourountzasE, w iltonw, Harrisonw, kMcP oImickP B (2007) PNbnicksocialkstLessinkadolescencek

auJ mentscoliticostelonekleasektok newlstlesoLinKats: Immediateeffectslinkmales4knduLinJ leffectslinkfemales!k  
PosteIplLesentedlatkNek' : °~5 5 0 \$°~ . ° 10 : 7@ : 0@ : " 5konfencekJune4KsilomaIP K!k

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**CarréW4McP oImickP B (2008)** KJJ LessivelbeNavioLlandcNanJekinsalivaLMestosteLonekconcentlationspLeditkwillinJ nessk  
tolenJ Jekink lcompetitivekask!PosteIplLesentedlatkNek °6 7@ : @ 7. : 1~ ° @05! 25: ~ : ° " 5 : °~5 confencek  
B MMancNesteIC5 !k

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**altersK, MathewsW) 4McP oImickP B 4R LudzMiskiFB (2008)** 50 ) 5 I kultatsonickvocalizationskafteIkinjectionkofsalinek  
oLampNetaminekincleaseafteIlepeatedexposulektoestk lenakinadult4butnotinkadolescentkfemale!PosteIk  
pLesentedlatkNek9 @! ° @#22 : ° ~ ° @5 0 ° 10 2: °@°konfencek B MMontLealkP!@ @! ° @A 10@ : ° 5  
° 10 : ° " ° : ° : °@°2!k

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**%homasV, Loewi BJ, MathewsW) 4R B kMcP oImick (2008)** DecLeasedkNppocampalkneuLoJ enesislandkncLeasedkspatialk  
locationkmemoL MfteIadolescentksocialkstLessinkfemales!PosteIplLesentedlatkNek @! ° @#22 : ° ~ ° @5 0  
° 10 2: °@°konfencek B MMontLealkP!@ @! ° @A 10@ : ° 5 ° 10 : ° " ° : ° : °@°2!k

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**MathewsWZ, kMcP oImickP B (2008)** LastinJ kinfluencekofcNbnicksocialkstLessinkadolescencekonkconditionedpplacek  
plfeLencekandklocomotoLsensitizationktoLampNetaminekinkmalekandkfemalekats!F MnposiumkpaperI JivenlatkNek  
annualPP PP P FkonfencekinkLondonkOntalio4kJune 2008.

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**CarréW4McP oImickP B (2008)** RelationsNpkbetweenksalivaLMestosteLonekKJJ LessivelbeNavioL4kndkwillinJ nesskto  
enJ Jekink lcompetitivekask!kRosteIplLesentedlatkNekannualPP PP P FkonfencekinkLondonkOntalio4kJune 2008.k

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**%burk, MathewsWZ, kMcP oImickP B (2008)** KJ elandksexkdifferenceskinkMbsinekNMLoxMasekimmunoLeactivitMinkNek  
developinJ kventalkkmental k leaLinkcontLlandkstLessedkats!PosteIplLesentedlatk> ° < 1@! ~ 52° : ° " ° 27  
" 5A8 2° 1A4kJulM2008, PambLidJek ^ !k

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**MathewsWZ, k Styles, kMcP oImickP B (2008)** Dose&dependentleffectsloflestLadiollbenzoatekonlampNetamine&inducedk  
locomotoLactivitMPosteIplLesentedlatkNekkonfencekofkNek' : °~5 5 0 ° 10 2: °@°4WASNnJ tonkDP 4kNov. 2008.

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P LudzMiskiFB 4McP oImickP B 4R uLJ doLlJ4R ankseppH4k LoesR4MoksalkRk(2008) DiffeLenceskinkcoliticostelonekLresponsek  
tolstLessinkkatskselectivekMbedkfoL50 ) 5 I kvocalizations!PosteIplLesentedlatkNekkonfencekofkNek' : °~5 5 0  
° 10 2: °@°4WASNnJ tonkDP 4kNov. 2008.

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**CarréW4McP oImickP B (2008)** TestosteLonekandkcompetition: NotktoobLijNlandkLeadMkrokiJN!PosteIplLesentedlatkNek  
konfencekofkNek' : °~5 5 0 ° 10 2: °@°4WASNnJ tonkDP 4kNov. 2008.

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**MathewsWZ, StylesA, kMcP oImickP B (2008)** KJ eldiffeLenceskinklocomotoLresponsektoLacutelampNetaminekisknotkduetok  
Jonadallkstatuskinkfemales!kRapeIplLesentedlatkNekkonfencekofkNekB@0@~ ° @ : ° " : °~5 5 0 %° : ° : 8A ° @ :  
! 25: ~ < ° : ° " 54WASNnJ tonkDP !Nov. 2008.

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McP oImick4**MathewsW) W(2008)** PNbnicksocialkstLessinkadolescencekaffectsklampNetamine&inducedkLeJulationkofk  
coliticolimbickMbsinekNMLoxMasekinkadultkmales!PosteIplLesentedlatkNekkonfencekofkNekB@0@~ ° @ : ° " : °~5 5 0  
%° : ° : 8A ° @ : ! 25: ~ < ° : ° " 54WASNnJ tonkDP !Nov. 2008.kk

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**CarréW4MondlocNP J4McP oImickP B (2009)** , acialkstLuctuLeiskankENonestsiJ nalFofk JJ LessonlandktestosteLonekink  
men!PosteIplLesentedlatkNekkonfencek7. : 1~ ° @05! 25: ~ : ° " 5 ( LeconfencekofkNek' : °~5 5 0! 02 @ : °5 @  
° : ° : ! 25: ~ : ° " 54kFebLualM2009 Tampa4kL!k

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**atersP, %homasVCM, MathewsW) 4McP oImickP B (2009)** %fectskofcNbnickcoliticostelonekadministrationkink  
adolescencekandkadultNodlonanxietaMandkdepLessivelbeNavioLlinkmalekats!PosteIplLesentedlatkNek' : °~5 5 0  
\$°~ . ° 0 : ° 10 ° @ : 0@ : " 5konfencekJune4kAstLansinJ 4MicNJ an!k

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**%homasVCM, w atersP, MathewsW) 4McP oImickP B (2009)** %fectskofsocialkstLessinkadolescencekonkcellpLolifeLationk  
andksuLivalkinkNekdentatek Miskinkats!PosteIplLesentedlatkNek' : °~5 5 0 \$°~ . ° 0 : ° 10 ° @ : 0@ : " 5  
konfencekJune4kAstLansinJ 4MicNJ an!k

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**Carré JM, Kilchrist J, Morrissey M, McP oImickP B** (2009) KJJ Lesson4testostelonek Miamics4indkwillinJ nessitok compete!PosteIplLesentedlatkNek' : °5 5 0\$° . ° 0 : °10, ° @. : 0°@. : " 5 confelenceJune4kastLansinJ4k MicNJ an!k

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**McP oImickP B 4Mathews W** (2009) KJ ediffeLencesinK locomotoI kResponsekointL &accumbenslampNetaminekdependlonk doseLandstaJ elofadolecence!PosteIplLesentedlatkNekconfelenceofkNek' : °5 5 0 °10, 2. °@°4R NcaJ o4Octk 2009.

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**Thomas CM, W aters P, Mathews W** 4McP oImickP B (2009) %ffectsof socialistLesslonkcellIplolifeLationlandksuLvivalink tNekadolescentKatIdentatek Mius!PosteIplLesentedlatkNekconfelenceofkNek' : °5 5 0 °10, 2. °@°4R NcaJ o4Octk 2009.

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**W aters P, W thomas CM, Mathews W** 4McP oImickP B (2009) PoIticostelonekLeatmentkncLeaseskNek J ediffeLencekinkNek foLcedkswimktestkinkmaleKats: DeclEasedkdepLessivekbeNavioukinkadolescence!PosteIplLesentedlatkNekconfelenceofk tNek' : °5 5 0 °10, 2. °@°4R NcaJ o4Oct 2009.

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**Mathews WZ, McP oImickP B** (2009). P NAnJ eslacLosladolecencekintoladultNodkinkampNetamine&nducedk locomotoIk activitMandk oslexPessionkinkNeknucleuskaccumbenskinkats!PosteIplLesentedlatkNekconfelenceofkNek' : °5 5 0 °10, 2. °@°4R NcaJ o4Oct 2009.

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**Carre JM, McP oImickP B** (2010) %ktLinsickandkintLinsickmotivationalkfactoIslandkNekRelationsNplbetweenktestostelonek ~ MiamicskandkNumank JJ LessonkduLinJ kcompetition!PosteIplLesentedlatkNekconfelenceofkNek' @0@ ° @. : °5 5 0\$° 2° 0: ~ , @#"" 0°2° @StoLkP &4kLulM2010.

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**Baumbach JL, w HodgesWE, w McCormickR,** (2016) Effectsofk socialkinstabilityk stresskinadolescentkratslonk olfactoryk neurogenesiskandk socialk memory!Posterlpresentedattheconferenceofkthe k":~5 5 0 °10 2: ~@° #22 : ° ~ @WaterlooUniversity4k May 2016.

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**imonev JJ, Baumbach JL, McCormick K** (2016) Corticolimbic 8 ktlandk' 8ErkY/% signaling in the expression of k unconditioned k generalized k and k conditioned k fear in adult female rats! Poster presented at the conference of the k' : °~5 5 0 \$° . ° 10 : ° 1, 0° @ : 0° @ : " 54 Montreal k ugust 2016.

**MacDonell ET, Patterson-Stallwood E, Geniole W** 4 McCormick K (2017) Force vs k Fury: Physical vs k psychological threat potential differentially predict aggressive behaviour! Poster presented at the k' : °~5 5 0! ° 0 2 @ : ° 5 @ " : ° : ! 25: ~ : : " 54 Bank tonio 4 kan 2017.

**McCormick K** 4 Cameron k 1 4 **Hompson M, Cummings M, Hodges WE, Langett M** (2017) The sexual preference of k female rats is influenced by males' adolescent social stress history and social status! Poster presented at the k B @ 0 @ ~ ° @ : 9, @ ° @ : @ 5! 25: ~ : : " ° : " : ° @ ° 4 Vienna 4 March 2017.

**MacDonell ET, Patterson-Stallwood E, Geniole W** 4 McCormick K (2017) Both physical and psychological threat are k judged accurately k from the faces of men 4 but the facial width to height ratio is a cue of their psychological threat only! k presented at the k B @ 0 @ ~ ° @ : 9, @ ° @ : @ 5! 25: ~ : : " ° : " : ° @ ° 4 Vienna 4 March 2017.

**Baumbach JL, Fish KM, Flynt KJ, Hodges WE, McCormick K** (2017, May) ! Reduced Fos expression k social interaction and altered synaptic plasticity in social brain areas after social instability stress in adolescent male k rats! Poster presented at the Southern Ontario Neuroscience k ssociation k Conference 4 St! Catharines 4 k.

**imonev JJ, Cattle GE, Baumbach JL, McCormick K** (2017). Effects of stress in adolescence on socioemotional function k dissipate 4 where as those of CB1 receptor antagonism emerge in adulthood 4 in male rats! @ / ° @ 9 : : ° ° , 5 ° 10, 825: ~ 8 ~ 0A : : : " 54 June 4 Kingston 4 Canada! k

**Marcolin ML, Hodges WE, McCormick K** (2017). Social instability stress increases the intake of ethanol 4 but not sucrose 4 k in rats! @ / ° @ 9 : : ° ° , 5 ° 10, 825: ~ 8 ~ 0A : : : " 54 June 4 Kingston 4 Canada! k

**imonev JJ, Leerentveld AJ, Baumbach JL, McCormick K** ! k . (2017). Independent effects of repeated stress and k %\*Yk treatment in adolescence on anxiety 4 sociality 4 and neuroendocrine stress responses 4 and on relevant protein expression k in the prefrontal cortex and hippocampus 4 in female rats! B @ 0 @ ~ ° @ : 9 @ @ ° @ °! \$ ° 2 0: ~ " : ° ~ 54 June, 2017, Montreal 4 Canada! k

**Eltahir A, Hodges WE, McCormick K** (2018). The effect of floxetine k receptor antagonist on social approach 4 social k interaction 4 and corticosterone release in socially stressed and non-stressed adolescent male rats! Poster presented at the joint conference of the k B @ 0 @ ~ ° @ : 9, @ / ° 22, 5 ° 10, ° @ : 0° @ : " 5 and the k' : °~5 5 0 \$° . ° 0 : ° 10 ° @ : 0° @ : " 54 Toronto 4 June 2018.

**Hodges WE, Bailey K-° 4 Lou Sh EL, McCormick K** (2018). Effects of social instability stress in adolescent male rats on k markers of synaptic plasticity and neuron morphology in the medial amygdala and lateral septum! Poster to be k presented at the joint conference of the k B @ 0 @ ~ ° @ : 9, @ / ° 22, 5 ° 10, ° @ : 0° @ : " 5 and the k' : °~5 5 0 \$° . ° 0 : ° 10 ° @ : 0° @ : " 54 Toronto 4 June 2018.

**McCormick K** , **whaver M, Lew im A PN, Smith K, Smailk** (2018). Adolescent social stress leads to k lasting 4 altered k responses to immune challenge in female rats! Poster presented at the joint conference of the k B @ 0 @ ~ ° @ : 9, @ / ° 22, 5 ° 10, ° @ : 0° @ : " 5 and the k' : °~5 5 0 \$° . ° 0 : ° 10, ° @ : 0° @ : " 54 Toronto 4 June 2018.

**Zeidan M, Green MR, McCormick K** (2018). Central vs k peripheral effects of testosterone on the k k axis in k adolescent and adult rats! Poster presented at the joint conference of the k B @ 0 @ ~ ° @ : 9, @ / ° 22, 5 ° 10, ° @ : 0° @ : " 5 and the k' : °~5 5 0 \$° . ° 0 : ° 10, ° @ : 0° @ : " 54 Toronto 4 June 2018. k

**imonev JJ, McPherson J, Zeidan M** 4 McCormick K (2018) Adolescent endocannabinoid signaling influences the k development of social behaviour in female rats! Poster presented at the k 28<sup>th</sup> Annual International Cannabinoid Research Society Symposium on the Cannabinoids 4 Leiden 4 July 2018.

**Asgari P, Hodges WE, Baumbach JL, McCormick K** (2019). Effects of social instability stress in adolescence in female k rats on social interaction and gene expression in social brain regions! Poster to be presented at the conference of the k Society for Behavioral Neuroendocrinolog 4 Bloomington k. 4 June 2019.

**Baumbach JL, McCormick J** (2019). Tamoxifen or estradiol limited to the induction phase enhance the expression of locomotor sensitization to nicotine in ovariectomized and intact female rats! Poster to be presented at the conference of the *Society for Behavioral Neuroendocrinology* 4Bloomington, 4 June 2019.

**Herlehy R, Wim S, Baumbach JL, Murray W, McCormick J** (2019). Social instability stress in adolescence administered in adolescence or adulthood has a lasting effect on preferences for natural in male and female rats! Poster to be presented at the conference of the *Society for Behavioral Neuroendocrinology* 4Bloomington, 4 June 2019.

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**Primary supervision of Graduate Theses at Brock University:**

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Mathews (5 (2007) ) student (4R& )° PGS! Behavioural Neuroscience! Locomotor sensitization and conditioned place preference for amphetamine in late adolescent and adult male and female rats! continued tok - >k

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Mathews (5 (2011) - student (4R& )° ICGS4 Behavioural Neuroscience! Developmental differences in locomotor responsiveness to amphetamine in rats. k& )° k-^ 4CURRENTk\*/(/\* : ssistant Professor 4University of Toronto!

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Carré (2010) - student (4R& )° ICGS! Behavioural Neuroscience! The social neuroendocrinology of competition! k& )° k-^ kdeclined>CURRENTk\*/(/\* : ssociate Professor 4Nipissing University!

k

Patti Waters (2010) ) student 4 Behavioural Neuroscience! Immediate and enduring effects of corticosterone administration during adolescence and adulthood on anxiety and depressive behavior in male rats! kCURRENTk\*/(/\* : unknown! k

k

Catherine Thomas (2011) MSc student! Biology! Chronic mild social stress increases neurogenesis in adolescent male rats! kCURRENTk\*/(/\* : Environmental Consultant 4Remediation Consulting Group Inc! k

k

Geniole (2012) ) student 4 Psychology! Psychopathic traits and endocrine function as predictors of costly and non-costly reactive aggression! kcontinued tok - >k

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Green (2013) ) student! Behavioural Neuroscience! Disambiguating the Effects of Social Instability Stress in Adolescence on Learning and Memory Tasks that Involve the Medial Prefrontal Cortex and Hippocampus! kcontinued tok - >k

k

Hodges & (2014) ) student! Behavioural Neuroscience! Effects of social context on endocrine function and Zif%F+k expression in response to an acute stressor in adolescent and adult rats kcontinued tok - >k

k

Geniole (2016) - student! Psychology! The facial width to height ratio and its role in advertisements and assessments of threat potential! k!4 )° ICGS4 k!4 )° Banting k-^ !k

k

MacDonell (2017) ) student! Investigating the relationship between the facial width to height ratio and physical and psychological threat potential! Psychology! k!4 )° k

k

Green (2017) - student! k! )° ICGS! Behavioural Neuroscience! Influence of gonadal hormones on hypothalamic & pituitary & adrenal function in adolescence and adulthood in rats! k

k

Hodges & (2018) - student! k! )° PGS! Behavioural Neuroscience! Effects of adolescent social stressors on the development of social behaviours in rats! k

k

Simonek (2018) - student! OGS! k! )° ICGS4 Biology! Endocannabinoid regulation of adolescent development in male and female rats! k

k

Zeidan (2018) MSc Biology! Testosterone's regulation of the k& axis differs for adolescent and adult male rats! k

k

Baumbach (2019) ) Psychology! Tamoxifen or Estradiol Limited to the Induction Phase of Nicotine Sensitization Enhances the Expression of Locomotor Sensitization in Ovariectomized and Intact Female Rats! k

k

de Lima Marcolin (2019) - student! Ontario Trillium Fellowship! Biology! Influence of adolescent social instability stress on the intake of ethanol and sucrose in a rodent model! k

- sgarik (2020) MSc!Biology!StressandtheDevelopmentofSocialBehaviourink dolescent!Female!Rats!k
- Herlehy! k!n!progress>k Psychology!DevaluationofSucroseCausedbySocialInstabilityStressink dolescent!Malek Long!Evans!Rats!inkthe!Presenceof!an!Unfamiliar!Peer!k
- Eltahirk k!n!progress>k Psychologyk
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- k
- CommitteemembersforgraduateThesestvBrock:w**
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- Carré, (2006) , Istudent!Behavioural!Neuroscience!Salivary!testosterone!and!cortisol: Role!of!athletic!setting!and! outcome!of!the!competition!in!elite!hockey!players!kkk
- k
- St!Pierre, (2008) , Istudent!Behavioural!Neuroscience!The!effects!of!quinpirole!in!eliciting! 50 '4+ !calls!from!the!rat!k nucleus!accumbens!k
- k
- Capuanak (2008) , Istudent!Behavioural!Neuroscience!Cortical!and!autonomic!modulation!of!attentional!control!k
- k
- Levesque (2008) MSc!student!Biology!Seasonal!changes!in!behavioural!and!thermoregulatory!responses!to!hypoxia!in!the!k eastern!chipmunk!kk
- k
- Riccik (2010) MSc!student!Biology!k !possible!role!for!chemokine!signaling!through!8°) :!k!as!a!downstream!effector!of!k retinoic!acid!signaling!in!the!regenerating!tail!and!spinal!cord!of!*Notophthalmus viridescens!*k k
- k
- Komadoskik (2010) MSc!student!Biology!Effects!of!Low!Doses!of!Quinpirole!on!Production!of! 50 '4+ !Vocalizations!in!k Wistar!Rats!k
- k
- Longfieldk (2010) , Istudent!Psychology!The!influence!of!emotional!body!posture!on!adults'!and!+!year!olds'!perception!k of!facial!expressions!k
- k
- Randk (2012) MSc!student!Biology!Elucidation!of!the!Retinoid!Signaling!Pathway!Involved!in!xon!Guidance!in!k *Xymnaea stagnalis* and *Xenopus laevis* k
- k
- Rennk (2012) , Istudent!Psychology!Frontal!Lobe!Function!and!Performance!Monitoring!following!Total!Sleep!k Deprivation!k
- k
- Hornerk (2012) , Istudent!The!Effects!of!Body!Posture!on!Emotion!Perception: !Developmental!and!Theoretical!k nalysis!k!Psychologyk
- k
- Mordenk (2013) , Istudent!Psychology!The!Role!of!Orexin!8 !ink !nxiety!and!the!Emission!of!Ultrasonic!Vocalizations!k in!Rats!k
- k
- Mulvihilk (2014) , Istudent!Psychology!Investigation!of!the!Role!of!the!Nucleus!ccumbens!in!mpphetamine!Induced!k 50 '4+ !Ultrasonic!Vocalizations!in!the!rat!k
- k
- St!Cyr!Bakerk (2014) - Istudent!Psychology!Indices!and!Implications!of!Emotional!Underarousal!for!Persons!with!ak History!of!Head!Trauma!k
- k
- Morris! (2016) , Istudent!Sustainability!Science!and!Society!Ice!cream!maybe?!Visual!representations!of!climate!change!ink Canada!k
- k
- Skorska! (2016) - Istudent!Psychology!Physical!Correlates!of!Sexual!Orientation: The!k ssociation!of!Height!4!Birth!k Weight!4!and!Facial!Structure!with!Sexual!Orientation!k
- k
- Lustigk (2016) , Istudent!Psychology!The!role!of!sleep!and!hormones!in!processing!emotional!information!k

Mulvihill (2019) - Student Psychology Behavioural Pharmacological and Immunohistochemical Investigation of 50 US Veterans Expression of Positive Emotional Arousal in the Long Evans Rat

Lustig (2016) - Student Psychology The Role of Sleep and Hormones in Processing Emotional Information

Mulvihill (2019) - Student Psychology Behavioural Pharmacological and Immunohistochemical Investigation of 50 US Veterans Expression of Positive Emotional Arousal in the Long Evans Rat

Ryan (2019) - Student Psychology The Effect of Stereotype Threat on Memory and Cortisol in Older Adults

k

Messner (2020) MSc Student Biology An In Vivo and In Vitro Exploration of the Use of Chronic Hypoxia/Physioxia and Mediated Alteration of Physiological Function in Mitochondrial Disease

Walker (2020) - Student Biology Investigating the Role of MicroRNAs in Regeneration and Axonal Pathfinding

Lustig in progress - Student Psychology

De Hoog in progress - Student Biology

Thibodeau in progress - Student Biology

Wasilewicz in progress MSc Student Biology

Baranowski in progress MSc Student Applied Health Sciences

**Pre-examination committee member, (not part of supervisory committee):**

Silkstone (2018) - Student Biology

Jung (2019) - Student Biology

**Supervision of Undergraduate Theses:**

Riccio (2006) Gender and Sex Role Identity Affect Ratings of Characteristics Associated with Leadership Style Psychology Bates College

Oakes (2006) Predictors of Life Satisfaction among Elderly Women Psychology Bates College

Swartz (2006) Case Study of Educational Weaknesses and Strengths in Bright High Achieving Young Adult and Adult Dyslexics Biopsychology Bates College

Beers (2006) Sex Difference in Mineralocorticoid Receptors in the Rat Brain Biopsychology Bates College

Singh (2006) Hemispheric Asymmetry in Progesterone and Estrogen Receptor Levels and Female Sexual Behavior in the Rat Biopsychology Bates College last contact: working for a pharmaceutical company

Paillet (2006) The Effects of Chronic Stress on Serotonin and Glucocorticoid Receptor Binding in Prenatally Stressed and Nonstressed Female Rats: Serotonin and Corticosteroid Systems May Covary to Mediate the Stress Response Biopsychology Bates College last contact: physician New Mexico

Manning (2006) The Effects of Neonatal Endotoxin on Social Play and Open Field Behaviors in Rats Biology Bates College last contact: - University of Vermont working in industry

k

- vonRumohr k=Y66: The effects of sex and prenatal stress on spatial memory and development of the hippocampus!k  
=Psychology4BatesCollege>k
- k
- Ferrini k=Y66: Chronic stress and immune function in mice!k Biology4BatesCollege>k
- k
- McCafferty k=Y66: Hormonal and behavioral changes over the crustacean molt cycle: Pre-molt syndrome! >k thek  
merican lobster *Homarus americanus*!k Biology4BatesCollege>kastcontact: in veterinary school>k
- k
- Furey Bk=Y66\* Organizational and activation effects of sex hormones on the hypothalamic-pituitary-adrenal axis!k  
=Biopsychology4BatesCollege>kastcontact: working for a biotechnology firm!k >k
- k
- Mahoney k=Y66\* Mother-young interactions in litters treated with endotoxin or saline!k Biopsychology4BatesCollege>k  
=astcontact: Univeristy of Illinois professor>k
- k
- McNamarak k=Y66\*> ketel corticosterone treatment following long-term adrenalectomy: Implications for spatial memory!k  
=Biopsychology4BatesCollege>kastcontact: research assistant4Mass General Hospital>k
- k
- Child k=Y66\* Hemispheric asymmetry in the control of sexual behavior by progesterone in female rats!k Biopsychology4k  
BatesCollege>kastcontact: working for biotech company4Portland & >k
- k
- Epstein k=Y66\* Sex4kickness4hand sinistrality: The associations among gender4hand preference4and immune status4k  
indicated by salivary IgA levels!k Psychology4BatesCollege>kastcontact: graduate school4Univ of Chicago>k
- k
- Mukhopadhyay k=Y66 Effects of long-term adrenalectomy on working memory and pain sensitivity!k Neuroscience4Batesk  
College>kastcontact: teacher in California>k
- k
- Mahoney k=Y66 The effects of prenatal4neonatal4and adult treatment with glutamide on the hypothalamic-pituitary-  
adrenal axis in the rat!k Neuroscience4BatesCollege>kastcontact: completed medical school>k
- k
- Blackwelder k=Y66 Neurogenesis and morphology in the granule cell layer of the adult rat hippocampus following chronic  
loss of adrenal steroids!k Psychology4BatesCollege>k
- k k k
- Kovacevic k=Y66 The effects of chronic exposure to corticosterone on spatial memory in handled and nonhandled rats!k  
=Neuroscience4BatesCollege>kastcontact: graduate school4McGill University>k
- k
- Sawyer k=Y66 The effects of testosterone on the circadian rhythmicity and stress levels of corticosterone in rats!k  
=Neuroscience4BatesCollege>kastcontact: . student at Yale University School of Nursing>k
- k
- Weld k=Y66 The effects of androstenediol on the release of corticosterone during stress in rats!k Neuroscience4Batesk  
College>kastcontact: Nurse Practitioner>k
- k
- Donohue k=Y66 The effects of androstenediol on the release of corticosterone during stress in rats!k Neuroscience4Batesk  
College>kastcontact: working for a pharmaceutical company>k
- k
- Warren k=Y66 The effect of acute and chronic glucose treatment on spatial memory in long-term adrenalectomized rats!k  
=Psychology4BatesCollege>k
- k
- Mirabile k=Y66 Cognitive function and sleep disturbance in elderly patients!k Psychology4BatesCollege>kastcontact:  
- 4Princeton4henk ssociate Vice President4Drexel University>k
- k
- Rood Bk=Y66 Long-term effects of neonatal isolation on hypothalamic-pituitary-adrenal response to stress!k Neuroscience4k  
BatesCollege>kastcontact: - 4k Mass mherst Post&doc UPenn>k
- k
- Lord k=Y66+> Neuropsychological investigation of Turner syndrome!k Psychology4BatesCollege>kastcontact: graduate k  
school4University of Connecticut>k
- k
- Cushing k=Y66+> Differential corticosterone response to stress in relation to gonadal status of female and male rats!k  
=Neuroscience4BatesCollege>k
- k

- Gogelk k=Y66+>tered locomotor behaviour in response to amphetamine in neonatally isolated rats as juveniles!  
=Neuroscience4BatesCollege>k
- Oberle k=Y66+Salivary cortisol levels and mood in relation to academic stress and training stress!  
Neuroscience4Bates College>kastkcontact: research assistant4DartmouthCollege>k
- DePaolok k=Y66Gonadallsteroids have differential effects in the hypothalamic & pituitary & adrenal & >axis and immune function in male and female rats!  
Neuroscience4BatesCollege>kastkcontact: graduate school4Northwestern University>k
- MacLaury k=Y66Stress related Fos expression in the medial preoptic area and paraventricular nucleus in males rats under different sex hormone replacement regimens!  
Neuroscience4BatesCollege>kastkcontact: graduate school4k University of Vermont>k
- Sallinen k=Y66Inhibitory effects of androgens in the medial preoptic area on corticosterone release in response to stress in rats!  
Neuroscience4BatesCollege>k= 4k ssistant Prof U of Michigan>k
- Linkroumk k=Y66Sex differences in object recognition and spatial recognition tasks in rats under different sex hormone replacement regimens!  
Neuroscience4BatesCollege>kastkcontact: graduate school in Public Policy4University of Maryland>k
- Fisher (2000) Cortisol, executive function, and attention deficit disorder!  
Neuroscience4BatesCollege>k
- Miller, (2000) androgen mediated effects of lesions of the lateral BNST on stress induced corticosterone release in rats!  
=Neuroscience4BatesCollege>kastkcontact: completed medical school>k
- Lang (2000) Neuroprotective effects of testosterone in long term adrenalectomized rats!  
Neuroscience4BatesCollege>k
- Teillon (2000) Menstrual cycle and gender differences in spatial performance: association with salivary cortisol levels!  
=Neuroscience4BatesCollege>kastkcontact: in graduate school4neuroscience4Fufts University>k
- Scott & (2001) Lesions of the anterior/lateral BNST and anxiety in female rats!  
Neuroscience4BatesCollege>kastkcontact: lawyer4corporatel practice of Paul Hastings in New York>!kk
- Cutler (2001) Lesions of the anterior/lateral BNST and androgens and anxiety in female rats!  
Neuroscience4BatesCollege: currently a Psychiatrist>k
- Gottlieb (2002) Mechanisms of androgen action on spatial performance in rats!  
Neuroscience4BatesCollege>k= link Epidemiology4working at Univ of Wisconsin>k
- Moser (2002) Chronic stress, estrogen, and spatial memory in male and female rats!  
Neuroscience4BatesCollege>kastkcontact: graduate student4Harvard Public Health>k
- Strahle (2002) Neurogenesis in the hippocampus of androgen treated rats!  
Neuroscience4Biochemistry4BatesCollege>k =now a - 7assistant prof Neurology>k
- Luciak (2002) Recognition of whole versus part faces, objects and words: Hemispheric asymmetries!  
Psychology4Bates College>k= 4Scientist at optimal Human Centered Engineering>kk
- Junk (2002) Meditation and cognitive performance!  
Neuroscience4BatesCollege>k
- Waters (2003) Bax and Bcl2 expression after chronic stress in males and females!  
Biochemistry4BatesCollege>k =currently teaching high school in Maine>k
- Shaughnessy (2003) Sexual behaviour in females treated perinatally with the anti androgen flutamide!  
Neuroscience4k Bates College>k currently in graduate school4psychology4Boston University>k
- Currie (2003) Spatial performance in males treated perinatally with the anti androgen flutamide!  
Psychology4Bates College>k currently in nursing school4Univ Southern Maine>k

- k  
Tjepkemaĳ (2003) Chronic stress 4 testosterone 4 and spatial memory in male rats! k Neuroscience 4 Bates College > k  
student in University of Minnesota College of Veterinary Medicine > k
- k  
Robartsĳ (2004) Adolescent stress and sensitization to nicotine and amphetamine in adulthood! k Neuroscience 4 Bates College > k  
contact in graduate school 4 biology 4 Ohio State > k
- k  
Kopeikinaĳ (2004) Adolescent stress and sensitization to nicotine and amphetamine in adulthood! k Neuroscience 4 Bates College > k  
contact in Dept! of Biochemistry 4 Boston Univ! School of Medicine! k
- k  
Lewisĳ (2004) Executive function and cortisol levels in response to stress! k Neuroscience 4 Bates College > k  
Physician's assistant > k
- k  
Kercsmarĳ (2004) Male signaling, honesty 4 female mate choice and maternal contribution to offspring in a swordtail fish  
*Xiphohorus helleri* *IPisces Poeciliidae* 2 k Biology 4 Bates College > k
- k  
Mitrusĳ (2004) Influence of high fat diet on memory! k Neuroscience 4 Bates College > k  
currently in graduate school 4 University of Arizona > k
- k  
Gleasonĳ (2004) Fos responses to nicotine in pubertally stressed female rats! k Neuroscience 4 Bates College > k  
contact: graduate school 4 University of Wisconsin 7 post & doc 4 Fuft Univ > k
- k  
Marstersĳ (2004) Fos responses to nicotine in pubertally stressed female rats! k Neuroscience 4 Bates College > k  
contact: University of Massachusetts Medical School 4 howlanĳ - > k
- k  
Melanieĳ (2006) Inconsistent condom use: inconsistent problem among adolescents! k Psychology 4 Brock University > k
- k  
Grayĳ (2006) Illicit use of prescription drugs across three populations! k Psychology 4 Brock University > k
- k  
Secenĳ (2006) The effects of age 4 type of stress 4 and stress history on 4 K). Levels of the paraventricular nucleus of the  
hypothalamus of adolescent rats! k Neuroscience 4 Brock University > k  
contact: graduate school 4 psychology UBC > k
- k  
Merrickĳ (2006) Social instability following restraint stress causes an increase in 4 K). In the central nucleus of the  
amygdala of male 4 but not female 4 adolescents! k Neuroscience 4 Brock University > k  
contact: Naturopathic Doctor > k
- k  
Ibrahimĳ. (2006) Nicotine induced Fos expression in the medial prefrontal cortex and paraventricular nucleus in male and  
female rats stressed during adolescence! k Neuroscience 4 Brock University > k  
contact: medical school 4 Kenya > k
- k  
Waltersĳ (2007) Does chronic stress in adolescence alter 0 + localizations of amphetamine in adolescent adult male and  
female rats? k Psychology 4 Brock University > k  
Beginning graduate school fall 2008, psychology 4 Laurier U > k
- k  
Wiltonĳ (2007) Social stress in adolescence leads to increased depressive like behaviour in the forced swim test and altered  
4 k function in female rats! k Psychology 4 Brock University > k  
working in mental health field > k
- k  
Smithĳ (2007) Enduring changes in behaviour in the elevated test maze after adolescent social stress: More anxiety in males  
and greater risk taking in females! k Neuroscience 4 Brock University > k  
contact: graduate school UBC > k
- k  
Harrisonĳ (2007) Effects of social stress in adolescence on behaviour in the forced swim test in male rats! k Neuroscience 4  
Brock University > k  
contact: medical school 4 Southwest College of Naturopathic Medicine > k
- k  
Tourontzaskĳ (2007) Potentiated corticosterone release to a heterotypic stressor after chronic stress compared to after acute  
stress in adolescent male rats! k Neuroscience 4 Brock University > k  
contact: graduate school 4 Pharmacy 4 Univ of Waterloo > k
- k  
Guadagnoĳ (2007) Effects of different levels of corticosterone replacement after adrenalectomy on prefrontal cortical  
cognitive function in male rats! k Neuroscience 4 Brock University > k  
contact: graduate school 4 King's College London 4 K > k
- k

- Mills (2007) Locomotor sensitization to amphetamine after chronic social stress in adolescence! k Biology 4 Brock University> k last contact: Teacher's College University of Buffalo 4 High School Teacher in Niagara Falls> k
- Thur (2008) Tyrosine hydroxylase immunoreactivity after chronic social stress in adolescent rats! k Neuroscience 4 Brock University> k last contact: ) lat University of Sheffield 4 k K> k
- Styles (2008) Is estradiol's enhancement of the locomotor & activating effects of amphetamine mediated by corticosterone in rats? k Neuroscience 4 Brock University> k last contact: graduate school 4 Epidemiology 4 McGill University> k
- Thomas (2008) The effect of chronic social stress in adolescence on hippocampal neurogenesis in rats! k Neuroscience 4 Brock University> k last contact: Environmental Consultant 4 RPGI> k
- Loewi BJ (2008) Sex & specific and stress & specific effects in adolescence on object recognition and spatial location memory in rats! k Neuroscience 4 Brock University 7 completed MSc Biology 4 last contact: graduate school 4 Health Sciences 4 McMaster University> k
- Komadoski (2008) The impact of social stress in adolescence on dominance and reproductive behaviour in rats! k Neuroscience 4 Brock University> k last contact: completed MSc 4 Brock 4 Biology fall 2008)
- Konrmas (2008) The phalangeal phenomenon of the % :4- rati in people and other animals! k What is it measuring and what does it predict? k Psychology 4 Brock University> k
- Dyck (2008) Detection of neurogenesis after adolescent social stress in rats using the endogenous marker KiFI! k Neuroscience 4 Brock University> k last contact: completed BSc Nursing> k
- Kelly (2009) Comparison of locomotor activity in response to acute and repeated treatments of amphetamine in adult and adolescent rats! k Psychology 4 Brock University> k last contact: graduate school 4 Psychology 4 Waterloo University> k
- Gilchrist (2009) Elucidating the relationship between testosterone and various forms of aggressive behaviour! k Psychology 4 Brock University> k last contact: graduate school 4 Health Sciences 4 Brock> k
- Sheridan (2010) (Psychology 4 Brock University> k Chronic social stress in male rats leads to selective deficits in spatial location memory! k
- Geniole (2010) (Psychology 4 Brock University> k Social rejection and its influence on testosterone and aggressive behaviour! k =currently in graduate school 4 Brock> k
- Morrissey (2010) (Psychology 4 Brock University> k Enduring deficits in contextual and cued conditioning after chronic social instability in adolescence in male rats! k last contact: graduate school 4 k of k > k
- Mychaskiw (2010) (Biology 4 Brock University> k gender differences in amphetamine-induced CREB phosphorylation! k last contact: School of Pharmacy> k
- Green (2011) (Psychology 4 Brock University> k Stress in adolescence and adult sexual behaviour in rats! k currently in graduate school 4 Brock> k
- Keyes (2012) (Psychology 4 Brock University> k Men and Women Differ in Motivation to Compete Aggressively! k last contact: MBA 4 Brock> k
- Daniel Mongillo (2012) (Neuroscience 4 Brock University> k Social instability in adolescence 4 not in adulthood 4 leads to lasting differences in contextual modulation of extinction of cued fear conditioning in female rats! k last contact: Grad school 4 Psychology 4 k of k Toronto> k
- Brittany Barnes (2012) (Neuroscience 4 Brock University> k The Effects of Social Stress in Adolescence on Social Interactions in Adulthood in Male Rats! k last contact: Grad school 4 Psychology 4 Laurier Univ> k
- Chris Luckhart (2012) (Neuroscience 4 Brock University> k Fos expression in the medial preoptic area after sexual behaviour in adolescent & stressed rats! k last contact: Grad school 4 Univ Ottawa> k

- Anderson B (2013) (Neuroscience4BrockUniversity>Effects of adolescent Stress on Fear Renewal in Adult Female Rats!k=k
- Simonek (2013) (Neuroscience4BrockUniversity>k ~ lexpression after fear conditioning in adolescent stressed adult female rats!kgraduate school4Brock>k
- Elliot B (2013) (Neuroscience4BrockUniversity>Effects of adolescent Stress on Contextual and Cued Fear Conditioning in Adult Female Rats!kGrad school4Univ of Toronto>k
- Vrysen B (2013) (Psychology4BrockUniversity>Possible Gaydar Mechanisms: Facial Predictors of Sexual Orientation k
- Cummingk (2014) (Neuroscience4BrockUniversity>k adolescent social stress affects social dominance behaviour in adult male Long Evans rats!kGrad school4McGillU>k
- Thompsonk (2014) (Neuroscience4BrockUniversity>The Effects of Social Stress and Dominance Status on Female Mate Preference applying to graduate programs>k
- Cunninghamk (2014) (Psychology4BrockUniversity>Sex differences in aggressive behaviour: the influence of provocation and perceived threat type!kapplying to graduate programs>k
- Malivoire B (2015) (Biology3kPsychology4BrockUniversity>The role of the endocannabinoid system in unconditioned and conditioned fear in female rats!kgraduate program4Ryerson University>k
- McLarenk (2015) The effects of testosterone on stress induced activity measuring Fos expression in the paraventricular nucleus of the hypothalamus!kgraduate school4UCSD>k
- MacDonellk (2015) (Psychology4BrockUniversity>The face of aggression: How the facial width to height ratio affects offers in the Ultimatum Game!kgraduate program4BrockUniversity>k
- Baumbachk (2017) (Psychology4BrockUniversity>Exploring the relationship between chronic adolescent stress and anxiety using predictive analyses in a rodent model!kgraduate program4BrockUniversity>k
- Flyntk (2017) (Neuroscience4BrockUniversity>Neural activations associated with social interactions in adolescent stressed rats!k
- Medlandk (2017) (Neuroscience4BrockUniversity>Social instability stress increases adolescent ethanol intake in rats!k
- Leerentveldk (2017) (Neuroscience4BrockUniversity>Effects of CB1 receptor antagonism on adolescent brain development in rats!k
- Cattlek (2017) (Neuroscience4BrockUniversity>Investigating the effects of adolescent stress on synaptic plasticity measures and if the effects are exacerbated by CB1 blockade!k
- McPhersonk (2018) (Neuroscience4BrockUniversity>The Effect of Repeated CB1 Receptor Blockade in Adolescent Social Interactions in Female Rats!kaccelerated nursing degree>k
- Eltahir k (2018) (Neuroscience4BrockUniversity>The Effects of Oxytocin Receptor Binding Antagonism on Corticosterone Release and the Social Behaviours of Socially Stressed Adolescent Male Rats!kGraduate program4WO4Brock>k
- Shaverk (2018) (Neuroscience4BrockUniversity>Immediate and long term effects of adolescent social stress on corticosterone response to ! k rats!kGraduate program4U of Ottawa>k
- Limk (2019) (Neuroscience4BrockUniversity>Social instability stress influences the social and sucrose reward value at low sucrose concentrations in female rats!k
- Patelk (2020) (Psychology4BrockUniversity>Sex specific effects of adolescent Social Instability Stress in Wistar Rats on anxiety Like Behaviour!kgraduate program4BrockUniversity>k
- Murrayk (2020) (Neuroscience4BrockUniversity>Social Memory in Adolescent Male and Female Wistar Rats Following Social Instability Stress!k

k  
 Syadk (2020) (Neuroscience4BrockUniversity>SocialInstability&StressInfluencesSocialDiscountingInAdolescent&AdultMale&FemaleRatsSoon&LongAfterTheStressExposure!kMastersofPublicHealth4BrockUniversity>!k

k  
 Campanellaĳ (2020) (Biology4BrockUniversity>EffectsOfSocialInstability&StressDuring AdolescenceOnGene ExpressionInTheHippocampusOfMaleWistarRats!k

k  
**Research training of undergraduates (other than primary thesis supervision) at Brock University #6778wsk**

Summer 2005:

k Njeriĳbrahim4fundedthroughk!&° periencePlus<International&lastcontact: inMedicalSchool4Kenya>k

k NickVespirini4fundedthroughBrock&USRA!&lastcontact: ingraduateschool4Biology4BrockU!k

k JohnSecen4fundedthroughBrock&USRA!&lastcontact: completedmastersinPsychology4UBC4howk\*/ latUWO!k

k myĳDidemus4kummer&volunteerfromYorkUniversity4lastcontact: ingraduateschool4psychology4Columbia  
 k k University!k

k lexĳHatry4fundedthroughBrock&USRA!&lastcontact: completedĳ 4BehaviouralNeuroscience4BrockU!k

k GabeĳTungol4visitingstudentfromUSA&fundedthrough44( !&lastcontact: MastersofPublicHealth4Fuftsk  
 k University!k

k KateĳIlen4fundedthroughk!&° ĳUSRA!&lastcontact: medicalschool4NorthernOntarioMedicalSchool!k

Summer 2006:

k CarloĳSmith4fundedthroughBrock&USRA!&lastcontact: Graduateschool4Psychology4UBC!k

k myĳStyles4fundedthroughk!&° 8DGĳgrant!&lastcontact: GradSchool4Fall 2009 Epidemiology4McGill  
 k Universityk

k FeatherĳNixon4undergraduate&volunteer!&Currently&completingĳBA!k

k JennaĳGilchrist4undergraduate&volunteer!&lastcontact: ingraduateschool4HealthSciences4BrockUniversity!k

Summer 2007:

k CarloĳSmith4fundedthroughk!&° ĳUSRA!&lastcontact: Graduateschool4Psychology4UBC!k

k myĳStyles4fundedthroughBrock&USRA!&lastcontact: GradSchool4Epidemiology4McGillUniversity!k

k KatieĳWalters4fundedthroughk!&° 8DGĳgrant!&lastcontact: graduateschool&fall 2008, psychology4LaurierU!k

k Meaghanĳilkins4undergraduate&volunteer4lastcontact: Graduateschool&fall 2008, psychology4QueensU!k

Summer 2008:

k JoshuaĳDyck4fundedthroughk!&° ĳUSRA!&NursingSchool!k

k FeatherĳNixon4fundedthroughk!&° ĳUSRA!&Currently&completingĳBAk

Summer 2009:

k FeatherĳNixon4fundedthroughk!&° ĳUSRA!&Currently&completingĳBAk

k MarkĳMorrissey4fundedthroughk!&° landk!4)° !&GradSchool4Psychology4UnivofToronto 2010k

Fall 2009:

k JenniferĳFlynn4Neuroscience&undergraduate&co&op&student!&Graduateschool4HumboldtUniversity!k

Summer 2010:

k FeatherĳNixon4fundedthroughk!&° ĳUSRA!&CompletedMastersofEducation4BrockUniversity7Professor4k  
 k NiagaraCollege!k

Fall 2010:

k QueenieĳLi4HighSchool&student&mentorship&program!&Lastcontact: undergraduate&lat&SyracuseUniversity!k

Winter 2011:

k mandaĳKeyes4undergraduate&volunteer!k

k ColinĳMeinke4undergraduate&volunteer

Summer 2011:

k StaceyĳMacAuley4independent&study&coursek

k JonathanĳSimone4undergraduate&volunteer

Fall 2011:

k AnĳLy4undergraduate&research&assistantk

k JonathanĳSimone4undergraduate&research&assistantk

k JennĳMcPherson4HighSchool&student&mentorship&programk

Winter 2012:

k AnĳLy4undergraduate&research&assistantk

k JonathanĳSimone4undergraduate&research&assistantk

k ColinĳMeinke4undergraduate&independent&study&studentk

k MarkĳCumming4undergraduate&volunteer

k MadisonĳThompson4undergraduate&volunteer

Summer 2012:

k Jonathan Simone 4 Undergraduate research assistant k  
 k Carla Sousa 4 Undergraduate independent study student k  
 Summer 2013:  
 k Mark Cumming 4 USRA student k  
 Fall & Winter 2013-2014:  
 k Klaus Manriques 4 High School student mentorship program k  
 k Baile Malivoire 4 Undergraduate volunteer k  
 k Michael McLaren 4 Undergraduate volunteer k  
 Summer 2014  
 k Baile Malivoire 4 USRA student k  
 k Beatriz Zeintun de Souza Toledo 4 Science without Borders Research Internship k  
 k Joacy David Pedro 4 Science without Borders Research Internship k  
 k Andre de Melo 4 Science without Borders Research Internship k  
 k Roseanne Ferreira 4 Science without Borders Research Internship k  
 Fall & Winter 2014-2015:  
 k Heather Robertson 4 High School student mentorship program k  
 k Larissa Mazzarella 4 Undergraduate independent research course k  
 k Hadil Nour 4 Undergraduate volunteer k  
 k Joo8 Lee 4 Undergraduate volunteer k  
 k Insley MacMillan 4 Undergraduate independent research course k  
 k Jonah Mondloch 4 Match of Minds Undergraduate research assistant k  
 k Jennet Baumbach 4 Undergraduate volunteer k  
 Summer 2015:  
 k Baile Malivoire 4 USRA student k  
 k Jonah Mondloch 4 Match of Minds Undergraduate research assistant k  
 k Jennet Baumbach 4 Match of Minds Undergraduate research assistant k  
 k Helen da Veiga Koehler 4 Science without Borders Research Internship k  
 k Tiago Pedro 4 Science without Borders Research Internship k  
 Fall & Winter 2015-2016:  
 k Madeleine Shaver 4 Undergraduate volunteer k  
 k Natalie Kit 4 Undergraduate volunteer k  
 k Jaqueline Leerentveld 4 Undergraduate volunteer k  
 k Jennet Baumbach 4 Undergraduate independent research course k  
 k Emma Patterson 8 Stallwood 4 Undergraduate independent research course k  
 Fall & Winter 2016-2017:  
 k Madeleine Shaver 4 Undergraduate volunteer k  
 k kiff Eltahir 4 Undergraduate volunteer k  
 k Jenn McPherson 4 Undergraduate volunteer k  
 k Emma Patterson 8 Stallwood 4 Undergraduate independent research course k  
 k Kelsey Fish 4 Undergraduate independent research course k  
 Summer 2017:  
 k Madeleine Shaver 4 USRA student k  
 k Paula Lima 4 visiting - student 4 Brazil k  
 Fall & Winter 2017-2018:  
 k Nour Najem 4 High School Mentorship Student k  
 k Smit Patel 4 Undergraduate volunteer k  
 k Francesc modio 4 Undergraduate volunteer k  
 Summer 2018:  
 k Smit Patel 4 USRA student k  
 k Francesc modio 4 Undergraduate independent research course k  
 k Shiwani Sagar 4 Undergraduate independent research course k  
 k Shealin Murray 4 Undergraduate volunteer k  
 Fall & Winter 2018-2019:  
 k Smit Patel 4 Undergraduate independent research course k  
 k Francesc modio 4 Undergraduate independent research course k  
 k Shealin Murray 4 Undergraduate independent research course k  
 k Mick Powers 4 Undergraduate volunteer k  
 Summer 2019:  
 k Smit Patel 4 USRA student k

Fall 2019: Visiting - student k seli Surraka 4 Mannheim University

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## CURRICULUM VITAE

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@B&lt;CU6 =MC5?: MNIC; C?CCk

k @, =, NC\* =Sc.kTrentUniversity, Peterborough, Ontario, May, k^ k

k HonoursThesisk"EffectsofenvironmentalcontextualvariableslearningKorsakoffk

k amnesics" k

HighestGraduateDegree:k

k Ph.D.kPsychologykMcMasterUniversity, Hamilton, Ontario, May, k^)\* k

k DoctoralThesisk"Thekdissociationbetweenkacitlandreflectivek easureslofk emorykaskk

k investigatedkwithkamnesicpatientslandknormalpopulations" k

ProfessionalRegistration:k

k O.B.E.P.RegistrationkOntarioBoardofExaminerskPsychology, Dec.k^/ k

k Licensed/Certifiedkforneuropsychology, rehabilitation, counselingandeducationkforbothk

k AdultskandkYouth/Childrenk

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2.w.9324 /"w/4t/: "t/8: 49: 3w w9034" k

H.S.S.H.D.kgradek78kOntarioScholar, k^9 k

EntrancescholarshipkTrentUniversity, k^9 k

Academicstandardscholarship, kTrentUniversity, k^: k1979k

Entrancescholarshipkgraduatekschool, kMcMasterUniversity, k^ k

Graduatekschoolkacademicscholarship, kMcMasterUniversity, k1980-1984k

&lt;5-2 k(graduate)kscholarshipkTrentUniversity, k1979-1983k

Universitykpost-doctoralfellowship, kUniversityofkToronto, k1983-1985k

CollegeofkPsychologistofkOntariokRegisteredMemberkforAutonomouskPractice, kCertificatek

k Registrationk2516, k^/ k"on"oin"

CanadiankInstituteofkHealthkResearchkCanadak9; kHealthkResearcher: kDiscoverieskforKifekkk

k acknowledgement.k2017.k

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Post-doctoralFellowk(AssistantProfessorkRank)kPsychologykDepartment, kUniversityofkToronto, k

k Toronto, kOntario, k1983-85k

AssistantkProfessorkDepartmentofkPsychology, kMountkAllisonkUniversity, kSackville, kNewk

k Brunswick, k1985-88.k

AssistantkProfessorkDepartmentofkPsychology, kBrockkUniversity, kSt.kCatharines, kOntario, k^)) k

k -1990.k

Co-ChairkCentreforkNeuroscienceslandkNeurosciencekDegreekProgram, kFacultyofk

k MathematicslandkScience, kBrockkUniversity, kSt.kCatharines, kOntario, k1998-2000.k

AssociatekProfessorkDepartmentofkPsychology, kBrockkUniversity, kSt.kCatharines, kOntario, k^; k

k -"on"oin".k

AdjunctkProfessorkPsychologykDept., kOntario Institute for Studies in Education,

University of Toronto, Toronto, Ontario, 1996 – 2005.

Adjunct Professor - Community Rehabilitation Studies, University of Calgary,

Calgary, Ontario, 1999 – 2004.

Chair, Department of Psychology, Faculty of Social Sciences, Brock University, St. Catharines, Ontario, 2006.

Associate (Past) Chair, Department of Psychology, Brock University, St. Catharines, Ontario, 2007.

Adjunct Associate Professor, Michael G. DeGroot School of Medicine, instructor for the Functional Neuroanatomy Medical Foundations course, 2017.

Director, Centre for Neurosciences and Neuroscience Degree Program, Faculty of Mathematics and Science, Brock University, St. Catharines, Ontario, 2017.

Associate Professor, Life Span Development Research Institute (research institute with both academic and community partners), Brock University, St. Catharines, Ontario, 2017.

Adjunct Professor, Psychology Dept., Medaille College, School of Adult and Graduate Education (SAGE), Buffalo, New York, 2017.

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Internships in neuropsychology/psychology (paediatrics and adults) at Chedoke Hospital, Hamilton, Ontario, 1982 (paediatrics); Victoria Hospital, Halifax, Nova Scotia, 1985-86 (paediatrics and adults); Moncton General Hospital, Moncton, New Brunswick, 1986-87 (adults); Shaver Hospital, St. Catharines, Ontario, 1990-1992 (adults).

Consulting Psychologist, Alzheimer's Society Niagara Region, Ontario, 1990-1996.

Consulting Psychologist in neuropsychology, psychology, rehabilitation, Acquired Brain Injury Rehabilitation residential and outreach program, Ministry of Health, St. Catharines, Ontario, 1992-1998.

Consulting Psychologist, The Shaver Hospital Quality Council, St. Catharines, Ontario, 1993-1996.

Consulting Psychologist in neuropsychology, psychology, rehabilitation, Ontario Brain Injury Association of Ontario, 1993-2005.

Consulting Psychologist, Bethlehem Place, Center for Independent Living, 1996.

Consulting Psychologist, Ontario Independent Living Program, 1998.

Consulting Psychologist, Distress Centre of Niagara (Suicide Prevention, Distress, Trauma), 2005.

Consulting Psychologist in neuropsychology, psychology, rehabilitation, Acquired Brain Injury Rehabilitation residential and outreach program, Anagram, NOTL, Ontario, 1993-2005.

Co-Chair, Community of Practice Research to Practice Network, Children and Youth with ABI, 2009-2011.

Provincial Director, Ontario Brain Injury Community of Practice, Paediatric Division, 2012.

Consulting Psychologist in neuropsychology, psychology, Bethesda/Twin Oaks Clinical Services, Thorold, Ontario, 2013.

Consulting and support Psychologist in neuropsychology and psychology, Public Health Youth Net Program, addressing mental health in youth/students of the Niagara Region Secondary Schools, 2016.

Examiner/Item-Writer for the Examination for Professional Practice in Psychology (EPPP) licensing board examinations in Canada and the United States through the Association of State and Provincial Psychology Boards (ASPPB) (invited and accepted for position), 2013-2017.

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Nominated to Canadian Academy of Psychologists in Disability Assessments; Support and Consulting Psychologist in neuropsychology and psychology; Psychiatric Mental Health Division, Niagara Health Systems, St. Catharines General Hospital, ON; *on°oin°*.

Member of Canadian Psychological Association; *on°oin°*

Member of Ontario Psychological Association; *on°oin°*

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4. *2020*: 5/8: 4

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(*2023*): 5/8: 4

k Journal Publications (published abstracts): 9K^9K7 (in review/submitted) k

k Published Monographs: 6\*

k Published Books: 9

k Refereed Papers Presented (not published abstract): 9\*

k Invited Paper Presentations: 6)9

k International Contributions: 6\*)

#### 5. *2006*: 5/8: 4

Clinical assessments & treatment of children, youth, adults in Neuropsychology and Psychology, including medical and/or medical legal, psycho-educational, rehabilitation reports, recommendations for treatment, delivery of treatment; from pre-school age through adulthood/elderly, with specialized attention to neurologically compromised individuals (e.g., developmental disorders, brain injury, dementia), primarily in Ontario, but also Nova Scotia, PEI, New Brunswick, Manitoba, Alberta, New York, Michigan, New Zealand, (supervised), (autonomous practice license) College of Psychologists of Ontario #2516.

Consulting Psychologist in neuropsychology, psychology, rehabilitation; Instructor of CARP Accredited and Brock University Continuing Education Courses (Introductory; Neuropsychology; Advanced Topics) Ontario Brain Injury Association of Ontario; *on°oin°*.

Consulting Psychologist in neuropsychology, psychology, rehabilitation; Acquired Brain Injury Rehabilitation residential and outreach program, Anagram, NOTL, Ontario; *on°oin°*. Organized Clinical Workshops for hosted professionals (SLP, Neuropsychologist, RN/SW, OT, Senior Educator) from STAPED (paediatric division for school boards and hospital supports for all of Norway), /B co-ordinated with Can Child Services through Hamilton Health Sciences, Ontario Neurotrauma Foundation, paediatric division, Hamilton (Catholic) Elementary and Secondary Schools.

Co-Chair of Community of Practice & Research to Practice Network for Children and Youth with ABI, 2009-2011.

Provincial Director of Ontario Brain Injury Community of Practice, Paediatric Division; *on°oin°* 2012.

Consulting Psychologist in neuropsychology, psychology, rehabilitation; Pathstones Mental Health for children; *on°oin°*.

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#### 6. *2005*: 5/8: 49: 3 *2006*: 0/4 49: "24"

Chair of Psychology Department; 7

Sabbaticals: July 1992-June 1997; July 1998-June 2000; July 2000-Sept 2001; Feb 2001-May 2007; July 2007-June 2014; Jan 2014-June 2015; Jan 2015-June 2019  
 Parental Leave: October 2000-Jan 2001  
 Director/Chair of Neuroscience Degree Program: December 2011-June 2012  
 Medical Leave: October 2013-January 2014  
 Director/Chair of Neuroscience Degree Program: January 2020-*in progress* (exp. December 2020)

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7. **U: 320\$093u9t2vC8u0424w 9u\$1t'w**

U: 320\$093u9t2vC8u0424w 9u\$1t'w

Introductory Psychology for Science Majors 6/8  
 Design & Analysis 6/7  
 Psychological Research 6/9  
 Introduction to Behavioural Neuroscience 6/8  
 Behavioural Neuroscience 6/7; 8  
 Behavioural Neuroscience 6/9  
 Advanced Topics in Behavioural Neuroscience 6/9  
 Neuropsychology 6/8  
 Advanced Topics in Memory 6/9  
 Special Topics in Psychology, Independent Studies 6/7\*

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Behavioural Neuroscience 6/9  
 Focus Area Research Seminar 6/7  
 Behavioural Neuroscience Techniques: Neuropsychological, Psychological Assessment 6/9  
 Lifespan Development (Special Topics) & Diagnostic Issues 6/8  
 Functional Neuroanatomy, McMaster Medical School 6/8

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k Honours Psychology: 6/7

k Honours Neuroscience: 6/8

k Masters Graduate: 6/8

k Ph.D. Graduate: 6/9

k Supervision of Practice: 6/8

k

k **C844 /tt22w 2452 08#w 12424'w**

k Honours Neuroscience: 6/8

k Masters Graduate: 6/8

k Ph.D. Graduate: 6/8

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k " 2v/2w20-? xt20:9 6w x94 /: 20'w

k Graduate students: 6/8

k Scholarships: 6/8

k Program (6/7)

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8. **w 24290"1w@09: t4'w**

" 24290"1@09: t 1 8620; \$10,000):  
 Ontario Youth Mental Health Grant (partner) received;  
 Holland Bloorview Kids Rehabilitation Hospital Grant, Co-Investigator (received 2016-  
 /;)8( 16~&  
 Ontario Neurotrauma Foundation, Principal Investigator: 16/117&  
 Réseau Provincial de Recherche en Adaption-Réadaption, Co-Investigator: 16~&  
 Social Sciences and Humanities Research Council, Primary Investigator: 167&  
 Natural Sciences and Engineering Research Council, Primary Investigator: 167&  
 National Research Council, Primary Investigator: 167&  
 Provincial Centre of Excellence/Mental Health, Primary Investigator: 16/8k  
 Provincial Experience Works, Primary Investigator: 16~911/8k  
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### 9. International Contributions: (47)

Clinical: 8k

Research: 7\*8v

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**CURRICULUM VITAE**  
**Dawn Good, Ph.D., M.Psych.**

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**1. Key Research Contributions over the Last Ten Years:**

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**Refereed Contributions:**

Good, D., Bennett, S., & Kumpf, J. (2010). (Japanese version) *Journal of Japanese Psychology* (40(1)), 1-10. (Japanese medical book publisher/editor: Richi Sasaki).

Good, D., Bennett, S., & Kumpf, J. (2011). *Journal of Psychology* (147(1)), 1-10. Hamilton, Canada: Zingal Pub.

van Noordt, S., & Good, D. (2011). Mild head injury and sympathetic arousal: Investigating relationships with decision-making and neuropsychological performance in university students. *Journal of Psychology*, 147(7), 707-716.

MacDougall, J., Good, D., Rumney, P. (2012). Community and school reintegration for children and youth with ABI. *Journal of the Ontario Association of Developmental Disabilities Research Special Interest Group (OADD-RSIG)*, Kingston, ON. 3(3) 31-45.

Baker, J. M., & Good, D. (2014). Physiological emotional underarousal in individuals with mild head injury. *Journal of Psychology*, 148(6), 61-65. doi: 10.3109/02699052.2013.857787

Good, D., Bennett, S., & Kumpf, J. (2016). (Norwegian version) *Journal of Psychology* (152(1)), 1-10. Gjøvik, Norway. (Norwegian medical book publisher/editor: Håvard Sørli).

van Noordt, S., Chiappetta, K., & Good, D. (2017). Examining relationships between oral judgement and mild head injury in university students. *Journal of Psychology*, 151(7), 544-559. <http://www.tandfonline.com/doi/full/10.1080/17470919.2016.1195773>

Krzeczkowski, J., Robb, S., & Good, D. (2017). Trait mindfulness is associated with lower post-injury psychological symptom following a mild head injury. *Journal of Psychology*, 151(10), 1007-1017. doi: 10.1007/s12671-017-0731-0.

Robb, S., Barry, N., & Good, D. (in press). Differentiating acquired brain injury and learning disabilities: A review of the neuropsychological literature. *Journal of Psychology*, 152(3), 31-45.

Krzeczkowski, J., & Good, D. (in press). Identifying a non-pharmaceutical treatment for students living with concussion and mild injuries to the brain. *Journal of Psychology*, 152(3), 31-45.

Gallant, C., Barry, N., & Good, D. (2017). Physiological arousal in athletes following repeated subconcussive impact exposure. *Journal of Psychology*, 151(3), 361-368. doi: 10.1007/s12144-018-9780-3

Alcock, B., Gallant, C., & Good, D. (2018). The relationship between concussion and alcohol use among university athletes. *Journal of Psychology*, 152(1), 1-10. doi: 10.1016/j.abrep.2018.02.001

Gallant, C., & Good, D. (2018). Physiological underarousal as a mechanism of aggressive behavior in university athletes with a history of concussion. *Journal of Psychology*, 152(1), 1-10. doi: 10.1002/brb3.1038

Gallant, C., & Good, D. (2019). Examining the 'Reading the Mind in the Eyes Test' as an assessment of subtle differences in affective theory of mind after concussion. *Journal of Psychology*, 153(7), 733-740. doi: 10.1080/13854046.2019.1612946

Gallant, I.C., & Good, D. (2019). Alcohol use and Traumatic Brain Injury: A review of the potential roles of dopaminergic dysfunction and physiological underarousal post-injury. *Journal of Interpersonal Violence, 33*(13), 2373-2390. doi.org/10.1080/23279095.2019.1670181

Gallant, I.C., Bork, P., Carpenter-Cleland, I.C., & Good, D. (2020). Examining the impact of a 2-day Scientific Conference on High School Students' Interest in STEM and Confidence in Attending University. *Journal of Career Assessment, 28*(1), 12-30. doi.org/10.1007/s42330-020-00086-7

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**Refereed Contributions:**

Baker, H., & Good, D. (2010). World Congress on Brain Injury, International Brain Injury Association, Washington, D.C. *Journal of Interpersonal Violence, 25*(4), 733-744.

Dzyundzyak, A., & Good, D. (2010). World Congress on Brain Injury, International Brain Injury Association, Washington, D.C. *Journal of Interpersonal Violence, 25*(4), 733-744.

Van Noordt, S., Chiapetta, K., & Good, D. (2010). World Congress on Brain Injury, International Brain Injury Association, Washington, D.C. *Journal of Interpersonal Violence, 25*(4), 733-744.

Baker, H., & Good, D. (2010). Annual Rotman Research Institute Conference, Baycrest-Berkeley, Toronto, ON. *Journal of Interpersonal Violence, 25*(4), 733-744.

Van Noordt, S., Chiapetta, K., & Good, D. (2010). Annual Rotman Research Institute Conference, Baycrest-Berkeley, Toronto, ON. *Journal of Interpersonal Violence, 25*(4), 733-744.

Dzyundzyak, A., St. Cyr-Baker, H., & Good, D. (2010). Annual Convention of the Canadian Psychological Association, Winnipeg, K. *Journal of Interpersonal Violence, 25*(4), 733-744.

Good, D., & Rumney, P. (2010). Annual Convention of the Canadian Psychological Association, Winnipeg, K. *Journal of Interpersonal Violence, 25*(4), 733-744.

Chiapetta, K., & Good, D. (2010). Annual Convention of the Canadian Psychological Association, Winnipeg, K. *Journal of Interpersonal Violence, 25*(4), 733-744.

Van Noordt, S., & Good, D. (2010). Annual Convention of the Canadian Psychological Association, Winnipeg, K. *Journal of Interpersonal Violence, 25*(4), 733-744.

Williams, J., Sharan, K., & Atkinson, H., & Good, D. (2010). Annual Convention of the Canadian Psychological Association, Winnipeg, K. *Journal of Interpersonal Violence, 25*(4), 733-744.

Johnson, S., & Good, D. (2011). Annual Convention of the Canadian Psychological Association, Toronto, K. *Journal of Interpersonal Violence, 26*(1), 12-30.

; ' % ° % < ( , " ! 3 ' 3 ( , > 23 ' 0 4 \* 5 .

Peck, K., K k ood, k ° k # \$ % # & Affective influences on physiological arousal in persons with and without k # ° k # ° k Annual Convention of the Canadian Psychological Association, k Toronto, k ^ k k ' % ° % < ( , " ! 3 ' 3 ( , > 23 ' 0 4 \* 5 . k

Robb, S., K k ood, k ° k # \$ % # & Decision-making strategies in persons with and without k # ° k # ° k Annual Convention of the Canadian Psychological Association, k Toronto, k ^ k k ' % ° % < ( , " ! 3 ' 3 ( , > 23 ' 0 4 \* 5 .

Baker, J., Dzyundzyak, A., K k ood, k ° k # \$ % # & Individual Differences in Psychosocial and Emotional Functioning in University Students with and without self-reported Mild Head Injury. k : ° k World Congress on Brain Injury, International Brain Injury Association, Edinburgh, k Scotland k + ' ' ° / 0 % , > 23 ' 0 4 \* . 6 .

ood, D., K Rumney, P. k # \$ % # & School-based Factors Contributing to Successful School Reintegration of Children and Youth with Acquired Brain Injury. k : ° k World Congress on Brain Injury, International Brain Injury Association, Edinburgh, Scotland k + ' ' ° / 0 % , > 23 ' 0 4 \* . 6 .

Johnson, S., K k ood, k ° k # \$ % # & Social and Neuropsychological Factors Contributing to Prejudice toward the Acquired Brain Injury (ABI) Community. k : ° k World Congress on Brain Injury, k International Brain Injury Association, Edinburgh, Scotland k + ' ' ° / 0 % , > 23 ' 0 4 \* . 6 . k

Robb, S., K k ood, k ° k # \$ % # & Implicit and Explicit Decision-making Strategies in Persons with and without k # ° k # ° k World Congress on Brain Injury, International Brain Injury Association, k Edinburgh, Scotland k + ' ' ° / 0 % , > 23 ' 0 4 \* . 6 .

Sharan, K., K k ood, k ° k # \$ % # & Individual Differences, Personality and Decision-making in persons with, and without, Mild Head Injury. k : ° k World Congress on Brain Injury, k International Brain Injury Association, Edinburgh, Scotland k + ' ' ° / 0 % , > 23 ' 0 4 \* . 6 .

Wlodarczyk, K., K k ood, k ° k # \$ % # & Educator Evaluation of Academic and Social Competence in Students with Acquired Brain Injury (ABI). k : ° k World Congress on Brain Injury, International Brain Injury Association, Edinburgh, Scotland k + ' ' ° / 0 % , > 23 ' 0 4 \* . 6 . k

Baker, J., K k ood, k ° k # \$ % # & Emotional experience differs as a function of history of self-reported mild head injury. Canadian Psychological Association @ Annual Convention, k Halifax, Nova Scotia k ' % ° % < ( , " ! 3 ' 3 ( , > 23 ' 0 4 \* 53

ood, D., Rumney, P., Bennett, S., McDougall, J., Martinussen, R., DeMatteo, C., k uerriere, k D., Loyst, S., Kumpf, J., K DeCourville, k ° k # \$ % # & Academic and social competence of children and youth with acquired brain injury. Canadian Psychological Association @ Annual Convention, Halifax, Nova Scotia k ' % ° % < ( , " ! 3 ' 3 ( , > 23 ' 0 4 \* 53

Hansen, K., K k ood, k ° k # \$ % # & Social contact affects attitude and prejudice towards persons with traumatic brain injury. Canadian Psychological Association @ Annual Convention, k Halifax, Nova Scotia k ' % ° % < ( , " ! 3 ' 3 ( , > 23 ' 0 4 \* 53 k

Johnson, S., K k ood, k ° k # \$ % # & Familiarity, religiosity and arousal alter attitudes toward acquired brain injury. Canadian Psychological Association @ Annual Convention, k Halifax, Nova Scotia k ; ' % ° % < ( , " ! 3 ' 3 ( , > 23 ' 0 4 \* 53 k

Kerlew, J., K k ood, k ° k # \$ % # & Variations in empathy in subclinical psychopathy and traumatic brain injury. Canadian Psychological Association @ Annual Convention, Halifax, Nova Scotia k ' % ° % < ( , " ! 3 ' 3 ( , > 23 ' 0 4 \* 53 k

Lam, L., Molnar, D., Murphy, K., K k ood, k ° k # \$ % # & Don't think I am perfect now: I would have seen me like that before. Canadian Psychological Association @ Annual Convention, k Halifax, Nova Scotia k ' % ° % < ( , " ! 3 ' 3 ( , > 23 ' 0 4 \* 53 k

- Robb, S., & Good, D. (2013). Use of music to manipulate implicit but not explicit decision-making strategies in persons with and without ABI. Canadian Psychological Association @ Annual Convention, Halifax, Nova Scotia. *Journal of Music Therapy*, 53(3), 23-53.
- Sharan, K., & Good, D. (2013). Empathic differences in individuals with subclinical psychopathy and mild head injury. Canadian Psychological Association @ Annual Convention, Halifax, Nova Scotia. *Journal of Music Therapy*, 53(3), 23-53.
- Wlodarczyk, K., & Good, D., & Bennett, J. (2013). Teacher knowledge and expectations of students with traumatic brain injury. Canadian Psychological Association @ Annual Convention, Halifax, Nova Scotia. *Journal of Music Therapy*, 53(3), 23-53.
- Baker, J. M., Good, D., Rumney, P., McDougall, J., & DeMatteo, C. (2013). Successful scholastic reintegration: Academic, social and behavioural success for students with ABI. Annual North American Brain Injury Society Conference, Miami, Florida. *Journal of Music Therapy*, 53(3), 23-53.
- Robb, S., & Good, D. (2013). The influence of emotionally-arousing stimuli on decision-making in university students with self-reported mild head injury. Annual North American Brain Injury Society Conference, Miami, Florida. *Journal of Music Therapy*, 53(3), 23-53.
- Sharan, K., & Good, D. (2013). Empathic differences in individuals with sub-clinical psychopathy and mild head injury. Annual North American Brain Injury Society Conference, Miami, Florida. *Journal of Music Therapy*, 53(3), 23-53.
- Wlodarczyk, K., & Good, D. (2013). ABI identification in combination with educator knowledge promotes social and academic success in students with ABI. Annual North American Brain Injury Society Conference, Miami, Florida. *Journal of Music Therapy*, 53(3), 23-53.
- Good, D., McDougall, J., Rumney, P., & Bennett, J. (2013). Successful scholastic reintegration for students who have experienced ABI. Annual American Congress of Rehabilitation Medicine Progress in Rehabilitation Conference, Vancouver, BC. *Journal of Music Therapy*, 53(3), 23-53.
- Turbach, H., & Good, D. (2013). Plasticity and recovery in adults with complex and catastrophic brain injuries. Annual Rotman Research Institute Conference, Baycrest, Toronto. *Journal of Music Therapy*, 53(3), 23-53.
- Farouk, N., & Good, D. (2013). The relationship between aggression and mild head injury in university students. Canadian Psychological Association @ Annual Convention, Quebec City, Quebec. *Journal of Music Therapy*, 53(3), 23-53.
- George, A., & Good, D. (2013). Differential levels of physiological arousal and motivation in athletes and non-athletes with Mild Head Injury. Canadian Psychological Association @ Annual Convention, Quebec City, Quebec. *Journal of Music Therapy*, 53(3), 23-53.
- Julien, K., & Good, D. (2013). Executive function and teacher perceptions of academic achievement in individuals with Acquired Brain Injury. Canadian Psychological Association @ Annual Convention, Quebec City, Quebec. *Journal of Music Therapy*, 53(3), 23-53.
- Sharan, K., & Good, D. (2013). The role of attention in emotional processing by individuals with subclinical psychopathy and mild head injury. Canadian Psychological Association @ Annual Convention, Quebec City, Quebec. *Journal of Music Therapy*, 53(3), 23-53.
- Baker, J., & Dzyundzyak, A. (2013). Classification of self-reported history of head

- trauma of university students as predicted by psychosocial, emotional, and physical health indices. *World Congress on Brain Injury, International Brain Injury Association, San Francisco, CA, United States* k+'' %l%%, > 23%4 \* .6 .
- ood, D., Rumney, P., McDougall, J., Bennett, S., et al. *Investigation of factors that influence socioemotional and academic gains in the classroom for students living with the effects of ABI.* *World Congress on Brain Injury, International Brain Injury Association, San Francisco, CA, United States* k+'' %l%%, > 23%4 \* .6 .
- Robb, S., kood, k' # % F *Barriers to social integration: Decision-making strategies and depression in persons with mild and moderate traumatic brain injury.* *World Congress on Brain Injury, International Brain Injury Association, San Francisco, CA, United States* k+'' %l%%, > 23%4 \* .6 .
- Sharan, K., kood, k' # % F *Personality and empathic differences in persons with, and without, Mild Head Injury.* *World Congress on Brain Injury, International Brain Injury Association, San Francisco, CA, United States* k+'' %l%%, > 23%4 \* .6 .
- Turbach, H., kood, k' # % F *Long-term outcome and recovery in adults with complex and catastrophic brain injuries.* *World Congress on Brain Injury, International Brain Injury Association, San Francisco, CA, United States* k+'' %l%%, > 23%4 \* .6 .
- vankNoordt, S., Dzyundzyak, A., Baker, J., Chiapetta, K., DeBono, K., kood, k' # % F *Examining the association between injury severity and neuropsychological and behavioural functioning in self-reported mild head injury.* *World Congress on Brain Injury, International Brain Injury Association, San Francisco, CA, United States* k+'' %l%%, > 23%4 \* .6 .
- Robb, S., Barry, N., kood, k' # % G *From research into practice: A review of the literature and examination of clinical cases series pertaining to the differentiation of acquired brain injury and learning disabilities.* *Annual Convention of the Ontario Association on Developmental Disabilities Research Special Interest Group (OADD-RSIG), St. Catharines, k^° 13%%' 3\*) \*2\*334 \*%&' ) '( &°\*(023%4 \* .9 .*
- Krzczkowski, J., kood, k' # % G *From research into practice: Identifying non-pharmaceutical treatment for students living with concussion and mild injuries to the brain.* *Annual Convention of the Ontario Association on Developmental Disabilities Research Special Interest Group (OADD-RSIG), St. Catharines, k^° 13%%' 3\*) \*2\*334 \*%&' ) '( &°\*(023%4 \* .9 .*
- Baker, J., Dzyundzyak, A., kood, k' # % G *Emotional intelligence as a predictor of socially unacceptable behaviour for persons with self-reported mild head injury.* *Canadian Psychological Association, G:° Annual Convention, Ottawa, Ontario* k ' % ° %< (, '! 3'3(, 0 23%4 \* 56.
- Barry, N., kood, k' # % G *Personality alterations postinjury in athletes with a history of mild head injury.* *Canadian Psychological Association, G:° Annual Convention, Ottawa, Ontario* k ; ' % ° %< (, '! 3'3(, 0 23%4 \* 56.
- Robb, S., kood, k' # % G *Investigating barriers to social reintegration following head injury: Exploring social decision-making and depressive symptomatology.* *Canadian Psychological Association, G:° Annual Convention, Ottawa, Ontario* k ' % ° %< (, '! 3'3(, 0 23%4 \* 56.
- Krzczkowski, J., kood, k' # % G *Motion regulation and depression in athletes with mild head injury.* *Canadian Psychological Association, G:° Annual Convention, Ottawa, Ontario* k ; ' % ° %< (, '! 3'3(, 0 23%4 \* 56.

- Mazzarella, L., Que, J., & Good, K. (2013). The influence of planning liability on decision-making in persons with or without mild head injury. *Canadian Psychological Association's 72<sup>nd</sup> Annual Convention, Ottawa, Ontario*. [k' % ° % < , ' ' 3 ' 3 \( , 0 2 3 ' % \\* 5 6 .](#)
- Baker, J., & Good, K. (2013). Bunted cortisol awakening response of persons with mild head injury and moderate traumatic brain injury relative to persons without a history of head injury. *Annual North American Brain Injury Society Conference, San Antonio, Texas*. [k k 3 % % ' 3 \\* # \\* ' , ' ' % 4 ' # \\* ! ' & ° & & % > 2 3 ' % 4 \\* 3 9](#)
- Barry, N., & Good, K. (2013). Disinhibition and Physical Aggression as a Function of Physiological Arousal After Mild Head Injury. *Annual North American Brain Injury Society Conference, San Antonio, Texas*. [k k 3 % % ' 3 \\* # \\* ' , ' ' % 4 ' # \\* ! ' & ° & & % > 2 3 ' % 4 \\* 3 9](#)
- Krzeczkowski, J., & Good, K. (2013). Understanding Depression in the Context of Persons with Mild Head Injury. *Annual North American Brain Injury Society Conference, San Antonio, Texas*. [k k 3 % % ' 3 \\* # \\* ' , ' ' % 4 ' # \\* ! ' & ° & & % > 2 3 ' % 4 \\* 3 9](#)
- Robb, S., & Good, K. (2013). Investigating depression following mild head injury and moderate traumatic brain injury: Is it different? *Annual North American Brain Injury Society Conference, San Antonio, Texas*. [k k 3 % % ' 3 \\* # \\* ' , ' ' % 4 ' # \\* ! ' & ° & & % > 2 3 ' % 4 \\* 3 9](#)
- Bennett, S., & Good, K. (2013). Working with students with ABI in schools: Why community matters? *2013 & 2014, \*2013 => +3\*01\* \* 0&3%\* %' &3%> 23'4 \* .. k*
- Baker, J., & Good, K. (2013). Emotional functioning and reactivity of university students to emotionally-evocative stimuli as a function of a history of mild head injury. *International Brain Injury Association [IBIA] World Congress on Brain Injury, Den Haag, The Netherlands*. [k + ' ' % 4 ' % , > 2 3 ' % 4 \\* 3 @ k](#)
- Robb, S., & Good, K. (2013). Sympathetic underarousal: A framework for understanding and managing postinjury psychiatric symptoms. *International Brain Injury Association [IBIA] World Congress on Brain Injury, Den Haag, The Netherlands*. [k + ' ' % 4 ' % , > 2 3 ' % 4 \\* 3 @ k](#)
- Barry, N., & Good, K. (2013). Physiological Arousal and Personality Profiles of Mild Head Injury in University Athletes. *International Brain Injury Association [IBIA] World Congress on Brain Injury, Den Haag, The Netherlands*. [k + ' ' % 4 ' % , > 2 3 ' % 4 \\* 3 @](#)
- Baker, J., & Good, K. (2013). Postconcussive symptom report profiles of university students with and without self-reported mild head injury. *NABIS Annual Conference, Tampa, Florida*. [> 1 3 % % ' 3 \\* # \\* ' , ' ' % 4 ' # \\* ! ' & ° & & % > 2 3 ' % 4 \\* 3 4 .](#)
- Robb, S., & Good, K. (2013). Autonomic underarousal following head injury: A framework for understanding and managing postinjury psychiatric symptomatology. *NABIS Annual Conference, Tampa, Florida*. [> 1 3 % % ' 3 \\* # \\* ' , ' ' % 4 ' # \\* ! ' & ° & & % > 2 3 ' % 4 \\* 3 4 .](#)
- Sharan-Watts, K., & Good, K. (2013). Is there evidence of "acquired sociopathy" in mild head injury? *NABIS Annual Conference, Tampa, Florida*. [> 1 3 % % ' 3 \\* # \\* ' , ' ' % 4 ' # \\* ! ' & ° & & % > 2 3 ' % 4 \\* 3 4 .](#)
- Allant, C., & Alcock, B., & Good, K. (2013). Investigating the relationship between subconcussion, cognition and physiological arousal in university students. *NABIS Annual Conference, Tampa, Florida*. [> 1 3 % % ' 3 \\* # \\* ' , ' ' % 4 ' # \\* ! ' & ° & & % > 2 3 ' % 4 \\* 3 4 . k k](#)
- Barry, N., & Good, K. (2013). Investigating the contribution of personality and neurological disruption to postinjury outcomes in athletes with mild head injury. *NABIS Annual Conference, Tampa, Florida*. [> 1 3 % % ' 3 \\* # \\* ' , ' ' % 4 ' # \\* ! ' & ° & & % > 2 3 ' % 4 \\* 3 4 . k](#)
- Alcock, B., & Good, K. (2013). Examining the relationship between dispositional mindfulness and post-concussive symptoms. *Annual Conference of the American Congress of*

Rehabilitation Medicine, Chicago, Ad) ' ' 2\*(3\* <!, ( ' ' ' : \* ' ' ' % # \* ! ' & ' % > 23' % \* @ . k

Barry, N., k k ood, k° k' # \$ % I & The relation of behavioural alterations to severity of injury and physiological underarousal after mild head injury. k @ Annual Conference of the American Congress of Rehabilitation Medicine, Chicago, Ad) ' ' 2\*(3\* <!, ( ' ' ' : \* ' ' ' % # \* ! ' & ' % > 23' % \* @ . k

allant, C., k k ood, k° k' # \$ % I & Investigating the relationship between subconcussion and psychiatric symptoms. k @ Annual Conference of the American Congress of Rehabilitation Medicine, Chicago, Ad) ' ' 2\*(3\* <!, ( ' ' ' : \* ' ' ' % # \* ! ' & ' % > 23' % \* @ . k

Robb, S., k k ood, k° k' # \$ % I & Building a theoretical framework for understanding psychopathology post-head injury: The role of autonomic dysregulation. k @ Annual Conference of the American Congress of Rehabilitation Medicine, Chicago, Ad) ' ' 2\*(3\* <!, ( ' ' ' : \* ' ' ' % # \* ! ' & ' % > 23' % \* @ . k

Turbach, H., k k ood, k° k' # \$ % I & Long-term functional outcomes related to gelatin injury and access to treatment in adults with severe brain injuries. k @ Annual Conference of the American Congress of Rehabilitation Medicine, Chicago, Ad) ' ' 2\*(3\* <!, ( ' ' ' : \* ' ' ' % # \* ! ' & ' % > 23' % \* @ . k

Alcock, B., k k ood, k° k' # \$ % , & Examining the Relationship Between Anxiety Symptoms and Mild Head Injury: Does Dispositional Mindfulness Play a Role? International Brain Injury Association [IBIA] % # World Congress on Brain Injury, New Orleans, Louisiana k + ' ' % / % , > 23' % \* & . k

allant, C., k k ood, k° k' # \$ % , & Exploring the relationship between subconcussion and risky behaviour. International Brain Injury Association [IBIA] % # World Congress on Brain Injury, New Orleans, Louisiana k + ' ' % / % , > 23' % \* & . k

Murray, L., k k ood, k° k' # \$ % , & Physiological underarousal and anxiety following mild head injury. k International Brain Injury Association [IBIA] % # World Congress on Brain Injury, New Orleans, Louisiana k + ' ' % / % , > 23' % \* & .

Robb, S., k k ood, k° k' # \$ % , & Depression post-head injury: Is severity of somatic depressive symptoms associated with sympathetic underarousal. International Brain Injury Association [IBIA] % # World Congress on Brain Injury, New Orleans, Louisiana k + ' ' % / % , > 23' % \* & . k

allant, C., k k ood, k° k' # \$ % , & Deficient emotionality following mild head injury and subconcussive impact exposure. Canadian Psychological Association, 32 Annual Convention, Toronto, Ontario k ' % ° % < (, ' ' 3'3(, 0 23' % \* 56.

Murray, L., k k ood, k° k' # \$ % , & Investigating the neuropsychological relationship between depression, anxiety and autonomic arousal following mild head injury. Canadian Psychological Association, 32 Annual Convention, Toronto, Ontario k ' % ° % < (, ' ' 3'3(, 0 23' % \* 56.

Robb, S., k k ood, k° k' # \$ % , & Mild head injury as a contributor to clinical heterogeneity in depression. Canadian Psychological Association, 32 Annual Convention, Toronto, Ontario k ; ' % ° % < (, ' ' 3'3(, 0 23' % \* 56.

Robb, S., k k ood, k° k' # \$ % , & Hospital-based neuropsychology: A case review highlighting the importance of basic psychology knowledge. Canadian Psychological Association, 32 Annual Convention, Toronto, Ontario k ' % ° % < (, ' ' 3'3(, 0 23' % \* 56.

- Rogers, N., Raycroft, J., Good, D., & Investigating the neurobehavioural and physiological effects of mild head injuries in a university population. Canadian Psychological Association, 2017 Annual Convention, Toronto, Ontario. [View Paper](#) (02/23/2018) \* 56.
- allant, C., Alcock, B., Good, D., & Age-at-injury effects on socialization and emotion regulation. 17th Annual International Conference on Paediatric Acquired Brain Injury. Rome, Italy. [View Paper](#)
- Alcock, B., allant, C., Good, D., & Age-at-injury effects on long-term cognitive outcomes: examining the moderating role of early medical intervention. 17th Annual International Conference on Paediatric Acquired Brain Injury. Rome, Italy. [View Paper](#)
- allant, C., Good, D., & Affective theory of mind in university students with learning disabilities. 17th Annual Convention of the Ontario Association of Developmental Disabilities Research Special Interest Group (OADD-RSIG), Kingston, ON. [View Paper](#) (02/23/2018) \* 3.
- allant, C., Good, D., & How self-awareness after mild head injury and its impact on self-reported Theory of Mind. 17th International Congress of Applied Psychology and 2017 Annual Convention. Montreal, Canada. [View Paper](#) (02/23/2018) \* 5@
- Murray, L., Good, D., & Investigating sensation-seeking behaviours and autonomic arousal following mild head injury. 17th International Congress of Applied Psychology and 2017 Annual Convention. Montreal, Canada. [View Paper](#) (02/23/2018) \* 5@
- Nour, H., allant, C., Good, D., & Affective Theory of Mind deficits following mild head injury in university students. 17th International Congress of Applied Psychology and 2017 Annual Convention. Montreal, Canada. [View Paper](#) (02/23/2018) \* 5@
- allant, C., Good, D., & Age-at-injury and sensation-seeking: Examining the role of sensitivity to reward. 17th Annual International Conference on Paediatric Acquired Brain Injury. Belfast, Ireland. [View Paper](#)
- Nour, H., Good, D., & Theory of Mind deficits related to age-at-injury following Mild Head Injury. 17th Annual International Conference on Paediatric Acquired Brain Injury. Belfast, Ireland. [View Paper](#)
- Taher, D., Good, D., & The association between age-at-injury and depression in children and youth with Mild Head Injury. 17th Annual International Conference on Paediatric Acquired Brain Injury. Belfast, Ireland. [View Paper](#)
- allant, C., authier, N., Good, D., & Investigating the neurocognitive, neuroemotional, and behavioural predictors of mental health complexity among children and youth. 17th Annual Convention of the Ontario Association of Developmental Disabilities Research Special Interest Group (OADD-RSIG), Niagara Falls, ON. [View Paper](#) (02/23/2018) \* 4.
- allant, C., Good, D., & Cannabis use and anxiety in undergraduate students. 17th Annual Convention and the 17th North American Correctional and Criminal Justice Psychology Conference. Halifax, Canada. [View Paper](#) (02/23/2018) \* 5@
- allant, C., Good, D., & Increased physical aggression among university athletes with a history of repetitive mild head injury. International Brain Injury Association [IBIA] 17th World Congress on Brain Injury, Toronto, Ontario. [View Paper](#) (02/23/2018) \* 4.
- Luczon, R., Saeed, U., Adgal, M., Good, D., & Investigating the influence of cannabis on symptoms of state anxiety in individuals with mild head injury. International Brain Injury Association [IBIA] 17th World Congress on Brain Injury, Toronto, Ontario. [View Paper](#) (02/23/2018) \* 4.

- Robb, I.S., Kood, K. R. #S%: Somatization following head injury: Severity of somatization symptomatology associated with sympathetic underarousal. International Brain Injury Association [IBIA] @ World Congress on Brain Injury, Toronto, Ontario. k+ ' %/ %%, > 23' % \* &A.
- allant, I.C., Kood, K. R. #S%: Cannabis use and anxiety in undergraduate students. M\$ k Annual Convention and the F? North American Correctional and Criminal Justice Psychology Conference. Halifax, Canada. ; ' % ° % < (, '! 3' 3(, 0 23' % \* 5 @
- allant, I.C., Kood, K. R. #S%: Cannabis use and anxiety in undergraduate students. M\$ k Annual Convention and the F? North American Correctional and Criminal Justice Psychology Conference. Halifax, Canada. ; ' % ° % < (, '! 3' 3(, 0 23' % \* 5 @
- allant, I.C., Kood, K. R. #S\$S& Cannabis use and potential predictors among university students with and without a history of mild head injury. NABIS (North American Brain Injury Society) k % G k Annual Conference k New Orleans, Louisiana k > 13% % ' 3 \* # ' , ' ' % ' # \* ! ' & ° & & 3 % > 23' % \* 35(2), k % G I 16 # G # doi: k 0.1097/HTR.0000000000000568
- allant, I.C., Kood, K. R. #S\$S& Investigating olfactory dysfunction following mild head injury in university students. M% Annual Convention. Montreal, Canada (virtual). ; ' % ° % < (, '! 3' 3(, 0 23' % \* \* 9.
- Luczon, R., Power, M., Patel, S., Kood, K. R. #S\$S& Investigating Cannabis Use on the Relationship Between Mild Head Injury and Reported Life Stressors. M% Annual Convention. Montreal, Canada (virtual). ; ' % ° % < (, '! 3' 3(, 0 23' % \* \* 9.
- Ing, K., Robb, I.S., Kood, K. R. #S\$S& Advantages of a Self-Report Mild Head Injury Measure over k Diagnosis of Concussion. M% Annual Convention. Montreal, Canada (virtual). ; ' % ° % < (, '! 3' 3(, 0 23' % \* \* 9.
- LaRiviere, B., Kood, D., Kood, K. R. #S\$S& Cognitive Fatigue Associated with Mild Head Injury. k M% Annual Convention. Montreal, Canada (virtual). ; ' % ° % < (, '! 3' 3(, 0 23' % \* \* 9.
- Amodio, F., Robb, I.S., Steeves, K., Kood, K. R. #S\$S& Understanding risk-taking in mild head injury: A model of autonomous underarousal. M% Annual Convention. Montreal, Canada (virtual). ; ' % ° % < (, '! 3' 3(, 0 23' % \* \* 9.
- Amodio, F., Robb, I.S., Kood, K. R. #S\$S& From research to practice: A review of the neuropsychological differentiation of intellectual impairment in paediatric acquired brain injury and developmental disorders. #M Annual Convention of the Ontario Association of k Developmental Disabilities Research Special Interest k roup (OADD-RSIG), Kitchener k ^ ° k (virtual). k 13% % ' 3 \* ) \* 2 \* 334 \* % & ' ) ° ' & ° & \* (0 23' % \* . 5. k

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**Non-published Contributions: w**

- Baker, J., Kood, K. R. #S%\$& Physiological and affective underarousal as a function of mild head injury in university students. F\$? k Annual Conference for the Southern Ontario Neuroscience Association, St. Catharines, k ^ k
- Atkinson, J., Kood, K. R. #S%\$& Mild head injury in university students: k Anger expression and k arousal. F\$? k Annual Conference for the Southern Ontario Neuroscience Association, St. k Catharines, k ^ k
- Sharan, K., Kood, K. R. #S%\$& Mild head injury in university students: k Individual differences, k decision making and k arousal. F\$? k Annual Conference for the Southern Ontario Neuroscience Association, St. Catharines, k ^ k

- Williams, H., K k ood, K° K'#\$%& Decision making, personality and physiological arousal in persons with mild head injury. K\$? Annual Conference for the Southern Ontario Neuroscience Association, St. Catharines, K^ k
- Johnson, S., K k ood, K° K'#\$%& The influence of arousal on social acceptance and decision-making in persons with and without K\*+° K° Annual Conference for the Southern Ontario Neuroscience Association, Kuelph, K^ k
- Peck, K., K k ood, K° K'#\$%& Affective influences of music on decision-making in persons with and without K\*+° K° Annual Conference for the Southern Ontario Neuroscience Association, Kuelph, K^ k
- Robb, S., K k ood, K° K'#\$%& Affective influences on physiological arousal in persons with and without K\*+° K° Annual Conference for the Southern Ontario Neuroscience Association, Kuelph, K^ k
- ood, ID., K Rumney, P., K MacDougall, K° K'#\$%& The effects of subject-based variables on academic and social success in school reintegration for children and youth with ABI. K° Annual Conference of the Ontario Association for Children's Rehabilitation Services, K Toronto, K^ k
- ood, ID., K Rumney, P. K'#\$%& School reintegration for children and youth with ABI: Modifiable predictors. K° Bi-annual Acquired Brain Injury Provincial Conference, Niagara Falls, K^ k
- ood, ID., K Robb, S., K Johnson, S., K Peck, K° K'#\$%& Social reintegration in ABI: Factors that influence social acceptance and social choices. K° Bi-annual Acquired Brain Injury Provincial Conference, Niagara Falls, K^ k
- ood, ID., K Robb, S., K Wlodarczyk, K° K'#\$%& The Rehabilitation Process. K° Annual International Concussion Summit, Niagara Falls, K^ k
- ood, ID., K Rumney, P. K'#\$%& Modifiable Factors that Enhance Successful Scholastic Reintegration for Students who have experienced Moderate to Severe Acquired Brain Injuries: Evidence from a Province-wide Investigation. K° Annual Conference of the Brain Injury Association of Canada, Ottawa, K^ k
- ood, ID., K Rumney, P., K MacDougall, H., K Bennett, K° K'#\$%& Modifiable factors that predict successful social, behavioural and scholastic reintegration in students who have previously sustained an acquired brain injury: Evidence from a province-wide investigation. K ABI Network Conference, K Toronto, K^ k
- ood, ID., K Bennett, K° K'#\$%& 'Mild Head Injuries are not Trivial'. International Summit # \$%& Concussions in School Sport: Making the Right Decisions. Niagara Falls, K^ k
- Strader, M., K Robb, S., K ood, K° K'#\$%& Emotionality and physiological arousal in individuals with and without K\*+° K° Annual Conference for the Southern Ontario Neuroscience Association, Kuelph, K^ k
- ood, ID., K Robb, S., K Morden, A., K Wlodarczyk, K° K'#\$%& From research to practice: Applied strategies to assist students' return to the classroom following a concussion. K° Annual International Concussion Summit, Niagara Falls, K^ k
- ood, K° K'#\$%& Expanding horizons: Shared education and clinical concerns. K Diksha School India, K Palam Vihar, Kurgaon, K India. K
- Barry, N., K k ood, K° K'#\$%& Investigating behavioural inhibition as a function of Mild Head Injury status and anxiety in university students. K° Annual Meeting of the International Society for Research on Impulsivity (INSRI), Society of Biological Psychiatry, K Toronto, K^ k

- Barry, N., & Good, D. (2018). Behavioural inhibition and associated psychiatric challenges in a nonclinical sample. 19th Annual Meeting of The International Society for Research on Impulsivity (InSRI), Society of Biological Psychiatry, Toronto, Canada.
- Good, D., Robb, S., & Barry, N. (2018). From research to practice: Applied strategies to assist students' return to the classroom following a concussion (Part 1). 21st International Concussion Summit, Niagara Falls, Canada.
- Mazzarella, L., Que, J., & Good, D. (2018). The influence of planning ability on decision-making in persons with and without mild head injury. 19th Annual Canadian Undergraduate Neuroscience Conference, Edmonton, Alberta.
- Good, D., Que, J., Dzyundzyak, A., & Robb, S. (2018). Influence of parental perceptions and educators' understanding of ABI on social, emotional and academic success as experienced by students living with the effects of acquired brain injury: A province-wide study. Acquired Brain Injury Provincial Conference, Niagara Falls, Ontario.
- Good, D., Robb, S., Gallant, C., & Alcock, B. (2018). From research to practice: Applied strategies to assist students' return to the classroom following a concussion. (Part 2). 21st International Concussion Summit, Niagara Falls, Canada.
- Gallant, C., & Good, D. (2018). Examining the role of physiological arousal in the cumulative effects of subconcussive impact exposure in university athletes. The Canadian Society for Brain, Behaviour and Cognitive Science #17 Annual Conference, Ottawa, Canada.
- Gallant, C., & Good, D. (2018). Investigating the relationship between subconcussive impact exposure and theory of mind (ToM). 17th Annual Conference of the Southern Ontario Neuroscience Society, Waterloo, Canada.
- Good, D., Robb, S., Gallant, C., Alcock, B., & Murray, A. (2018). Social barriers to reintegration following a concussion. 19th International Concussion Summit, Niagara Falls, Canada.
- Alcock, B., & Good, D. (2018). Investigating the Relationships between Mild Head Injury, Executive Function, and Dispositional Mindfulness in University Students. 27th Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Sciences (CSBBCS), Regina, Saskatchewan.
- Adegbemi, O., & Good, D. (2018). The relationship between trait mindfulness and post-concussive symptoms. 37th Annual Southern Ontario Neuroscience Association (SONA), St. Catharines, Ontario.
- Alcock, B., & Good, D. (2018). Investigating the relationship between Mild Head Injury, substance use, and athletic status in university students. 37th Annual Southern Ontario Neuroscience Association (SONA), St. Catharines, Ontario.
- Gallant, C., & Good, D. (2018). Investigating the role of the ventromedial prefrontal cortex in affective theory of mind after mild head injury. 37th Annual Southern Ontario Neuroscience Association (SONA), St. Catharines, Ontario.
- Murray, L., Hadgal, M., & Good, D. (2018). Investigating post-concussive irritability, fatigue, anxiety, and autonomic arousal following Mild Head Injury. 37th Annual Southern Ontario Neuroscience Association (SONA), St. Catharines, Ontario.
- Raycroft, G., Gallant, C., & Good, D. (2018). Impulsivity and risk-taking in individuals with mild head injury. 37th Annual Southern Ontario Neuroscience Association (SONA), St. Catharines, Ontario.
- Gallant, C., & Good, D. (2017, May). Investigating the role of the ventromedial prefrontal cortex in affective theory of mind after mild head injury. 37th Annual Meeting of the Southern Ontario Neuroscience Association, Brock University, St. Catharines, Ontario.



ood, k° k (September, #S% @ Developmental considerations in Traumatic Brain Injury. Paediatric Brain Injury, St. Olav's University Hospital, Universitetssykehuset (Norwegian Ministry of Health and Care Services), Trondheim, Norway. k k Keynote Speaker. k

ood, k° k (September, #S% @ Challenges of community and scholastic reintegration. Paediatric Brain Injury, St. Olav's University Hospital, Universitetssykehuset (Norwegian Ministry of Health and Care Services), Trondheim, Norway. k k Keynote Speaker. k

ood, k° k (September, #S% @ Overcoming the barriers of social reintegration. Paediatric Brain Injury, St. Olav's University Hospital, Universitetssykehuset (Norwegian Ministry of Health and Care Services), Trondheim, Norway. k k Keynote Speaker. k

ood, k° k (October, #S% @ Invited Item-Writer for a period of three years for the Association State Provincial Psychology Boards' EPPP (Examination for Professional Practice in Psychology), Peachtree City, Georgia. k

ood, k° k (February, #S% @ Expanding horizons: Shared education and clinical concerns. Dikshak School India, Palam Vihar, Gurgaon, India. k Invited Speaker. k

ood, k° k (May, #S% @ Invited Item-Writer continued for an additional period of three years for the Association State Provincial Psychology Boards' EPPP (Examination for Professional Practice in Psychology), Atlanta, Georgia. k

ood, k° k (April, #S% @ Invited Item-Writer continued for an additional period of three years for the Association State Provincial Psychology Boards' EPPP (Examination for Professional Practice in Psychology), Atlanta, Georgia. k

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### Forthcoming Contributions: w

vank Noordt, S., k ood, k° k (manuscript revisions under review). Affect recognition in university students: Neuropsychological consequences of mild head injury. k 3'''' ; 3(%&\*'% ) \*\*'' &\* 7%'3('''\*%''\*k

DeBono, K., vank Noordt, S., k ood, k° k (under revision). Mild Head Injury and executive function as predictors of reactive aggression. k '( &'&, '% #\*!' &'& &%'

Wlodarczyk, K., Bennett, S., k ood, k° k (submitted). Teacher Knowledge and IEP influence Academic and Social Outcomes for Students with ABI. k 3'''' ; ' '\* '% 7%'3 '( &'& &%'

Wlodarczyk, K., Bennett, S., k ood, k° k (submitted). Understanding the classroom brain of students with ABI. k <' 3\*\*('3%' , +3\*' ('%'°

Dzyundzyak, K., k ood, k° k (In Preparation). Mild Head Injury and frontal lobe dysfunction as predictors of disinhibition. k 3%'%' 3\*#\*' , ''%' #\*!' &'& &%'

Baker, J., k ood, k° k (In Progress). Post-acute post-concussive symptom reporting in university students with mild head injury. k 3%'%' 3\*#\*' , ''%' #\*!' &'& &%'

Baker, J., Dzyundzyak, K., k ood, k° k (in progress). Psychosocial and physical health of university students with mild head injury. k ' '! 2\*(3\* ; '°8'' ' 7%'33(, '! 3'3(, k

Robb, S., k ood, k° k (In Preparation). A model of physiological underarousal and altered decision-making following mild head injury: Preliminary attempts to increase arousal using emotionally evocative stimuli and impact cognition. k

Robb, S., k ood, k° k (In Preparation). Decreased learning from decision-making consequences and physiological underarousal following mild head injury and moderate traumatic brain injury. k

Robb, S., Krzeczowski, J., k ood, k° k (In Preparation). Mild head injury as a potential confound for research investigating depression: A investigation of whether depression following head injury is really depression. k

allant, IC., Luczon, R., Ryan, D., & Good, K. (In Preparation). Investigating the impact of cannabis use among university students with and without a history of concussion.

allant, IC., & Good, K. (In Preparation). Sensation seeking after mild head injury: Examining the potential role of sympathetic arousal.

Robb, S., & Good, K. (In Preparation). Characterizing attentional challenges: The utility of neuropsychological assessment. *J Cogn Neurosci*, 31(1), 1-12.

**2. Other Research/Clinical Contributions:**

Consulting Psychologist in neuropsychology and rehabilitation. Instructor of CARPA Accredited and Brock University Continuing Education Courses (Introductory; Neuropsychology; Advanced Topics) Ontario Brain Injury Association of Ontario, @: [ton@oin.org](mailto:ton@oin.org)

Consulting Psychologist in neuropsychology and rehabilitation. Acquired Brain Injury Rehabilitation residential and outreach program, Anagram, NOTL, Ontario, 1993-ongoing.

Co-Chair, Community of Practice in Research to Practice Network for Children and Youth with ABI, #1:1#%

Provincial Director, Ontario Brain Injury Community of Practice, Paediatric Division, #1:1#% #1:1#%

Consulting Psychologist, podcast specializing in Concussion with community partners, Brock University, #1:1#%

Consulting Psychologist in neuropsychology, Niagara Health System St. Catharines Site, #1:1#% [ton@oin.org](mailto:ton@oin.org)

Consulting Research Psychologist in neuropsychology, Pathstones, St. Catharines, #1:1#% [ton@oin.org](mailto:ton@oin.org)

Consulting Psychologist, Policy issues on Mental Health in the Niagara Region. Panel presentation to the Provincial Liberal Association, Niagara Falls, ON, #1:1#%,

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**3. Most Significant Career Research Contributions (only for Regular Scholars):**

**4. Career Interruptions and Special Circumstances:**

Director/Chair of Neuroscience Degree Program (and The Centre for Neurosciences) k December #1:1#% June #1:1#%

Sabbaticals k Jan 2014-June #1:1#% FR k 2015-June #1:1#% CR k 2019-June #1:1#% \$ k

Director/Chair of Neuroscience Degree Program k December #1:1#% June #1:1#%

Medical Leave k October #1:1#% # k January #1:1#% FR

Director/Chair of Neuroscience Degree Program k January #1:1#% Dec #1:1#%: Currently on sabbatical leave k will resume July #1:1#% \$ k

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**5. Contributions to Training**

**Primary Supervisor of Thesis &/or Internship/Practicum**

Laura Parent. *J Cogn Neurosci*, 31(1), 1-12. *Associate PhD candidate* Sept. #1:1#% #1:1#%

Sarah Palmer. *On-Site Supervisor for Internship MA candidate* for Mental Health Counseling Program, Medaille College, Williamsville k July #1:1#%: k #1:1#%

Tanvi Sharan. *Honours Psychology* Mild head injury in university students: Individual differences, decision making and arousal, #1:1#%



Julie Baker. *On-Site Supervisor for Internship "r ndid r te". Private Practice* St. Catharines Hospital Mental Health, St. Catharines, # \$ % k *ongoing*. k

Angela Dzyundzyak. *On-Site Supervisor for Internship "r ndid r te". Private Practice* St. Catharines Hospital Mental Health, St. Catharines, # \$ % k *ongoing*. k

Caitlyn allant. *On-Site Supervisor for Pr r cticum*. Brock University St. Catharines Hospital Mental Health, St. Catharines, # \$ % k *ongoing*. k

Bradey Alcock. *On-Site Supervisor for Pr r cticum*. Brock University St. Catharines Hospital Mental Health, St. Catharines, # \$ % k *ongoing*. k

Laura Murray. *Mrsters "r ndid r te"*. Brock University, St. Catharines, # \$ % k # \$ % : k

Opeyemi Adegbeni. *Honours Psychology*. Brock University, St. Catharines, # \$ % , k

lenna Raycroft. *Honours Neuroscience*. Brock University, St. Catharines, # \$ % , k

Caitlyn allant. *Ph.D. "r ndid r te"*. Brock University, St. Catharines, # \$ % , k *ongoing* k

Caitlyn allant. *On-Site Supervisor for Internship "r ndid r te"*. Brock University St. Catharines Hospital Mental Health, St. Catharines, # \$ % k *ongoing*. k

Laura Murray. *On-Site Supervisor for Pr r cticum*. Brock University St. Catharines Hospital Mental Health, St. Catharines, # \$ % , k *ongoing*. k

Blake LaRiviere. *Honours Psychology*. Brock University, St. Catharines, # \$ % M °

Hadil Nour. *Honours Psychology*. Brock University, St. Catharines, # \$ % M °

Ushna Saeed. *Honours Neuroscience*. Brock University, St. Catharines, # \$ % M °

Denise Taher. *Honours Psychology*. Brock University, St. Catharines, # \$ % M °

Nathalie authier. *On-Site Supervisor for Internship "r ndid r te"*. Brock University St. Catharines Hospital Mental Health, St. Catharines, # \$ % M *ongoing*. k

Reuben Howlett. *On-Site Supervisor for Pr r cticum*. Brock University St. Catharines Hospital Mental Health, St. Catharines, # \$ % M *ongoing*. k

Rachel Luczon. *Honours Neuroscience "r ndid r te"*. Brock University, St. Catharines, # \$ % M # \$ % : k

Mahenor Adgal. *Honours Psychology "r ndid r te"*. Brock University, St. Catharines, # \$ % M # \$ % : k k

Blake LaRiviere. *Mrsters "r ndid r te"*. Brock University, St. Catharines, # \$ % M *ongoing* k

Mick Power. *Honours Neuroscience "r ndid r te"*. Brock University, St. Catharines, # \$ % k *ongoing* k

Koah ng. *Honours Neuroscience "r ndid r te"*. Brock University, St. Catharines, # \$ % k *ongoing* k

Francesco Amodio. *Honours Psychology "r ndid r te"*. Brock University, St. Catharines, # \$ % k k *ongoing* k

#### Committee Member of Thesis: w

Iva Mathews. *Mrsters Psychology* Brock University, St. Catharines, # \$ \$ , ° w

Joel St. Pierre. *Mrsters Psychology* Brock University, St. Catharines, # \$ \$ M w

Alex Hatry. *Honours Neuroscience* Brock University, St. Catharines, # \$ \$ , ° w

Tendai Mirwura. *Honours Neuroscience* Brock University, St. Catharines, # \$ % \$ w

Matthew Burton. *Honours Neuroscience* Brock University, St. Catharines, # \$ % \$ w

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Patti Waters. *Mrsters Psychology* Brock University, St. Catharines, # \$ % \$ w

Stokes. *Mrsters Psychology* Brock University, St. Catharines, # \$ % \$ w

Stefonkank Noordt. *Mrsters Psychology* Brock University, St. Catharines, # \$ % k °

Nikole allagher. *Honours Neuroscience* Brock University, St. Catharines, # \$ % # R

Rachel ibson *Honours Neuroscience* Brock University, St. Catharines, # \$ % # R

Bryce Hunt. *Honours Neuroscience* Brock University, St. Catharines, # \$ % # R

Brett Riches. *Honours Neuroscience* Brock University, St. Catharines, # \$ % # R

Kathy Wlodarczyk, *Mrsters Educrtion* Brock University, St. Catharines, #\$\$#  
 Alex Morden, *Mrsters Psychology*, Brock University, St. Catharines, #\$\$  
 Stef van Noordt, *upervision of Terching Apprenticeship*, Ph.D. Candidate, St. Catharines, #\$\$  
 Kevin Mulvihill, *Mrsters Psychology*, Brock University, St. Catharines, #\$\$  
 Kevin Mulvihill, *Ph.D. " r ndid r te*, Brock University, St. Catharines, #\$\$  
 Valerie Plante-Brisebois, *Mrsters " r ndid r te*, Brock University, St. Catharines, #\$\$  
 Lydia Lavis, *Mrsters " r ndid r te*, Brock University, St. Catharines, #\$\$

#### Ph.D. Comprehensive Examiner:

Kiana Lapierre, *Ph.D. " r ndid r te*, Brock University, St. Catharines, #\$\$  
 Caitlyn Allant, *Ph.D. " r ndid r te*, Brock University, St. Catharines, #\$\$

#### External Examiner:

External Reviewer for *Ph.D. cr ndid r te* at Brock University (Faculty of Education) July, #\$\$  
 External Reviewer for *Ontario Graduate Scholarship* competition for Masters, Ph.D. and Post-doctoral scholarships/fellowships, February, #\$\$ February, #\$\$  
 External Examiner for *Ph.D. cr ndid r te* (Jennifer Bernier) Laurentian University, August, #\$\$  
 External Examiner for *Ph.D. cr ndid r te* (Ruth Tesselaar) Victoria University, Melbourne, Australia, November, #\$\$  
 External Examiner for *M.A. cr ndid r te* (Sara Salehi) University of Toronto, September, #\$\$  
 External Examiner for *Ph.D. cr ndid r te* (Catherine Wiseman-Hakes) University of Toronto, August, #\$\$  
 Internal/External Examiner for *Ph.D. cr ndid r te* (Po-ling Bork) Brock University, September, #\$\$  
 External Examiner for *M.A. cr ndid r te* (raziella El-Khechen Richandi) University of Toronto, August, #\$\$  
 External Examiner for *M. c. cr ndid r te* (Pavel Tselichtchev) University of Toronto, October, #\$\$  
 External Examiner for *Ph.D. cr ndid r te* (Chelsea Jones) University of Alberta, January, #\$\$

#### Program Reviewer:

External Program Reviewer Psychology Undergraduate Program, Lakehead University, Thunder Bay, #\$\$, May, #\$\$  
 External Program Reviewer Neuroscience Undergraduate Program, Laurentian University, Sudbury, #\$\$, December, #\$\$  
 Internal Program Reviewer New Graduate Program Application for Masters program in Applied Gerontology for the Faculty of Applied Health Sciences, Brock University, St. Catharines, #\$\$, May, #\$\$

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**ANDREW W. DANES**

3 epartment of Psychology, Brock University  
C=CDAsack rockWay, k@Batharines, k' ntario, kBanada, k' D@F@Ck  
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**A. Formal Education**

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k k k k k 3 epartment of Human Development and Applied Psychology  
" ntario Institute for Studies in Education, University of  
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CAACAAE k k kkkkk MEEk@hool and B hild B clinical Psychology  
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CA=ACAAGk k k k . k@E onours, k first class standing  
k k k k k Queen's University, Kingston, Ontario  
k k k k k Psychology and English Literature

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**C. Academic Positions Held**

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D! C9resenk k k k Associate Professor  
k k k k k 3 epartment of Psychology  
k k k k k . Brock University

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D! C9resenk k k k Assistant Professor (tenure track)  
3 epartment of Psychology  
. Brock University

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D!!0 D! CK Lecturer  
3 epartment of Psychology  
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## D. Creative/Scholarly Activities

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### 1. Publications

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#### a) Books and chapters contributed to books

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Lapierre, E. D. & K. S. J. (2013). *Individual differences in cyberbullying: A developmental perspective*. In E. D. Lapierre & K. S. J. (Eds.), *Cyberbullying: A developmental perspective* (pp. 191-210). New York: Springer.

k

Wolke, D., Bloomfield, B., & Karlyson, M. (2013). *When and why adolescent bullying is adaptive*. In E. D. Lapierre & K. S. J. (Eds.), *Cyberbullying: A developmental perspective* (pp. 191-210). New York: Springer.

k

Marini, H., & Wolke, D. (2015). *Preventing bullying by tailoring parenting to children's temperament: The case of children with callous-unempathic characteristics*. In H. Marini & D. Wolke (Eds.), *Preventing bullying by tailoring parenting to children's temperament: The case of children with callous-unempathic characteristics* (pp. 1-15). New York: Springer.

k

Marini, H., & Wolke, D. (2015). *Multiple pathways to bullying: Educational implications of individual differences in temperament and brain function*. In H. Marini & D. Wolke (Eds.), *Preventing bullying by tailoring parenting to children's temperament: The case of children with callous-unempathic characteristics* (pp. 1-15). New York: Springer.

k

Marini, H., & Wolke, D. (2015). *Parent-focused interventions for the prevention of bullying: Accommodating children with difficulties regulating emotions*. In H. Marini & D. Wolke (Eds.), *Preventing bullying by tailoring parenting to children's temperament: The case of children with callous-unempathic characteristics* (pp. 1-15). New York: Springer.

k

Marini, H., & Wolke, D. (2015). *Matching interventions to bullying subtypes: Ensuring programs fit the multifaceted needs of children involved in bullying*. In H. Marini & D. Wolke (Eds.), *Preventing bullying by tailoring parenting to children's temperament: The case of children with callous-unempathic characteristics* (pp. 1-15). New York: Springer.

k

Wolke, D., Bloomfield, B., & Karlyson, M. (2013). *Individual differences in cyberbullying: A developmental perspective*. In E. D. Lapierre & K. S. J. (Eds.), *Cyberbullying: A developmental perspective* (pp. 191-210). New York: Springer.

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# Articles in refereed journals

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>olk, @Franklin Luther, Ek razil, Ek D3 ane, @Ek Dk aillancourt, Ek D D#Ekhek influence of demographics and personality on B" > A C coping in young adults Ek ' ~ => 5. 6-B. 5~ 15~/:/; . 6) /&&5%> Advance online publication. <https://doi.org/10.1080/10761003.2016.1191111>

k

Lapierre, Ek D3 ane, @Ek D D#Ek social advantages and disadvantages associated with cyber aggression/victimization Ek - 5 ?; <=> 5 ( ; 5. 5 + ^# . :- = Advance online publication Ek <https://doi.org/10.1080/10761003.2016.1191111>

k

4arrell, @Ek D3 ane, @Ek D D#Ek ulying, k/victimization and prosocial resource control k strategies B3 differential relations with dominance and alliance formation Ek :- 6 <- 5. =B + ^# . :- = 6) % 5% > 0bDE! 0D=F <https://doi.org/10.1080/10761003.2016.1191111> CE=k

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Lapierre, Ek D3 ane, @Ek D D#Ek Cyberbullying, k/cyber aggression, and cyber victimization k relation to adolescents' dating and sexual behavior Ek A nevolutionary psychological perspective Ek \$\$ => ^# + ^# . :- = 06b BOBA <https://doi.org/10.1080/10761003.2016.1191111> DM# EDCCG

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>olk, @Ek D3 ane, @Ek D D#Ek rovenzano, B Ek 4arrell, @Ek D3 ane, @Ek D D#Ek kulman, B Ek D CA Ek D personality and k bullying B pathways to adolescent social dominance Ek ; = 5 < ' > B#- 6 \$B Advance online publication <https://doi.org/10.1080/10761003.2016.1191111> ECDCGCCA!! C=DG

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>olk, @Ek D3 ane, @Ek D D#Ek Franklin, Ek D C# Ek D parenting, k personality and adolescent attitudes k about antisocial behavior Ek 5 < = 5. <- 5. 6) - ; = 5. 6- & \$ 5 - <- 5. 6 \$ ~ ; % <- 5 b 10 7 k CFCF=Ek

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M' Bomb, @Ek D3 ane, @Ek D D#Ek Evolutionary psychological perspective on peer k victimization Ek Relations with attachment security and dating and sexual history Ek \$ :- 6 <- 5. =B' > B#- 6 \$/% 6) % 5% > 5, k DGFDB <https://doi.org/10.1080/10761003.2016.1191111> Ek G =! C! C=0 ! C=! 0 Ck

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9rovenzano, B Ek 4arrell, @Ek D3 ane, @Ek D D#Ek Marini, Ek D C# Ek D A direct effect of k personality and bullying on adolescent sexual behavior Ek \$ :- 6 <- 5. =B' > B#- 6 \$/% 6) % 5% > 0b DD CDFD Ek

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arini, K.Z.A., Dane, K.A.V., Bosacki, K. K. (2006). Direct and indirect bully-victims: Differential psychosocial risk factors associated with adolescents involved in bullying and victimization.

k

Dane, K.A., Schachar, R., Tannock, R. (2005). Does Actigraphy Differentiate ADHD Subtypes in a Clinical Research Setting?

w

Dane, K.A.V., Schneider, K. (2006). Program integrity in primary and early secondary prevention: Are implementation effects out of control?

k

**Research-based reports to governmental and other comparable agencies**

k

Oke, K., Sheehan, K., Dane, K.A., Bednar, K., Greenway, K., Timmerman, K., Rabinovich, K. (2015). Provincial Centre of Excellence for Child and Youth Mental Health at CHEO.

k

ane, K., Lawrence, K., Kerevensky, K., McPhee, K., Panetta, K. (2015). Preventing youth problem gambling and high risk behaviour: A longitudinal study of parenting and protective factors.

k

**2. Work in progress submitted for publication**

k

Volk, K., Schiralli, K., Spadafora, K., Buchner, K. (2015). Revised and resubmitted. Cooperative versus coercive dominance strategies: Relationships with the environment and personality.

k

k

Andrews, K., McDowell, K., Spadafora, K. (2015). Submitted. Using social network position to understand power and dominance within the peer group.

k

Volk, K., Andrews, K. (2015). Submitted. Adolescent aggression and the balance of power.

k

Brazil, K., Volk, K. (2015). In preparation. Do all forms of empathy predict prosocial and antisocial traits and behavior?

k

Prabakaran, K., ane, K., Spadafora, K. (2015). In preparation. Victimization (bullying and non-bullying) aggression: An evolutionary psychological perspective.

k

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**4. Papers presented at conferences and learned societies (refereed)**

w

ane, K., Ciccarelli, K., Volk, K. (July 2015). Accepted but cancelled due to COVID-19. Bullying and prosocial behaviour in relation to adolescent dating popularity.

evolutionary perspective Paper presentation cancelled (at the biennial conference of the International Society for Research on Aggression, Ottawa, Canada)

k

Lapierre, P. K. & K. R. (March); (Social costs and benefits of cyber aggression victimization: A latent class analysis Paper presentation at the biennial conference of the Society for Research on Child development, Baltimore, Maryland)

k

ane, K. & K. R. Farrell, K. (July); (Pathways to dominance and alliance formation: Bullying, victimization and prosocial behavior Paper presentation at the biennial conference of the International Society for Research on Aggression, Paris, France)

w

LaPierre, P. K. & K. R. (July); (Cyberbullying, aggression, and victimization in relation to adolescents' dating and sexual behaviour: An evolutionary psychological perspective Poster presentation at the biennial conference of the International Society for Research on Aggression, Paris, France)

k

LaPierre, P. K. & K. R. (May); (Cyberbullying and aggression in relation to adolescents' dating and sexual behaviour: An evolutionary psychological perspective Paper presented at the development conference, St. Catharines, Canada)

k

Marini, K. & K. R. Volk, K. (April); (Physical and relational bullying: differential relations with temperament Symposium presentation at the biennial conference of the Society for Research on Child development, Austin, Texas)

w

ane, K. & K. Marini, K. & K. Vaillancourt, K. (April); (Peer victimization and dating behavior: The moderating role of parent-child relationship quality and sex Poster presented at the biennial conference of the Society for Research on Child development, Austin, Texas)

k

Provenzano, K. & Farrell, K. & K. Marini, K. & K. Volk, K. (April); (Do bullies get more sex? It depends on their personality Poster presented at the biennial conference of the Society for Research on Child development, Austin, Texas)

w

ane, K. & K. Marini, K. (March); (Adolescent physical and relational bullying: differential relations with dating and sexual behavior Poster presented at the biennial conference of the Society for Research on Child development, Philadelphia, Pennsylvania)

k

ane, K. & K. Marini, K. (March); (Adolescent cyberbullying and relational bullying: differential relations with dating and sexual behavior Poster presented at the biennial conference of the Society for Research on Child development, Philadelphia, Pennsylvania)

w

ane, K. & K. Marini, K. (April); (Relational forms of reactive and proactive aggression in adolescents: A longitudinal analysis of relations with temperament Poster presented at the biennial conference of the Society for Research on Child development, Seattle, Washington)

k  
Brooks, C. K. & ane, k July, k\*+,\* (The goodness of fit between adolescent temperament and parent personality: Relations with reactive/over aggression) Poster presented at the k\*+^k Meeting of the International Society for Research on Aggression 2025! (Luxembourg) k

k  
Brooks, C. K. & ane, k July, k\*+,\* (Temperament predictors of reactive/over and proactive/over aggression: Longitudinal relations with self-regulation and emotional reactivity) Poster presented at the k\*+^k Meeting of the International Society for Research on Aggression 2025! (Luxembourg) k

k  
Stoner, k & ane, k July, k\*+,\* (Antisocial behaviour in adolescence: The moderating role of effortful control) Poster presented at the k\*+^k Meeting of the International Society for Research on Aggression 2025! (Luxembourg) k

k  
ane, k & Marini, k & k July (Emotion regulation in overt and relational forms of reactive aggression: Differential relations with temperament) Symposium presentation at the k\*+^k European Congress of Psychology, Istanbul, Turkey k

k  
ane, k & Marini, k & k March (Reactive control in reactive relational and reactive overt aggression: Variations in the protective function of fearfulness) Poster presented at the biennial conference of the Society for Research in Child Development, Montreal, Quebec k

w  
ane, k & Marini, k & k March (Self-regulation of reactive/over and proactive/over aggression: Gender-specific reactive and effortful control processes) Poster presented at the biennial conference of the Society for Research in Child Development, Montreal, Quebec k

Marini, k & Polihronis, k & ane, k & Volk, k & k June (Towards the development of a Civil Learning Community: Differentiating Between Intentional and Unintentional Incivility) Society for Teaching and Learning in Higher Education, STLHE (10^k Annual Conference, Toronto, Ontario) k

k  
ane, k & Marini, k & k April (The indirect link between authoritative parenting and adolescent delinquency: The role of self-regulation) Poster presented at the meeting of the Society for Research in Child Development, Denver, CO) k

k  
Marini, k & ane, k & k April (Unpacking self-regulation: The role of activation control in the development of adolescent delinquency) Poster presented at the meeting of the Society for Research in Child Development, Denver, CO) k

Marini, k & ane, k & Vaillancourt, k & Cunningham, k & Short, k & MacCura, k & k July (Anti-Bullying practices and moral disengagement: Key gender differences) Poster accepted for presentation at the 20th meeting of the International Society for the Study of Behavioural Development 2024 (Wuerzburg, Germany) k

ane, k & Marini, k & Vaillancourt, k & Short, k & Cunningham, k & MacCura, k & k July (Moral disengagement in Physical, Verbal, Social and Cyberbullying: Relation to Bully

Victim Status Poster accepted for presentation at the 20th meeting of the International Society for the Study of Behavioural Development 2024 (Wuerzburg, Germany)

k

Leenaars, H. A. M., & Marini, R. M. (2023, March). Indirect victimization in adolescence as a function of attractiveness, dating and sexual behavior: An evolutionary perspective. Poster accepted for presentation at the meeting of the Society for Research in Child Development, Boston, MA.

k

ane, R. M., & Marini, R. M. (2023, March). Indirect and direct bullying victim status: Links with mother and father adolescent attachment security. Poster accepted for presentation at the Society for Research in Adolescence Biennial Meeting, San Francisco, CA.

k

Marini, R. M., & Bosacki, J. R. (2023, May). The effects of parental attachment and monitoring on the bullying involvement of adolescents: bullies, victims, and bully-victims. Paper presented at the Canadian Association for Educational Psychology Conference, Congress of the Social Sciences and Humanities, University of Western Ontario, London, Ontario.

k

Kennedy, K. E., & ane, R. M. (2023, April). Emergence of normative beliefs legitimizing antisocial behaviour in adolescents as a function of monitoring, attachment, and temperament. Poster session presented at the Society for Research in Child Development Biennial Meeting, Atlanta, GA.

k

Marini, R. M., & Bosacki, J. R. (2023, April). (k# \$ & > & + 5 ? = 5 ~ 5 < 5 ~ ) < 5 / 5 ~ 5 < 5 # +; 6 5 / 5 : - 6 ~ 5 ~ 5 < 6 ~ - 6 ~ 5 < +; 6 6 ~ 5 ( / 5 > . 5 ~ +; 6 6 ( / 5 > k Poster presented at the biennial conference of the Society for Research in Child Development, Atlanta, Georgia.

k

Reker, K. M., & ane, R. M. (2023, April). Authoritative parenting and temperament: differential predictors of reactive, proactive, overt, and relational aggression. Poster presented at the Society for Research in Child Development, Atlanta, Georgia.

k

ane, R. M., & Bosacki, J. R. (2023, July). (k / = % . 5 ~ 15 ~ / = % ( / 5 / G < - 5 . 5 ~ 15 < = 5 . 6 5 \$ ' = & 5 > 15 < = ? ~ = > 5 . 6 . 5 ~ 15 < = ? ~ = > 5 . 6 \* ~ / . < = \* Poster presented at the meeting of the International Society for the Study of Behavioural Development, Ghent, Belgium.

k

Marini, R. M., & Bosacki, J. R. (2023, July). (k / = % . 5 ~ 15 ~ / = % & 6 6 / 5 / \$ < = 5 . 6 6 \$ = \* & % = > 5 - 5 \$ . ~ - 6 ~ 5 < & 6 6 : / 5 > & 6 6 > . 5 ~ : / 5 > Poster accepted for presentation at the meeting of the International Society for the Study of Behavioural Development, Ghent, Belgium.

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ane, k r ^ kTannock, k r kSchachar, k r% , = kJune (k r - - & k ) % : ~ 5 ~ . > ; = > - & k % : / B 6 : ~ 6 ~ / & k 5 < . < > ; & k ? ~ > - & k < 5 < 5 ~ ~ & k # B ? ~ = % : / B ~ / > = ~ k Poster presented at the meeting of the University of Toronto, Department of Psychiatry, Harvey Stancerk Research Laboratory, Toronto, Canada k

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ane, k r k r kSchneider, k r k r% , @ kJuly (k r = \$ = 5 / 5 < \$ = B / 5 ? = 5 . = B . 5 ~ ~ . = B > % 5 ~ . = B ? = : ~ 5 < 5 / ) = / 5 ? 6 5 ~ 5 < < 5 ~ & k & k > ; < - & k % 5 < = 6 k Poster presented at the European Congress of Psychology, Dublin, Ireland k

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**5. Grants obtained**

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**a) Internal grants**

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ane, k r k r k Brock SSHRC Institutional Grant #42:H (k r - 5 \$ / < ; / 5 . 6 ) < ; B - & k # ) ~ . ? < : ~ 5 ~ > > & k + ; 6 6 / 5 \$ / + # ~ - 6 - & k - D ~ = . 5 ~ ^ - . 6 b + ; A + ; @ k k ; \* A + ; @ k L J ; \* C ^ + + k

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Martini, k r k k ane, k r k r k Brock University Teaching and Learning Enhancement Award (k r ) > > > / 5 \$ # \$ & k % B - & k # ~ - . ~ 5 . ? < ; . = ~ = > 5 ' > B / # - 6 \$ B ; - ; = > b + ; A + ; I ~ + ; A + ; = k L \* + + f + + k k

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ane, k R Council for Research in Social Sciences (CRISS) (k; 6/5\$. 5~ ' ~ = ~ 6 <- 5 #/?> ) 5 \$: - 6 <- 5. =B' ~ =? %/: ~ b; + A+; Ckk; + A+; I kL\*++k

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**c) Reviewed External grants or contracts**

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Volk, k R ^ (k ane, k ~ R ^ applicant (k Marini, k R ^ applicant (Social Sciences and Humanities Research Council of Canada Insight Grant, k %5%?<; 6/5\$ +; 6/5\$/ ) <=5\$ #/5/5\$ #~ +; 5~ . <- 5 &=\* ~ . >; =5 ~ 5 \$ ~ >. =#b 15 <=: 5 <- 5>. 5~ ' - 6%bb +JA+; @+JA+\*\* kL;; I kL\*D++k

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Volk, k R ^ (k ane, k ~ R ^ applicant (k Marini, k R ^ applicant (k Aston, k R ^ collaborator (k Craig, k R ^ collaborator (Social Sciences and Humanities Research Council of Canada Insight Grant, k; 6/5\$/ ) #~ - = < % 6. 5~ ~ 5 ? / = % 6 = ~ ~ & 5 / <- 5. +JA+; J Ranked kL! k

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Siegel, k ^ k ane, k ^ k Marini, k ^ k Ward, k A k R k Sharpe, k R YMCA Canada, k Positive Youth and Family Development k; A\* k k JAD, k LDI++k

k  
Craig, k R ^ (k Pepler, k R ^ (k Crooks, k R ^ (k ane, k R ^ (k Hymel, k R ^ (k Marini, k R ^ (k Mishna, k R ^ (k Volk, k A Ontario Centre of Excellence for Child and Youth Mental Health, k; 6/5\$ 4 / < = % B \* - ~; 6 k DA+; \* + IA+; \* kL; J kL+@k

k  
Oke, k R ^ (k Sheehan, k R ^ (k ane, k R ^ (k Bednar, k R ^ (k Greenway, k R ^ (k Timmerman, k R ^ (k Rabinovich, k R Provincial Centre of Excellence for Child and Youth Mental Health at CHEO, k \$: . 6 <- 5 - & # 4; / % 8 ) % % > ) ~ = % . < ; # / 6 . 5~ ) ~ - 6 % 5 < ) ~ = % > . + @ \* ++, ~ + IA+; + kLD k++k

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ane, k R R ^ (k erevensky, k R ^ (k McPhee, k R ^ (k Ontario Problem Gambling Research Centre, k . = 5 < 6 > % 6 G <- 5 - & B ; < # \$ . 5 & 5 \$ b + \* A D + \* A J kL;; D kL @ \* ++k

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Lawrence, k R R ^ (k McPhee, k R ^ (k ane, k ~ R ^ (k Ontario Problem Gambling Research Centre, k - ; < # ? = & 5 \$ . 5 & 5 \$ . 5~ # ~ + # ~ - = < % 6 \* - ~ ~ 6 - & # . 5 \$ b; + A \* +, A D k L; = + k @ I++k

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**7. Other creative and scholarly activities**

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- K Reviewer, CIHR, Project Grant Competition, June, k\*+; I k
- K !^ hockgrantreviewerforSocialSciencesandHumanitiesResearchCouncilk
- K !^ hockgrantreviewerforProvincialCentreforExcellenceforChildandYouthMentalHealthk
- K !^ hockreviewer, \$S=>?~ +^#. :/- =) 5C^ <Bb) <=>> 5~ ; - ?/5\$; +\* ; ' >B#- 6 \$B; +\* ; ' ; &6%( \. 6#; += /5. 5~ ; - \$5/4- 5; ; . 5. ~/ . 5 )-; =5. 6- &+^#. :/-; =. 6) %5%; ; . 5. ~/ . 5 ' >B#- 6 \$B; ; #/6 ) \: ^6 ?5 ^5 < ; B & =? >B#- 6 \$B; ) \: ^6 ?5 ^5 < 6' >B#- 6 \$B; \$: - 6 < /- 5. =B' >B#- 6 \$B; 15 < =5. 4- 5. 6) -; =5. 6- & - 5 & % . 5~ ( /- 6' 5%; ) -; =5. 6- & ) &S- =5. 6; #/6 ' >B#- 6 \$B; ' 4%) %(@\$; ) - % 6) \: ^6 ?5 ^5 < k
- K Panel member for Ontario Graduate Scholarship Review Committee, January, k\*++ + C January k\*++ = January k\*++; + (k
- K Brock University, SSHRC Master's Adjudication Committee, March, k\*+; Ck
- K Chair of Thesis Examining Committee for k\* k ^! k Theses k  
 ^ Sarah Bradley, Popular Culture k  
 ^ Heather McGuire, Social Justice and Equity Studies Program, October, k\*++ @
- K Representative for department Chair for k\* k ^! k Theses k
  - oK Malvina Skorska, September, k\*+; \* k
  - oK Carol Purslow, October, k\*++; k
  - oK Kendra Thomson, ^ 5 > /4: /B < ^ /& & 5% > & D ~ 5 ? - > ~ . 5 ~ \$ ^ 5; /5 ~ & % 6 ^ C = > ^ 5 ^ ) = % # /6 = 5 ^ . > B & - 6 ~ 1 H July, k\*++ @
  - oK Holly Stack, ^ < /5 \$ . 5 ~ 15 < =? ^ = > 5. 6' = ~ /% = > & - 55 ; 5 /B) ^ = : % ^ . = % 6? . 4- 5 b November, k\*++ Jk
- K External Examiner k
  - oK ^ ^ k Thesis, K Krista Andrews, McMaster University, January, D; st, k\*++ + k
  - oK ^ ^ k Thesis, K Wafa Saoud, York University, March, D; k\*++ + k
  - oK ^ ^ k Thesis, K Jake Keithley, Ontario Institute for Studies in Education, University of Toronto, May, D; k\*+; , k
  - oK Ed ^ k Thesis, K John Mattys, Ontario Institute for Studies in Education, University of Toronto, October, k\*+; I k k
  - oK ^ ^ k Thesis, K Kaitlyn Laforge, MacKenzie, Faculty of Applied Health Sciences, Brock University, k e cember, k\*+; J k k
  - oK ^ ^ k Thesis, K Jessica Schroeder, Clinical ^ evelopmental Psychology Program, York University, September, k\*+; D k k
  - oK ^ ^ k Thesis, K Anthony eBono, Clinical ^ evelopmental Psychology Program, York University, August, k\*+; \* k k
  - oK ^! k Thesis, K k arrell, Child and Youth Studies, Brock University k k
  - oK ^! k Thesis, K % k wigger, Child and Youth Studies, Brock University, September, k\*+; + k k

•K Internal k ^! k and k ^ ^ k Thesis Examiner k Times k

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**d) Other activities w**

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a(K Invited Presentations k

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Martini, K. K. ane, k. k. R. R. April, k. k. @ Roadmap to Careers in Psychology Presentation for Brock University Spring Perspectives on Teaching and Learning: Spotlight on Experiential Education k k

k

ane, k. k. R. R. November, k. k. C. (The dating game: Bullying to compete for dating and sexual partners in adolescence) Presentation for Brock University Psychology Department Brew Tap meeting k k

k

ane, k. k. ^ Marini, k. k. ^ Spadafora, k. k. ^ Farrell, k. k. ^ Barrow, k. k. ^ Woods, k. k. R. R. J. November (k Bullying Research Cafe, Brock University k k k

k

ane, k. k. R. R. ^ Marini, k. k. ^ Volk, k. k. ^ Vaillancourt, k. k. R. R. D. October (Bullying in relation to adolescent dating and sexual activities) Paper presented at the meeting of k arwink ayk \*+; D. Brock University k k

k

ane, k. k. R. R. R. R. D. (Translating theory and empirical research into clinical practice) Guest Lecture, CHYS k, Brock University, St Catharines, Canada k k

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ane, k. k. ^ Marini, k. k. R. R. January, k. k. + @ / & 5 < 6 ' > B # - > % 6 ) ~ ); > 5 ~ 5 < % - > > ; & B ? ~ > - & ) \$\$ = > 5 . ^ ; ~ > 4 ~ % ; = b ' ) ! ; 0 ' 2 . Brock University, St Catharines, Canada k k

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ane, k. k. R. R. January, k. k. + + I ( k 5 ~ / : / ~ ; . 6 G 5 \$ 1 5 < = : ~ 5 < 5 > < . ~ = > > ; & B ? ~ > - & ) \$\$ = > 5 . ^ ; ~ > 4 ~ % ; = b ' ) ! ; 0 ' 2 . Brock University, St Catharines, Canada k k

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ane, k. k. ^ Marini, k. k. R. R. October ( k . = 5 < 6 ) / > % 6 5 ~ . 5 ~ ) \$\$ = > 5 ~ + ^ # . : / - ; = . Guest Lecture, CHYS k, Brock University, St Catharines, Canada k k

k

ane, k. k. ^ Marini, k. k. R. R. April ( k . = 5 < 5 b + ^ 5 ? ~ = 5 ~ 5 < 5 ~ ) ~ - 6 > % 5 < / > \* + ^ # . : / - ; = . Guest Lecture, PSYCK, D. Brock University, St Catharines, Canada k k

k

ane, k. k. R. R. R. R. March ( k & & & > & . = 5 < 5 \$ . 5 ~ + ^ 5 ? ~ = 5 ~ 5 < 5 ) ~ - 6 > % 5 < ) \$\$ = > 5 . k Guest Lecture, PSYCK, D. Brock University, St Catharines, Canada k k

Marini, k. k. ane, k. k. R. R. R. R. Bosacki, k. k. R. R. D. October ( k / = % . 5 ~ 1 5 ~ / = % + ; 6 B 5 \$ / ) / & & 5 < 6 ' > B # - > % 6 ) ~ ); > 5 ~ 5 < - & ) ~ - 6 > % 5 < + ; 6 B ~ b ( / % 5 > . 5 ~ + ; 6 B ( / % 5 > Paper presented at the meeting of the Niagara YLC ~ CURA, Brock University, St Catharines, Canada k k

k

ane, k. k. R. R. R. R. June ( k + ^ ~ = 6 - & ? . = 5 < > 5 ~ ? ~ = > 5 6 . = 5 / \$ Guest Lecture, PSYCK < JC, k Brock University, St Catharines, Canada k k

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ane, k. k. R. R. R. R. March ( ^ + # ~ & / 5 ~ # / ? > - & : ~ = B . 5 ~ = 6 < 5 . 6 B . \$\$ = > 5 ~ . ~ - 6 > % 5 < > Guest Lecture, CHYS k, k department of Child and Youth Studies, Brock University, St Catharines, Canada k k

k

ane, k R R%++D January (^ % ^ = < 5 ~ = 6 < 5. 6. \$\$ = > > 5 / + # ? - > / < . ~ . 5 ~ 5 ~ \$. < . ~ / 5 & ~ 5 % > - & # / 6 = 5 E & ~ 5 ~ > . Guest Lecture, PSYCH, D, k epartment of Psychology, k Brock University, St Catharines, Canada k k

k

ane, k R R%++\* November (^ + # & ~ 5 ~ # / ? > - & : ~ = B. 5 ~ = 6 < 5. 6 B. \$\$ = > > ~ . ~ - 6 > % 5 < > 4 - 5 \$ / < ; ~ / 5. 6. 5 ~ 5 ; 6 / 5 ~ # ~ ~ : / ~ 5 %. Paper presented at the Brock Research Institute for Youth Studies Colloquial Series, Brock University, St Catharines, k Canada k k

k

ane, k R R%++\* February (^ ; # / 6 # - ~ . 5 ~ ) ~ - 6 > % 5 < ) \$\$ = > > 5. Guest Lecture, PSYCH J, D, k epartment of Psychology, Brock University, St Catharines, Canada k k

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ane, k R R%++; October (^ ) \$\$ = > > 5 . 5 ~ + = ~ 5 ~ # / ? . Guest Lecture, PSYCH C' + C, k epartment of Psychology, Brock University, St Catharines, Canada k k

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/ (Conferences A Workshops Attended k

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- K Mental Health and Addictions Charter for Niagara Breakfast, March k + ; J k
- K PREVNet Highly Qualified Personnel for National Centre of Excellence Grant Working Group Meeting, Toronto, January k + ; J k
- K Pathways to Mental Health Care with Young People, Niagara Public Health July k + ; D k
- K 7th Annual PREVNet Partners Conference: It's Everybody's Role to Promote Mental Health and Prevent Bullying, May k + ; D k

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## E. Teaching Activities w

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### 1. Courses Taught k

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PSYCH < , + Foundations of Psychology (k

- K Fall A Winter k + ; @ k + ; = Enrollment k J + + (k
- K Fall A Winter k + ; , A + \* + Enrollment k J = C (k

k

PSYCH k + ; Roadmap to Careers in Psychology (k

- K Fall k + ; @ Enrollment k = + (k
- K Fall k + ; , Enrollment k = + (k

k

PSYCH k ; C Abnormal Psychology (k

- K Fall k + ; , Enrollment k = + (k

k

PSYCH + @ Psychology Students' Transition to Work (k

- K Winter k + ; @ Enrollment k J (k
- K Winter k + ; , k

k

PSYCH D \* = Introduction to Abnormal Psychology (k

- K Fall k + ; I Enrollment k + (k k

- K Fall, k\*; @, k; enrollment; (k
- K Winter, k\*; , enrollment; =+(k
- k
- PSYCI; @; I; Lifespank development; Research; Seminar(k
- K Course; coordinator; k; Fall; Winter; k\*++ @\*++ =; k; Fall; Winter; k\*+; + ~\*+;; 9 k; Fall; Winter; k\*+;; ~\*+; \* k
- K Faculty; member; k\*++ , ~\*+; + k\*+; \* ~\*+; D; k\*+; D\*+; J k
- w

PSYCAHYSD \*D; Psychology; of; Parenting; k

- K Winter; k\*++ ; k; enrollment; =+(k
- K Winter; k\*++ \*k; enrollment; =+(k
- K Winter; k\*++ D; k; enrollment; =+(k
- K Winter; k\*++ J; k; enrollment; =+(k
- K Winter; k\*++ C; k; enrollment; k; +=(k
- K Winter; k\*++ I; enrollment; k; J+ (k
- K Winter; k\*++ @; enrollment; k; J+ (k
- K Fall; k\*++ @; enrollment; k; + (k
- K Fall; k\*++ , enrollment; k; +=(k
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- K Winter; k\*+; \* enrollment; k; +\* (k
- K Winter; k\*+; D; enrollment; k; +C(k
- K Winter; k\*+; C; enrollment; k; +=(k
- k

PSYCD<\*+~ Abnormal; Psychology; k

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- K Fall; Winter; k\*++ \* \*++ D; enrollment; k; @; k
- K Fall; Winter; k\*++ D\*++ J; k; enrollment; k; @; k
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- K Fall; Winter; k\*++ I; A\*++ @; enrollment; k; +=(k
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- K Fall; Winter; k\*+; + A\*+;; enrollment; k; \*+ (k
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- K Fall; Winter; k\*+; \* A\*+; D; enrollment; k; +C(k
- K Fall; Winter; k\*+; D; A\*+; J enrollment; k; +=(k
- K Fall; Winter; k\*+; J; A\*+; C; enrollment; k; +=(k
- k

PSYCAHYSDG, J ~ Social; development; k

- K Fall; k\*++ ; enrollment; k; D\* (k
- k

PSYCI \*+~ Concept; of; development; k; Graduate; course; k

- K Winter; k\*++ ; enrollment; k; \* (k
- K Fall; k\*++ ; enrollment; k; k (k

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- K Fallk\*++DkKonrolmentk\*(k
- K Fallk\*++JkKonrolmentk\*(k
- K Fallk\*++CkKonrolmentk\*(k
- K Fallk\*++IkKonrolmentk\*(k

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PSYCK \*= IntroductiontoPsychologyandHumank developmentkk

- K CPIE LearningInitiativeproposal%withico~applicantJohnMitterer(kto developanonlinek courseapproved,kAprilk\*+;Ck  
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### GraduateStudentSupervisionww

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#### ThesisSupervisionww

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RichardKennedy,k ^! %++Qk  
analReker,k ^ %++;(k

ChristinaBrook,k ^! %++;(k

AmandaStoner,k ^! %++;\*(k

KatieQuinlan,k ^! %++;J(k

AmandaStoner,k ^ %++;@k

KianaLaPierre,k ^! %++;@k

KiannaLaPierre,k ^ %Candidate%ongoing(k

NivethaPrabakaran,k ^! %++\*(k

HannahMcDowell%o~supervisionkwithkDrkAnthonykVolk;kongoing(k

w

#### ThesisCommitteeMembershipw

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ianelSantesso,k ^ %++I(k

EmmaPote,k ^ %withdrawn(k

MarinaFarrell,k ^ %Candidate%++;@k

TinaBrook,k ^ %Candidate%++;@k

AnnFarrell,k ^ %Candidate%++;=(k

JordanPower,k ^ %Candidate%ongoing(k

ElliottMacDonell,k ^ %Candidate%ongoing(k

TessaMazachowsky,k ^ %Candidate%ongoing(k

CaitlynGallant,k ^ %Candidate%ongoing(k

JenniferRoters,k ^ %Candidatek%ongoing(k

Victoriaykstra,k ^ %Candidate%ongoing(kk

k

k

KellyCampbell,k ^! %++J(k

SherriCampbell,k ^! %++Dk

Alisonkuff,k ^! %++Dk

aniellek yke\_k ^! ^!%++Ck  
 BethkVisser\_k ^! ^!%++Ck  
 ianelSantesso\_k ^! ^!%++Dk  
 AndreaMarkovic\_k ^! ^!%+;; (k  
 JoleneHill\_k ^! ^!Candidate^!%+;J (k  
 SeanRobb\_k ^! ^!%+;C(k  
 NicoleBarry\_k ^! ^!Candidate^!%+;I (k  
 anielProvenzano\_k ^! ^!%+;@k  
 ErinkHiggs\_k ^! ^!%+;@k  
 JordankPower\_k ^! ^!%+;@k  
 TessakMazachowsky\_k ^! ^!%+;@k  
 LaurakMurray\_k ^! ^!%+;, (k  
 JenniferRoters\_k ^! ^!%+;, (k  
 Owenk aly\_k ^! ^!%+;, (k  
 Victoriak ykstra\_k ^! ^!%+;, (k  
 XiaoyangkXia\_k ^! ^!%+;, (k  
 TorikWattamk^ongoing(k  
 HammahkShahidk^ongoing(kk  
 k

**AdvancedStudyPaperSupervision**  
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MikeLoguek@ C;^Summerk\*+;\* (k  
 JulieSt^Cyrk@ C;^Summerk\*+;\* (k  
 JunrukZhaok^SYCk@ C;^Septemberk\*+;+(k  
 EmmakPotek^SYCk@ C;^Summerk\*+;D(k  
 AmandaStonerk@ C;^Summerk\*+;D(k  
 ThaliaSemploniusk@ C;^Summerk\*+;J (k  
 AshleyHosker^Fieldk@ C^Summerk\*+;J (k  
 AnnFarrellk@ C;^Summerk\*+;C(k  
 JoshuaBlackk@ C;^Summerk\*+;C(k  
 k

**Apprenticeships**  
w

AdotekAnumk^SYCk@ +,^CommunitykApprenticeship;k\*++J(k  
 AmandaStonerk^SYCk@ +,^CommunitykApprenticeship;kAprilk\*+;\* (w  
 JunrukZhaok@ +@TeachingkApprenticeship;kWinterk\*+;D(w  
 k

**IndependentStudySupervision** k k k k k k k k k k

SeanRobbk^SYCk@ \*D% ^k irectedkReadingskCourse:k ifferentialk iagnosis;k\*+;@kkk  
 KerrikMichalick% ^ ^IndependentkStudy;k\*++=(k  
 CatherineMilnerk% ^ ^IndependentkStudy;k\*+;+(k  
 ianelSantesso% ^ ^IndependentkStudy;k\*++Ck

**UndergraduateStudentSupervision**  
w

**ThesisSupervision**  
w

w

Claudia Megna  
Juanita Vibert  
Stacey Jackson  
Ashley Howe  
Monika Galati  
Janine Croke  
Lindsey Leenaars  
Susan Patrick Harris  
Jean Gaspich  
Ashley Jellema  
Jennifer Cuvillo  
Corine Van Staalduinen  
Julie Francey  
Kyla ennill  
Charlene Esposto  
Nicole Mantel  
Nick Slothouber  
Kristen Morrison  
Stephanie Findlay  
Lisa Marchioli  
Nichole Carroll  
Amanda Webb  
Kaitlyn Salvaterra  
Kyle Horvarth  
Hannah Madden  
Kristen yell  
Breanna Elliottson  
Samantha Helmecci  
Hannah Morse  
Ashley Skinner  
Marlaina Sann  
Lauren Berwick  
Kelly ueck  
Shannon Hicks  
Sarah McComb  
Megann Haennel  
Sarah Lam  
Emalee Majnarich  
Sierra Kramer  
Candice De Freitas  
Julianna Ciccarelli

**Independent Study Supervision**

Travis Belchior  
Lianne Charlebois

Sara Altamari BSc Psychology J= Summer; D(k k  
 Lewis Lau BSc Psychology J= Summer; J (k  
 Stephanie Kapetaneas BSc Psychology ;+ Summer; C(k  
 Julia vornikova BSc Psychology ;+ Fall; C(k  
 Rebecca Young BSc Psychology ;+ Summer; I (k  
 k k k k k k

## F. University/Community Service

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- K Member, Planning, Priorities and Budget Advisory Committee, July; to present
- K Member, Senate Governance Standing Subcommittee, September; to present
- K Chair, Undergraduate Program Committee, Standing Senate Subcommittee, June; to present
- K Vice-Chair, Undergraduate Program Committee, Standing Senate Subcommittee, September; to May
- K Member, Forensic Psychology and Criminal Justice Program Committee, September; to present
- K Chair, Psychotherapy and Professional Psychology Program Committee, August; to present
- K Chair, Graduate Diploma in Clinical Psychology and Counselling Committee, July; to
- K Member of the Hoc Committee for the planning of the Roadmap to Careers in Psychology course w
- K CRISS and Student Travel Awards Adjudication Committee, February; to
- K Reviewer, CIHR, Project Grant Competition, June; I k
- K Brock University SSHRC Master's Adjudication Committee, March; Cw
- K Faculty of Social Sciences Curriculum Committee, May; J to June; Cw
- K Self-Study Committee, January; J to June; Ck
- K Honours Thesis Appeals Committee, May; D, May; J k
- K Psychology <J+D D, Appeals Committee, July; Dk
- K Undergraduate Program Officer, Psychology Department, July; to June; C January; to August; k
- K Psychology Department Representative, Ontario University Fair, September; \* September; D, September; I k
- K Psychology Department Representative, Fall Preview Day, November; \* November; Dk
- K Psychology Department Representative, Spring Open House, March; D, March; J k March; I, March; @k
- K Psychology Department Representative, Campus Day, April; J kkk
- K Faculty Presenter, Smart Start, Brock University, ; to present k
- K Member of the Hoc Committee concerning the planning of a Transdisciplinary Space application for a Graduate Diploma in Clinical Psychology and Counselling, August; to May; \* (k
- K Undergraduate Committee, September; K Present k
- K Faculty Organizer, Annual In-house Conference, Psychology Department Brock University, ;+; k;
- K Developmental Representative, Graduate Admissions Committee, @k=k; w



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**Curriculum Vitaew**

FSIPk J kJKJk

Gordonk Hodson, kPhDk  
 Fellowk ofk APS, kSESP, kSPSPk  
 Departmentk ofk Psychologyk  
 Brockk Universityk  
 St. kCatharines, kOntario, kCanada kL2S3A1k  
 (\*!+,!,!\*\*\* ) kextk\*% . k  
[ghodson@brocku.ca](mailto:ghodson@brocku.ca)  
 k

[Scopusk Authork ID](#) k(+)&+(\*,\*( k  
[ORCIDk ID](#) k  
[ResearchGate](#) k  
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**!kFormalk Educationk**

| Institutionw                                          | Degreew                      | Datesw                        |
|-------------------------------------------------------|------------------------------|-------------------------------|
| Thek Universityk ofk Westernk Ontariok                | Ph.D.k (Socialk Psychology)k | Sept.k (( * k) kSept.k (( k   |
| Thek Universityk ofk Westernk Ontariok                | M.A.k (Socialk Psychology)k  | Sept.k (( & k) kSept.k (( * k |
| Huronk Collegek<br>(nowk Huronk Universityk College)k | B.A.k (Honours)k             | Sept.k (( k) kAprilk (( & k   |

**!kAcademic Distinctions and Awards;k**

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 %)\* k Recipientk ofk Brockk Universityk kChancellork kChairk fork Researchk Excellencek  
 (\$60,000)k  
 %)))9%)% k Socialk Sciencesk andk Humanitiesk Researchk Councilk ofk Canadak (SSHRC)k Post-  
 Doctoralk Fellowshipk (7.\*+9%))9)=,8 k\$36,000.kk  
 '(.(9'((( k SSHRCk Doctoralk Fellowshipk  
 '(.(9'((( k Universityk ofk Westernk Ontariok Graduatek Tuitionk Scholarshipk (GTS)k  
 '(=(9'(( k Ontariok Graduatek Scholarshipk (OGS)k  
 '(.(9'((& k Huronk Collegek Corporatiok Scholarshipk fork Upperclassmenk (Honours)k  
 '(.(9'(( k Huronk Collegek Corporatiok Scholarshipk fork Freshmenk

**Fellowshipsk**

Societyk ofk Experimentalk Socialk Psychologyk (SESP)k (%)' & k  
 Associationk fork Psychologicalk Sciencek (APS)k (%)'.9 k  
 Societyk fork Personaliok andk Socialk Psychologyk (SPSP)k (%)',9 k  
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 citations, link [paperk 10^ Noannidisk et al. k7%\)' \(8!k \(specifick tablek fork %\)'. kstatistics\).kk](#)

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**!kAcademic Positions Heldk (institutions, kposition/rankk andk dates);k**  
 k



















MacInnis, I. C. C., & Hodson, G. (2015). Surfing for sexual sin: Relations between religiousness and viewing sexual content online. *Sexual Addiction & Compulsivity, 23*, 1-9. <http://dx.doi.org/10.1080/10720162.2015.1130000>

Hoffarth, M. R., & Hodson, G. (2015). Who needs imagined contact? Replication attempts examining previous contact as a potential moderator. *Social Psychology, 47*, 90-95. DOI: 10.1027/1864-9335/a000258 [\\$2FA](#)

Hoffarth, M. R., Drolet, C. E., Hodson, G., & Haferkamp, H. (2015). Development and validation of the Attitudes Toward Asexuals (ATA) scale. *Psychology and Sexuality, 8*(1), 1-15. DOI: 10.1080/19268923.2015.1055555 [\\$2FA](#)

Keely, N., Hodson, G., & Bruneau, E. (2015). They seek us as less than human: Meta-dehumanization predicts intergroup conflict in reciprocal dehumanization. *Journal of Personality and Social Psychology, 108*, 1-15. <http://dx.doi.org/10.1037/pspa0000044>

Hodson, G., & MacInnis, I. C. (2015). Derogating humor as a delegitimization strategy in intergroup contexts. *Translational Issues in Psychological Science, 2*, 8-9. <http://dx.doi.org/10.1037/tps0000052>

Choma, B. L., Haji, R., Hodson, G., & Hoffarth, M. (2015). Avoiding cultural contamination: Intergroup disgust sensitivity and religious identification as predictors of interfaith threat, faith-based policies, and Islamophobia. *Personality and Individual Differences, 95*, 9-15. <http://dx.doi.org/10.1016/j.paid.2016.02.013>

Adachi, P. J. C., Hodson, G., Willoughby, K. T., Blank, I. C., & Ha, A. (2015). From outgroups to allied forces: Effect of intergroup cooperation on violent and non-violent video games on boosting favorable outgroup attitudes. *Journal of Experimental Psychology: General, 145*, 1-15. <http://dx.doi.org/10.1037/xge0000145>

Hoffarth, M. R., & Hodson, G. (2015). Green on the outside, red on the inside: Perceived environmentalist threat as a factor explaining political polarization of climate change. *Journal of Environmental Psychology, 45*, 1-9. DOI: 10.1016/j.jenvp.2015.11.002

- K [recipient of the Graduate Student Award for the American Psychological Association \(APA\) Division 17 Society for the Environmental Population & Conservation Psychology](#). [\\$2FA](#)

Onraet, E., Van Hiel, A., Dhont, R., Hodson, G., Schitterkatte, M., & De Pauw, S. (2015). The association of cognitive flexibility with right-wing ideological attitudes and prejudice: A meta-analytic review. *European Journal of Personality, 29*, 1-15. DOI: 10.1002/per.2027 [\\$2FA](#)

- K recipient of the Wiley Prize (award for outstanding contribution to EJPP based on Masters or Doctoral work) [http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1099-0984/homepage/wiley\\_prize.htm](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1099-0984/homepage/wiley_prize.htm)

Adachi, P. J. C., Hodson, G., & Hoffarth, M. (2015). Video game play and intergroup relations:





Examining the association between generalized authoritarianism and subjective well-being. *Personality and Individual Differences*, 55, 9. <http://dx.doi.org/10.1016/j.paid.2013.06.018>

**Hodson, G., Choma, B.L., Boisvert, J., Hafer, C., MacInnis, C.C., Costello, K.A.** The role of intergroup disgust in predicting negative outgroup evaluations. *Journal of Experimental Social Psychology*, 49. DOI: 10.1016/j.jesp.2012.11.002

**Hewstone, M., Swart, H., Hodson, G.** Of babies and bath-water, and rabbits and rabbit-holes: A plea for conflict-prevention, not conflict-promotion. *Behavioral and Brain Sciences*, 35. doi:10.1017/S0140525X12001239

**MacInnis, C.C., Hodson, G.** Intergroup bias toward Group A: Evidence of prejudice, dehumanization, avoidance, and discrimination against sexuals. *Group Processes and Intergroup Relations*, 15. DOI: 10.1177/1471642212458811

**Choma, B.L., Hanoch, Y., Gummerum, M., Hodson, G.** Relations between risk perceptions and socio-political ideology are domain- and ideology-dependent. *Personality and Individual Differences*, 54. <http://dx.doi.org/10.1016/j.paid.2012.07.028>

**MacInnis, C.C., Hodson, G.** Where the rubber hits the road: An route to intergroup harmony: Examining contact intentions and contact behavior under meta-stereotype threat. *British Journal of Social Psychology*, 91. DOI: 10.1111/j.2044-8295.2011.02044.x

**Bastian, B., Costello, K., Loughnan, S., Hodson, G.** When closing the human-animal divide expands moral concern: The importance of framing. *Social Psychological and Personality Science*, 3. DOI: 10.1177/1948543312458811

**Hodson, G., Busseri, M.A.** Bright minds and dark attitudes: Lower cognitive ability predicts greater prejudice through right-wing ideology and low intergroup contact. *Psychological Science*, 23. DOI: 10.1177/0956797612458811

**Choma, B.L., Hodson, G., Costello, K.A.** Intergroup disgust sensitivity as a predictor of Islamophobia: The moderating effect of fear. *Journal of Experimental Social Psychology*, 48. <https://doi.org/10.1016/j.jesp.2011.10.014>

**Hodson, G.** Do ideologically intolerant people benefit from intergroup contact? *Current Directions in Psychological Science*, 20. DOI: 10.1177/0963529211419111

**Costello, K., Hodson, G.** Social dominance-based threat reactions to immigrants: A need for assistance. *European Journal of Social Psychology*, 41. DOI: 10.1002/ejsp.769

**Hodson, G., Rush, J., & MacInnis, D. L. (2009).** Cavalier humor beliefs facilitate the expression of group dominance motives. *Journal of Personality and Social Psychology, 99*, 949-961. <http://dx.doi.org/10.1037/a0019627>

**Hodson, G., & MacInnis, D. L. (2009).** Prejudice-relevant correlates of humor temperaments and humor styles. *Personality and Individual Differences, 49*, 109-115. <https://doi.org/10.1016/j.paid.2010.05.016>

**Costello, K., & Hodson, G. (2009).** Exploring the roots of dehumanization: The role of animal-human similarity in promoting immigrant humanization. *Group Processes and Intergroup Relations, 12*, 1-15. <https://doi.org/10.1177/1478781508325888>

**Rice, D. R., Abrams, D., Badea, I., Bohner, G., Carnaghi, A., Dementi, S. H., Durkin, K., Ehmann, B., Hodson, G., Kokdemir, D., Masip, J., Moran, A., Oswald, D. L., Ouwkerk, M. A., Reber, R., Schroeder, J., Tasiopoulou, K., & Trzebinski, K. (2010).** What did you just call me? European and American ratings of the alence of ethnophobias. *Journal of Language and Social Psychology, 29*, 9-24. <https://doi.org/10.1177/0261927X09358888>

**Hodson, G., Choma, B. L., & Costello, K. (2009).** Experiencing Alien-Nation: Effects of a simulation intervention on attitudes toward homosexuals. *Journal of Experimental Social Psychology, 45*, 105-111. <https://doi.org/10.1016/j.jesp.2009.02.010>

**Hodson, G., Hogg, S. M., & MacInnis, D. L. (2009).** The role of dark personalities (narcissism, Machiavellianism, psychopathy) and five personality factors in explaining prejudice. *Journal of Research in Personality, 43*, 109-120. <https://doi.org/10.1016/j.jrp.2009.02.005>

**Hodson, G. (2008).** The puzzling person-situation schism in prejudice research. *Journal of Research in Personality, 43*, 10-15. <https://doi.org/10.1016/j.jrp.2008.12.035>

**Hodson, G., Harry, H., & Mitchell, A. (2008).** Independent benefits of contact and friendship on attitudes toward homosexuals among authoritarians and highly identified heterosexuals. *European Journal of Social Psychology, 38*, 109-120. <https://doi.org/10.1002/ejsp.558>

**Hodson, G. (2008).** Interracial prison contact: The pros for (socially dominant) cons. *British Journal of Social Psychology, 79*, 109-120. <https://doi.org/10.1111/j.1469-8608.2007.01211.x>

**Esses, V. M., Veenliet, S., Hodson, G., & Mihic, S. (2008).** Justice, morality, and the dehumanization of refugees. *Social Justice Research, 21*, 109-120. <https://doi.org/10.1007/s11211-007-9009-9>

**Hodson, G., & Costello, K. (2008).** Interpersonal disgust, ideological orientations, and dehumanization as predictors of intergroup attitudes. *Psychological Science, 19*, 109-115. <https://doi.org/10.1111/j.1469-8608.2007.01211.x>

















































book series Current Issues in Social Psychology (abstract submitted July 2, 2019; k proposal accepted Oct 2, 2019; submitted March 2, 2020; revision 1 invited Apr 28, 2020; k revision 1 submitted Apr 28, 2020).

k

Dhont, R. & Hodson, G. (under review). (proposal) Speciesism: Towards an integrative theory of why humans oppress other animals. *European Review of Social Psychology* (submitted Oct 26, 2019; proposal accepted Oct 28, 2019). #1) -2019-0030

w

Earle, J. & Hoffarth, J. & Prusaczyk, K. & MacInnis, D. & Hodson, G. (under review). A multilevel analysis of LGBT rights support across 10 countries: The role of primary and secondary contact and country laws. *British Journal of Social Psychology* (submitted March 2020; revision 1 invited May 28, 2020; revision 1 submitted July 21, 2020). k +1 P.20.0072

w

Prusaczyk, K. & Earle, J. & Hodson, G. (under review). Reducing beef consumption: A brief nudged orled education intervention can increase willingness to order a mushroom-beef burger. *Food Quality and Preference* (submitted April 26, 2020; revision 1 invited June 2, 2020; revision 1 submitted July 2020).

k

Hodson, G. (under review, proposal). Microaggressions: Paradoxical creep concerns for harm and moral foundations. *Perspectives on Psychological Science* PPS-20-188. (submitted May 2020; proposal accepted May 18, 2020)

k

Rosenfeld, D. & Balcetis, E. & Bastian, T. & Berkman, K. T., Bosson, M. E. & Brannon, E. & Burrow, L. & Cameron, R. & Chen, K. & Cook, J. & Crandall, K. & Davidai, D. & Dhont, R. & Eastwick, J. & Gaither, K. & Gangestad, K. & Gilovich, T., Gray, J. & Haines, D. & Haselton, M. G., Haslam, S. & Hodson, G., Hogg, J. & Hornsey, J. & Huo, L. & Joel, K. & Jost, J. T., Kachanoff, H. & Kraft-Todd, G., Leary, J. & Ledgerwood, J. & Lee, R. T., Loughnan, S. & MacInnis, D. & Mann, T., Murray, J. & Parkinson, J. & Perez, J. & Pyszczynski, T., Ratner, E. & Rothgerber, H., Rounds, J. & Schaller, J. & Cohen Silver, J. & Pellmar, T. & Trohming, S. & Wim, D. & Hoemmes, H. & Jurganci, T. & Vandellos, J. & Volz, K. & Zayas, L. & Tomiyama, A. (under review). *Conducting social psychological research in the wake of COVID-19* *Perspectives on Psychological Science* (proposal accepted April 28, 2020; manuscript submitted May 2020). PPS-20-213

w

Choma, B. & Hodson, G., Hanoch, L. & Gummerum, J. & Kumanyika, J. (under review). Ideological and psychological predictors of COVID-19-related collective action, opinions, and health compliance across three nations. *Social Psychological and Personality Science* (submitted May 2, 2020). SPPS-20-0240

k

k

Hodson, G., Ganesh, S. & Race, T. (under review). Double-pronged bias against black women: Sexism and racism (but not conservatism) as unique predictors. *Canadian Journal of Behavioural Science* (submitted May 2020). k+ -2020-0208

k

Buliga, S. & MacInnis, D. & Hodson, G., & Biamonte, J. (under review). Friendship and romance

across the political divide: Hindrance or help for outgroup political attitudes? *Journal of Applied Social Psychology* (submitted May 29, 2020). 20-JASP-0262

k

Choma, M., Hodson, G., Manry, B., Hanoch, L., & Gummerum, I. (under review). A week in the life of COVID-19: Increased contagion compliance and collective action but growing anti-Chinese bias. *Journal of Applied Social Psychology*. (submitted July 2, 2020). 20-JASP-0329

k

Dhont, R., & Piazza, J. & Hodson, G. (under review). The role of meat appetite will fully disregard factory farming as a pandemic catalyst risk. *Psychological Science* (submitted July 20, 2020). 20-1137

w

**Grants obtained**

k

**a) internal grants**

k

Hodson, G. (2006). Social Sciences and Humanities Research Council (SSHRC) Internal Seed Grant, Brock University (value \$20,000)

k

Hodson, G. (2012-2013). Office of Research Services (Brock University) 7 funding grant (value \$2000)

w

Hodson, G. (2013-2014). Office of Research Services (Brock University) 7 funding grant

Hodson, G. (2014-2015). Council for Research in the Social Sciences (CRSS) grant (Brock University) (value \$20,000) *Perceptions of risk and threat as a function of ideology*

w

Hodson, G. (2015-2017). Council for Research in the Social Sciences (CRSS) grant (Brock University) (value \$20,000) *Promoting climate change mitigation 1: appealing to right-leaning concerns and solutions* (value \$20,000)

w

w

Hodson, G. (2015-2018). Chancellor's Chair for Research Excellence (Brock University) \$20,000

kk

Dhont, R., Leite, I., & Hodson, G., & Milfont, T. (2017). Cross-Cultural Investigation of Moral Paradoxes Involving Animal Exploitation. University of Kent Faculty of Social Sciences Faculty Research Fund. \$4570.20 (approx. \$7859.86 Cdn. award) (awarded Dec 2017).

k

Hodson, G. (with Earle, I. & Prusaczyk, K. (2018-2020). Effects of Objectifying Video Game Content and Personality on Men's Likelihood to Sexually Harass or Exploit Women. Council for Research in the Social Sciences (CRSS) grant (Brock University) (value \$20,000) (awarded Oct. 12, 2018)

k

Hodson, G. (2020). Match of Minds (with student Kaileigh Chenck). Brock University (value \$20,000) (awarded May 2020).

k

**b) refereed external grants**

k

k

Meleady, B. & Crisp, R. J. & Hodson, G. (under review). Beyond Prejudice: Intergroup Contact Effects on Cognitive Flexibility and Expansion. Economic and Social Research Council (submitted Aug 2019).

k

Dhont, R. & Hodson, G. The Impact of Animal Advocacy Books on Attitudes and Behaviour: A Large-scale Experimental Intervention Study. Animal Charity Evaluators (value £1238 (approx. Q2, 78Q2A) (accepted Sept 2017)

k

MacInnis, D. & Hodson, G. Fighting Aids in the veg\* community: Examining and overcoming a barrier to successful veg\*nism and/or collective action. Animal Charity Evaluators. (value \$2600 US) (Jan 2017)

k

Carré, J. & Arnocky, K. & Hodson, G., & Abbey, R. Situational, psychological, and hormonal processes underlying sexual aggression. Social Sciences and Humanities Research Council of Canada (SSHRC) Insight Development Grant, 2015-2017 (value \$100,000)

k

Choma, B. & Hodson, G. (co-investigator). Ideological beliefs and differential distress: Threat target as a moderator. Social Sciences and Humanities Research Council of Canada (SSHRC) Insight Grant, 2015-2020 (value \$100,000)

k

egalowitz, J. & Mondloch, J. & Ashton, J. (collaborator), Hodson, G. (collaborator). Personality and the automatic processing of facial emotion. Social Sciences and Humanities Research Council of Canada (SSHRC) \$300,000 (2010-2012)

k

Hodson, G. (2007-2010) (extended to 2011; Brock University extended it internally to 2013). Intergroup disgust and ideology as determinants of prejudice. Social Sciences and Humanities Research Council of Canada (SSHRC) standard Research Grant Competition (value \$88,728)

◆

Application was ranked C+ of 92 in my category, and included a 2 year Release Time stipend. A Named Researcher for Economic and Social Research Council (Future Leader scheme grant entitled Political Orientation and Differential Threat-Sensitivity) (Becky Choma).

k

Hodson, G. (2018) Suppression and rebound of unconscious prejudice. Social Sciences and Humanities Research Council of Canada (SSHRC) Postdoctoral Fellowship

k

**c) other/Miscellaneous**

k

International Academic Visitor Fund (SE, sterling). University of Kent, Canterbury, for travel expenses to University of Kent for collaboration, July 2016.

k

**2 Work in Progress**

kkkkk





**2009-2010 (on sabbatical leave)**

**2007-2009 (Brick University, Canada)**

- Psychology 2P30 (Fundamentals of Social Psychology)
- Psychology AHCF Focus Area Research Seminar (graduate level)
- Psychology C- (Psychology of Prejudice and Discrimination)

**2005-2007 (Brick University, Canada)**

- Psychology 2F30 (Introduction to Social Psychology)
- Psychology 2F25 (Introduction to Personality)
- Psychology #2, (Critical Thinking in Psychology)
- Psychology ;=?<#C- (Psychology of Prejudice and Discrimination)

**2004-2005 (Brick University, Canada)**

- Psychology 2F30 (Introduction to Social Psychology)
- Psychology 2F25 (Introduction to Personality)
- Psychology #2, (Critical Thinking in Psychology)

**2003-2004 (University of Wales ~ ansea, UK)**

- Psychology # "2, (Work Psychology [Industrial-Organizational])
- Psychology # "22. (Emotion and Prejudice)
- Psychology PS-213 (Social Psychology)
- Psychology # "--< (Individual \* Abnormal [Personality])

**2002-2003 (University of Wales ~ ansea, UK)**

- Psychology # "2, (Work Psychology [Industrial-Organizational])
- Psychology # "--< (Individual \* Abnormal [Personality])

**1999-2001 (University of Western Ontario, Canada)**

- Psychology 270 (Introduction to Social Psychology), Kings College, University of Western Ontario (2001).
- Psychology C, (Introduction to Social Psychology), University of Western Ontario \$-...%°

**University of Western Ontario (and Kings College), London, Canada**

- Psychology 270 (Introduction to Social Psychology), Kings College \$=, (students) taught once.
- Psychology C, (Introduction to Social Psychology). \$-<. (students). taught once.
- (below, specific courses in specific years)

(take my teaching evaluations seriously, and I am pleased that they have been consistently very high. Despite teaching large classes, and mandatory topics such as research design, my students find me very approachable and fair. Most notably, I manage to maintain high ratings despite my strict grading standards (e.g., mean grades in the "A"–"C" range in second-year courses).)

**2. Graduate and undergraduate students supervised at Brock and other universities)**

**Post-doctoral supervision**

Nour Kteily (PhD Harvard), Aug 2013–July 2014. HRC-funded.

**Graduate students (% w/role as advisor or co-advisor)**

\* = recipient of Canadian Psychological Association (CPA) Certificate of Academic Excellence (for MA Thesis)  
 \*\* = recipient of Canadian Psychological Association (CPA) Certificate of Academic Excellence (for PhD Thesis)

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AcademicHistoryw

| Positionk                          | k                                                      | k | k       | Institutionk                                    | k            | kkkkkkk  | kkkkDatek              |
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| AssistantProfessork                | k                                                      | k | k       | NorthDakotaStateUniversityk                     | k            | k        | k\$, kK'((" k          |
| Post-doctoralFellowshipk           | MedicalResearchCouncil–Cognition@ Bra^nk cienciasUnitk | + | –k\$, k | MedicalResearchCouncil –AppliedPsychologyUnit)w |              |          |                        |
| Ph.D.(CognitivePsychology)k        | k                                                      |   |         | UniversityofWaterlook                           | kkkkkkkkkkkk | kkkkkk   | kkkkkkk\$#kkkkk"+ k    |
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| ResearchAssociate(CognitionLab.)kk |                                                        |   |         | UniversityofCalgaryk                            | k            | kkkkkkkk | kK'(\$ k               |
| B.A.(Psychology,WithDistinction)kk |                                                        |   |         | UniversityofCalgaryk                            | k            | k        | k\$,+ kK'(" k          |

## Grants & Research Awards Received

W

Arnell, K. (PI) (P4\*) National Sciences and Engineering Research Council (NSERC) 2008\* Individual Discovery operating grant, *Individual Differences in Attention: Behavioural and Electrophysiological Investigations*, (NSERC) Canadian.

k

Arnell, K. (PI) (P4\*) National Sciences and Engineering Research Council (NSERC) 2008\* Individual Discovery operating grant, *Behavioural and electrophysiological investigations of individual differences in dual-task attention costs*, (NSERC) Canadian.

k

Arnell, K. (PI) (P4\*) National Sciences and Engineering Research Council (NSERC) 2008\* Individual Discovery operating grant, *Behavioural and electrophysiological investigations of the attentional blink*, (NSERC) Canadian.

W

Arnell, K. (PI) (P4\*) National Sciences and Engineering Research Council (NSERC) 2008\* Individual Discovery operating grant, *Behavioural and electrophysiological investigations of the attentional blink*, (NSERC) Canadian.

W

Klein, R. (PI) (P4\*) National Sciences and Engineering Research Council (NSERC) 2008\* Individual Discovery operating grant, *Behavioural and electrophysiological investigations of the attentional blink*, (NSERC) Canadian.

W

Arnell, K. (PI) (P4\*) National Sciences and Engineering Research Council (NSERC) 2008\* Individual Discovery operating grant, *Electrophysiology and behavioural investigations of dual-task attention costs*, (NSERC) Canadian.

k

Arnell, K. (PI) (P4\*) Canadian Foundation for Innovation (CFI) 2008\* 6 opportunities fund, *Innovation Trust, Electrophysiology and behavioural laboratory for the Study of Attentional Limitations*, (CFI) Canadian.

W

Arnell, K. (PI) (P4\*) Neuropsychiatric Research Institute small grant award, *The role of attention in "central" processes: Investigations using event-related potentials*, (NSERC) Canadian.

k

Arnell, K. (PI) (P4\*) North Dakota State University Grant, *Cross-modal attentional bottlenecks: Investigations using event-related potentials*, (NSERC) Canadian.

k

McCourt, K. (PI) (P4\*) National Science Foundation (NSF) Experimental Program to Stimulate Competitive Research (EPSCOR) Infrastructure Improvement Grant, *Laboratory for the study of human psychophysiology*, (NSF) Direct Costs.

k

Arnell, K. (PI) (P4\*) International Human Frontier Science Program organization (IHFS) Long Term Fellowship, *Processing Limitations in Visual Attention*, (NSERC) Canadian.

k

Arnell, K. (PI) (P4\*) National Sciences and Engineering Research Council (NSERC) 2008\* Post-graduate doctoral scholarship (PGSK), (NSERC) Canadian.

k

Arnell, K. (PI) (P4\*) National Sciences and Engineering Research Council (NSERC) 2008\* Post-graduate scholarship (PGSA), (NSERC) Canadian.

k

Arnell, K. (PI) (P4\*) National Sciences and Engineering Research Council (NSERC) 2008\* University Undergraduate Research Award, (NSERC) Canadian.

k

W

## Teaching and Service Awards Received

- James A. Meier, Junior Professor, 2010-2011  
I was the holder of the College of Science and Math's junior title for the assistant or associate professor who best exemplifies the integration of high quality teaching and research.
- Preferred Professor, 2010-2011  
Each year approximately 100 faculty, out of approximately 1000 on the campus receive this recognition for teaching and mentoring, based on nominations by undergraduate students.
- Mary McCannel Gunkelmann Recognition Award Winner, 2010-2011  
Each year approximately 100 faculty, staff and student leaders are nominated for this award based on their contribution to the development and happiness of others. I was the sole winner of this award for my work mentoring students in research and my work with the Psychology Club.
- Mortar Board Overall Award for outstanding Academic, Organizational Advisor, 2010-2011  
Each year the campus honors society gives awards to faculty for their involvement with students. I received the overall award for mentoring students academically and professionally.

## Institutional Service

- Brock Psychology Department Graduate committee member 2007-2013, 2014-2017, 2018-2020  
Brock University PhD NSERC scholarship committee member, fall 2020  
Brock University PhD OGS scholarship committee member, winter 2019  
Psychology Department Graduate Open House Day organizer, winter 2019  
Brock University PhD 2008 scholarship committee member, fall 2019  
Psychology Department PhD 2008 scholarship committee member, fall 2019  
Brock University MA 2007 scholarship committee member, winter 2019  
Brock Psychology Department 2008 PhD scholarship committee member, fall 2019  
Brock Psychology Department colloquium organizer, 2019-2020  
Psychology Department 2008 scholarship ranking committee, 2019-2020  
Brock Psychology Graduate Program Director 2009-2012  
Brock Psychology Associate Chair, 2019-2020  
Psychology Department colloquium organizer, fall 2019  
Brock Psychology Department faculty organizer psychology in-house conference May 2019  
Brock 2008 scholarship ranking committee fall 2019  
Brock Social Science speaker Series committee member, summer 2019  
Brock Academic Program Committee (APC) member, 2019-2020  
Member Brock University Behavioural Neuroscience Research Committee fall 2019  
Member 2019 Cognitive Neuropsychology Research Committee fall 2019  
2019 Science Bound selection committee member – Spring 2019  
Member 2019 University Senate, 2019-2020  
2019 Psychology Student Affairs Committee 2019-2020  
Member 2019 Cognitive Neuropsychology Research Committee 2019-2020  
2019 Psychology Club and Psi/Chi Faculty Advisor, 2019-2020  
2019 Annual River Psychology Conference organizer, 2019-2020  
2019 Psychology Faculty Advisory Committee 2019-2020  
Co-organizer 2019 Colloquium Series, Spring 2019

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## Professional Services

Associate Editor:

*Journal of Experimental Psychology: Human Perception and Performance* & Year term, Jan. 2018 – Dec. 2018

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Consulting Editor (Editorial Board):

*Journal of Experimental Psychology: Human Perception and Performance* & "(( – "( \* k  
*Brain " Cognition & (" – "( \* k*

*Psychological Research* & ((, – present) k

Regular ad hoc reviewer for over 10 psychology journals

Ad hoc grant reviewer:

Natural Sciences and Engineering Research Council 2007-present

Biotechnology and Biological Sciences Research Council 2010-present

Alberta Heritage Medical Research Foundation, 2010-2015

2010-2015 scholarship application reviewer

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Promotion and Tenure Reviewer, external referee for:

k

- Dr. Jason Invanoff, Department of Psychology, St. Mary's University, Halifax, NS, 09/2009
- Dr. Liana Brown, Department of Psychology, Trent University, Peterborough, 5/2010
- Dr. Steve Smith, Department of Psychology, University of Winnipeg, Winnipeg, 7/2010

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External Examiner – Graduate Theses:

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- David De Vito, *The Affective Consequences of Inhibition in Working Memory*, University of Guelph, 2018, PhD.
- Brandon Ralph, *Media multitasking and performance on attentionally-demanding tasks* University of Waterloo, 2017, PhD.
- Andrea Jackson, *The Impact of Perceptual Grouping on Repetition Blindness*, University of Windsor, 2016, PhD.
- Danielle Labosierre *Effects of exposure to emotionally charged distractors on subsequent visual search performance*. University of Manitoba, 2014, PhD.
- Sandra Tomson, *Backward compatibility effects in dual-task performance: implications for central information processing*. McMaster University, 2013, PhD.
- Mamata Pandey, *Attention to Meaning: Capture by Perceptually Grouped Faces in RSVP*. University of Regina, 2013, PhD.
- Marla Joy Sanderson, *Cognitive and affective processing differences in migraine headache sufferers* University of British Columbia, 2013, Neuroscience PhD.
- Vladimir Miskovic, *The psychophysiology of social anxiety: An integrative approach*, McMaster University, 2013, PhD.
- Gregor MacLean, *The need for speed: Visual temporal processing in developmental dyslexia*, MacQuarie University, 2013, PhD.
- Daryl Wilson, *Load effects on selective attention* University of Toronto, 2013, PhD.
- Murray Lawson, *The attentional blink as a tool for cognitive research* La Trobe University, Victoria, Australia, 2013, PhD.
- Rosleen Mansour, *Effective cognitive inhibition in depression*, 2013, MA.

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**Graduate Supervisory Experience**

Brent Pitchford MAWWS+ - "(\$, ~ PhD Sept. k'(\$, k presentk  
Andrew Chung MAk(\$+ - "(\$, ~ PhD Sept. k'(\$, k presentk  
Kirk Stokes MAk(, -"(\$~ k PhD 2010-June k'(\$+ k  
Gillian Dale MAk(> -"(' k PhD 2009-Nov. k'(\$# k  
Mary MacLean MAk(> -"(' k PhD 2009-June, k'(\$# k

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Kevin MacDonald teaching apprenticeship advisor PhD "(\$+ k k k k  
Mary MacLean teaching apprenticeship advisor PhD "(\$ k k k k kkkkkkk  
Gillian Dale teaching apprenticeship advisor PhD "(\$ k  
Karen 7 athewson research apprenticeship advisor PhD "(() -"(+ k  
Diane Santesso teaching apprenticeship advisor PhD "((# -"(; k

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Psychology PhD comprehensive examiner k times in the last # years k  
"> Psychology undergraduate honours thesis students k & "\$ k (present) k

k

During k'(\$ -"(' ~ k have been a committee member for k PhD students in addition to my own students k  
(Kevin MacDonald, Kari Lustig, Christine Salahu2, Joel Robitaille, Claire Matthews, Holly Lockhart, k  
Kristen Baker \*k

During k'(\$ -"(' ~ k have been a committee member for k MA students (Reuben Howlett, Laurak  
Murray) k

k

**Volunteer Community Service**

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"(\$; k'(\$ k Head Coach and Manager for St. Catharines Ladies Softball league Squirt softball team k  
"(\$+ -"(\$> k Team Statistician for St. Catharines Brock Jr Badgers girls Atom k~ hockey team k  
"(\$> -"(' k Team Statistician @ Data Analyst for # Stoney Creek Sabres Pee wee @ Bantam hockey  
teams k

2020-present @eam Statistician and Data Analyst for Burlington k arracudas Bantam AA hockey team k

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**Association Membership**

Associate member of the k sychonomic Society, k' ' + - present k  
Member of the Vision Sciences Society k' (" - present k  
Canadian Society for Brain, Behaviour and Cognitive Science & ~ ~ ~ ~ k' (, k present k  
Member of Cognitive Neurosciences Society k' S \* k' ((( -" ( (; k

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**Manuscripts submitted for Publication (underline marks student co-author): k**

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Chung, A., Busseri, M. A. & Arnell, K. M. (submitted). Individual differences in naturally-occurring affect predict conceptual breadth: Evidence for the importance of valence by arousal interactions. *Cognitive Research: Principles and Implications.*

Pitchford, B. & Arnell, K. M. (submitted). Individual differences in attentional breadth changes over time: An ERP investigation. *Brain & Cognition.*

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## **Publications**

- Chung, A. & Arnell, K. M. (In press). Between-person variation in naturally occurring affect does not relate to working memory performance: A latent variable modelling study. *Psychological Research*.
- Pitchford, B. & Arnell, K. M. (2019). Resting EEG in alpha and beta bands predicts individual differences in attentional breadth. *Consciousness and Cognition*, 75, 102803.
- Pitchford, B., & Arnell, K. M. (2019). Speech of young offenders as a function of their psychopathic tendencies. *Canadian Journal of Experimental Psychology/Revue canadienne de psychologie expérimentale*, 73(3), 193.
- Pitchford, B. & Arnell, K. M. (2019). Self-control and its influence on global/local processing: An investigation of the role of frontal alpha asymmetry and dispositional approach tendencies. *Attention, Perception and Psychophysics*, 81, 173-187.
- Schutten, D., Stokes, K. A., & Arnell, K. M. (2017). I want to media multitask and I want to do it now: Individual differences in media multitasking predict delay of gratification and system 1 thinking. *Cognitive Research: Principles and Implications*, 2(1).
- MacLeod, J., Newman, A. & Arnell, K. M. (2017). Do Emotion-Induced Blindness and the Attentional Blink Share Underlying Mechanisms? An Event-Related Potential Study of Emotionally-Arousing Words. *Cognitive, Affective, & Behavioral Neuroscience*, 17, 592-611.
- Dale, G. & Arnell, K. M. (2013). Multiple measures of dispositional global/local bias predict attentional blink magnitude. *Psychological Research*, 79, 394-406.
- Dale, G. & Arnell, K. M. (2013). Lost in the forest, stuck in the trees: Dispositional global/local bias resistant to exposure to high and low spatial frequencies. *PlosOne*, 8(1), e75000.
- Dale, G. & Arnell, K. M. (2013). Investigating the stability of and relationships among global/local processing measures. *Attention, Perception and Psychophysics*, 75, 394-406.
- Dale, G., Dux, P. E. & Arnell, K. M. (2013). Individual differences within and across attentional blink tasks revisited. *Attention, Perception & Psychophysics*, 75, 456-467.
- Dale, G. & Arnell, K. M. (2013). How reliable is the attentional blink? Examining the relationships within and between attentional blink tasks over time. *Psychological Research*, 77, 99-105.
- MacLean, M. H. & Arnell, K. M. (2012). A conceptual and methodological framework for measuring and modulating the attentional blink. *Attention, Perception & Psychophysics*, 74, 1080-1097.
- Stokes, K. A. & Arnell, K. M. (2012). New considerations for the cognitive locus of impairment in the irrelevant-sound effect. *Memory and Cognition*, 40, 918-931.
- MacLean, M. H., Arnell, K. M. & Cote, K. A. (2012). Resting EEG in alpha and beta bands predicts individual differences in attentional blink magnitude. *Brain and Cognition*, 78, 218-229.
- Arnell, K. M. & Shapiro, K. L. (2011). Attentional blink and repetition blindness. *Wiley Interdisciplinary Reviews Cognitive Science*, 2, 336-344.

MacLean, M. H. & Arnell, K. M. (2011). Greater attentional blink magnitude is associated with higher levels of anticipatory attention as measured by alpha event-related desynchronization (ERD). *Brain Research*, 1387, 99-107.

MacLean, M. H. & Arnell, K. M. (2010). Personality predicts temporal attention costs in the attentional blink paradigm. *Psychonomic Bulletin & Review*, 17, 556-562.

Arnell, K. M. & Stubitz, S. (2010). Attentional blink magnitude is predicted by the ability to keep irrelevant material out of working memory. *Psychological Research*, 5, 457-467.

MacLean, M., Arnell, K. M., & Busseri, M. A. (2010). Dispositional affect predicts temporal attention costs in the attentional blink paradigm. *Cognition and Emotion* 24, 1431-1438.

Dale, G. & Arnell, K. M. (2010). Individual differences in dispositional focus/diffusion of attention predict attentional blink magnitude. *Attention, Perception & Psychophysics*, 72, 602-606.

Arnell, K. M., Stokes, K. A., MacLean, M. E., & Gicante, C. (2010). Executive control processes of working memory predict attentional blink magnitude over and above storage capacity. *Psychological Research*, 74, 1-11.

Shapiro, K. L., Raymond, J. E., & Arnell, K. M. (2009). The attentional blink. *Scholarpedia*, 4(6):3320.

Arnell, K. M., Joannis, M. Klein, R., Busseri M. A., & Tannock, R. (2009). Decomposing the relation between Rapid Automatized Naming (RAN) and reading ability. *Canadian Journal of Experimental Psychology* 63, 173-184.

Seifert, K. L., Arnell, K. M., & Kiviniemi, K. (2010). The relation of body dissatisfaction to the salience of particular body sizes. *Eating and Weight Disorders*, 15, 1-11.

Ptito, A., Arnell, K. M., Jolicoeur, P., & MacLeod, J. (2008). Intramodal and crossmodal processing delays in the attentional blink paradigm revealed by event-related potentials. *Psychophysiology*, 45, 794-803.

Mathewson, K. J., Arnell, K. M. & Mansfield, C. A. (2008). Capturing and Holding Attention: The Impact of Emotional Words in Rapid Serial Visual Presentation. *Memory & Cognition*, 36, 182-200.

Arnell, K. M., Killman, K. V., & Fijavz, D. (2007). Blinded by Emotion: Target Misses Follow Attention Capture by Arousing Distractors in RSVP. *Emotion*, 7, 465-477.

Aquino, J.M., & Arnell, K.M. (2007). Attention and the processing of emotional words: Dissociating effects of arousal. *Psychonomic Bulletin & Review*, 14, 430-435.

Arnell, K. M. (2007). The attentional blink: A review of the literature. *Attention, Perception & Psychophysics* 69, 1-11.

Arnell, K. M., Howe, K., Joannis, M., Klein, R., & Tannock, R. (2009). Relationships between attentional blink magnitude, RSVP target accuracy, and performance on other cognitive tasks. *Memory and Cognition* 37, 1-11.

Howe, K., Arnell, K. M., Klein, R., Joannis, M., & Tannock, R. (2009). The ABCs of computerized naming: Equivalency, reliability, and predictive validity of a computerized rapid automatized naming (RAN) task. *Journal of Neuroscience Methods*, 183, 1-11.

Arnell, W. & Jenkins, B. (1988). Revisiting within-modality and cross-modality attentional blinks: Effects of target-distractor similarity. *Perception and Psychophysics*, 100, 1-10.

Arnell, W., Helion, K., Hurdlebrink, K., & Pasieka, K. (1998). Dissociating sources of interference: Using Human Electrophysiology. *Psychonomic Bulletin & Review*, 5, 1-10.

Arnell, W., & Larson, K. (1997). A cross-modality attentional blink without task-set switching. *Psychonomic Bulletin & Review*, 4, 1-10.

Arnell, W., & Duncan, L. (1998). Shared and separate sources of dual-task cost in stimulus identification and response selection. *Cognitive Psychology*, 22, 1-10.

Rokke, P., Arnell, W., Koch, K., & Andrews, K. (1998). Dual-task attention deficits and dysphoric mood. *Abnormal Psychology*, 107, 1-10.

Arnell, W. (1998). Cross-modality interactions in dual-task paradigms. In K. R. Shapiro & O. S. Temporal Attention (pp. 1-10). Oxford, UK: Oxford University Press.

Vandenberghe, B., Duncan, L., Arnell, W., Herrod, B., Kwen, A., Minhas, P., & Riban, R. (2000). Maintaining and shifting attention within left or right hemifield: A PET study. *Cerebral Cortex*, 10, 1-10.

Arnell, W., & Jolicoeur, P. (1995). The attentional blink across stimulus modalities: Evidence for a central processing limitation. *Journal of Experimental Psychology: Human Perception and Performance*, 21, 1-10.

Arnell, W., & Shapiro, K. (1998). Reduced repetition blindness for one's own name. *Visual Cognition*, 5, 1-10.

Shapiro, K., & Arnell, W. (1998). The attentional blink. *Trends in Cognitive Sciences*, 16, 1-10.

Arnell, W., & Jolicoeur, P. (1995). Repetition blindness for pseudo-object pictures. *Journal of Experimental Psychology: Human Perception and Performance*, 21, 1-10.

Raymond, D., Shapiro, K., & Arnell, W. (1998). Magnitude of the attentional blink depends on target-distractor similarity. *Journal of Experimental Psychology: Human Perception and Performance*, 24, 1-10.

Shapiro, K., & Raymond, D. (1998). The attentional blink results from attentional allocation to visual pattern information. *Journal of Experimental Psychology: Human Perception and Performance*, 24, 1-10.

Raymond, D., Shapiro, K., & Arnell, W. (1998). Temporary suppression of visual processing in a RSVP task: An attentional blink? *Journal of Experimental Psychology: Human Perception and Performance*, 24, 1-10.

### Invited Addresses

Guelph University, Neuroscience & Applied Cognitive Sciences division, March 2016

McMaster University, Cognition & Perception speaker series, Sept. 2011

Guelph University, Neuroscience & Applied Cognitive Sciences division, March 2010

Blinks of the Mind conference, Amsterdam, The Netherlands, August 2000  
 Dalhousie University, Psychology colloquium, Halifax, Nova Scotia, February 2000  
 Brock University, Psychology colloquium, March 2000  
 McMaster University, Psychology Cognition/Perception group, Hamilton, Ontario, October 2000  
 California State University San Marcos, 400 Science Program lecture, February 2001  
 University of Manitoba, Department of Psychology, September 2001  
 Women's Studies Symposium, North Dakota State University, April, 2000  
 North Dakota State University Department of Psychology, October 2001  
 University of Lancaster, Lancaster, UK, January 2002  
 University of Liverpool, Liverpool, UK, October 2002  
 Medical Research Council – Applied Psychology Unit, Cambridge, UK, April 2003  
 University of Wales at Bangor, Bangor, UK, March 2003  
 McMaster University, Hamilton, Canada, November 2003

### **National or International Conference Presentations**

- Pitchford, B. & Arnell, K. M. (2019, Oct.). High approach-motivated versus low approach-motivated positive affect following self-control: The relation between ERPs and attentional breadth Poster to be presented at the Society for Psychophysiological Research. Washington, DC, USA.
- Pitchford, B. & Arnell, K. M. (2018, Nov). Resting EEG in alpha and beta bands predicts individual differences in global/local processing. Poster to be presented at the annual OPAM meeting, New Orleans, LA.
- Chung, A. & Arnell, K. M. (2018, Nov). Naturally occurring affect predicts verbal and spatial working memory performance. Poster to be presented at the annual meeting of the Psychonomics Society, New Orleans, LA.
- Pitchford, B. & Arnell, K. M. (2018, Oct.) Investigating changes in attentional breadth following self control: An ERP study. Poster to be presented at the Society for Psychophysiological Research. Quebec City, Canada.
- Pitchford, B. & Arnell, K. M. (May, 2018). Approach motivation and narrowed attentional breadth following self-control: investigating the role of asymmetrical frontal activity. Poster presented at the 17<sup>th</sup> annual meeting of the Vision Sciences Society, St. Pete Beach, FL.
- Pitchford, B. & Arnell, K. M. (May, 2017). Executive control processes can narrow attention for those with high approach tendencies. Poster presented at the 16<sup>th</sup> annual meeting of the Vision Sciences Society, St. Pete Beach, FL.
- Chung, A. & Arnell, K. M. (May, 2017). Dispositional affect predicts attentional and conceptual breadth: Individual difference evidence for the importance of arousal and valence interactions. Poster presented at the 16<sup>th</sup> annual meeting of the Vision Sciences Society, St. Pete Beach, FL.
- Arnell, K. M., Schutten, D., Salgado, G. & Stokes, K. A. (2016, Nov.). I Want to Media Multitask Now: Individual Differences in Media Multitasking Predict Delay of Gratification and System 1 Thinking. Poster to be presented at the 57<sup>th</sup> Annual Meeting of the Psychonomic Society, Boston, MA.
- Dube, B. & Arnell, K. M. (2015, May). *Extraversion Predicts Superior Face-Specific Recognition Ability: A Role for Experience, Not Affect*. Poster presented at the 15<sup>th</sup> annual meeting of the Vision Sciences Society, St. Pete Beach, FL.

- Dube, B., Arnell, K. M. & Mondloch, C. J. (2014, May). *Does attention to low spatial frequencies enhance face recognition? An individual differences approach*. Poster presented at the 14<sup>th</sup> annual meeting of the Vision Sciences Society, St. Pete Beach, FL.
- Arnell, K. M., Dale, G. & MacLean, M. H. (2014, May). *Individual differences in affect and personality predict attentional and conceptual breadth*. Poster presented at the 14<sup>th</sup> annual meeting of the Vision Sciences Society, St. Pete Beach, FL.
- Stokes, K. A. & Arnell, K. M. (2013, Nov.). Individual differences in attention capture. Poster presented at the 54<sup>th</sup> annual meeting of the Psychonomic Society, Toronto, ON.
- MacLean, M. H. & Arnell, K. M. (2013, May). *Individual difference in electrophysiological responses to performance feedback predict attentional blink magnitude*. Poster presented at the 13<sup>th</sup> annual meeting of the Vision Sciences Society, Naples, FL.
- Dale, G., Dux, P. E. & Arnell, K. M. (2013, May). *Individual differences within and across attentional blink tasks revisited*. Poster presented at the 13<sup>th</sup> annual meeting of the Vision Sciences Society, Naples, FL.
- Stokes, K. A. & Arnell, K. M. (2012, Nov). Individual differences in attention capture: Is attention capture a trait? Poster presented at the 53<sup>rd</sup> annual meeting of the Psychonomic Society, Minneapolis, MN.
- MacLean, M. H., Arnell, K. M., & Cote, K. A. (2012, May). *Resting EEG in alpha and beta bands predicts individual differences in attentional blink magnitude*. Poster presented at the 12<sup>th</sup> annual meeting of the Vision Sciences Society, Naples, FL.
- Dale, G. & Arnell, K. M. (2012, May). Performance on Multiple Different Global/Local Processing Measures Predict Individual Differences in the Attentional Blink. Poster presented at the 12<sup>th</sup> annual meeting of the Vision Sciences Society, Naples, FL.
- Stokes, K. A. & Arnell, K. M. (2011, Nov.). *The Cognitive Locus of Impairment in the Irrelevant Sound Effect: Not Simply Disruptions to Rehearsal or Seriation Processes*. Poster presented at the 52<sup>nd</sup> annual meeting of the Psychonomic Society, Seattle, WA.
- Dale, G. & Arnell, K. M. (2011, May). *An investigation of the reliability and relationships among global-local processing measures*. Poster presented at the 11<sup>th</sup> annual meeting of the Vision Sciences Society, Naples, FL.
- MacLean, M. H. & Arnell, K. M. (2011, June). ). Greater attentional blink magnitude is associated with higher levels of anticipatory attention as measured by alpha event-related desynchronization (ERD). Poster presented at the 11<sup>th</sup> annual meeting of the Vision Sciences Society, Naples, FL.
- MacLean, M. H. & Arnell, K. M. (2010, June). *Personality predicts temporal attention costs in the attentional blink paradigm*. Paper presented at the 20<sup>th</sup> Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science, Halifax, NS.
- Dale, G. & Arnell, K. M. (2010, June). *Re-examining the relationship between diffusion/focus of attention and the attentional blink*. Poster presented at the 20<sup>th</sup> Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science, Halifax, NS.
- Stokes, K. A. & Arnell, K. M. (2010, June). *The cognitive locus of memory impairment in the irrelevant sound effect: Rehearsal is not everything*. Poster presented at the 20<sup>th</sup> Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science, Halifax, NS.
- Arnell, K. M. & Stubitz, S. (May, 2010). Attentional blink magnitude if predicted by the ability to keep irrelevant material out of working memory Poster presented at the 10<sup>th</sup> annual meeting of the Vision Sciences Society, Naples, FL.

- Stokes, K. A., Arnell, K. M. & Goldhawk, M. P. (July, 2009). *New considerations for the cognitive locus of memory impairment in the Irrelevant Sound Effect*. Talk presented at the joint meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science (BBCS) & the European Psychological Society (EPS), York, UK.
- MacLean, M., Arnell, K. M. & Dale, G. (July, 2009). *Self reported affective state predicts the attentional blink*. Poster presented at the joint meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science (BBCS) & the European Psychological Society (EPS), York, UK.
- Dale, G., Arnell, K. M., Rudyk, C. & Unternahrer, K. (July, 2009). *Individual differences in diffusion of attention predict the attentional blink*. Poster presented at the joint meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science (BBCS) & the European Psychological Society (EPS), York, UK.
- Arnell, K. M., Walters, K., Sanders, L., & Rudyk, C. (2008, Nov.). *Semantic processing, but not semantic inhibition, produces the enhanced attentional blink for emotional first targets*. Poster presented at the 49<sup>th</sup> annual meeting of the Psychonomic Society, Chicago, IL.
- MacLean, M., Arnell, K. M., Stokes, K., & Busseri, M. A. (2008, June). *Naturally occurring affect predicts attentional blink magnitude*. Poster presented at the 18<sup>th</sup> Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science (BBCS), London, ON.
- Stokes, K. A. & Arnell, K. M. (2008, June). *Deviant irrelevant stimuli impair surprise recognition memory, not just serial recall*. Poster presented at the 18<sup>th</sup> Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science (BBCS), London, ON.
- Dale, G., Young, R., & Arnell, K. M. (2008, June). *Attentional blink magnitude can be predicted by the P3 event-related potential amplitude to sexual first targets*. Poster presented at the 18<sup>th</sup> Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science (BBCS), London, ON.
- MacLean, M., Stokes, K., Gicante, C., & Arnell, K. M. (2008, May) *Working component of working memory predicts AB magnitude*. Poster presented at the 8<sup>th</sup> annual meeting of the Vision Sciences Society, Naples, FL.
- Dale, G., Young, R., & Arnell, K. M. (2008, May). *That's my name don't wear it out: Attentional blink and the cocktail party effect*. Poster presented at the 8<sup>th</sup> annual meeting of the Vision Sciences Society, Naples, FL.
- Arnell, K. M. (2007, Aug.) *Behavioural and electrophysiological investigations of emotional words in the Attentional Blink task*. Paper presented at Blinks of the mind: New insights into temporal attention and consciousness meeting, Amsterdam, The Netherlands.
- Ptito, A., Arnell, K. M., Jolicoeur, P., & MacLeod, J. (2007, Aug.). *Equivalent delay of the P3 for the 2<sup>nd</sup> target within and across the visual and auditory modalities in the attentional blink: Electrophysiological evidence for an amodal bottleneck*. Paper presented at the 15<sup>th</sup> annual European Society for Cognitive Psychology (ESCOP) conference, Marseille, France.
- Seeds, P. M., Schurter, M., Arnell, K. M., Joanisse, M. F., Barr, C. L., Klein, R. M., & Tannock, R. (May, 2007). *Rapid serial naming across the lifespan: Gender and age effects*. Poster presented at the 19<sup>th</sup> annual meeting of the Association for Psychological Science (APS), Washington, DC.
- Barr, C. L., Klein, R., Stevanovski, B., Joanisse, M., Arnell, K. M., Tannock, R., & Couto, J. (2007, June). *Genetic contribution to reading skills in a population-based sample: Study of the KIAA0319L gene*. Poster presented at the annual meeting of the Canadian language and Literacy Research Network (CLLRNet), Calgary, AB.

- Arnell, K. M., MacLeod, J. W. (2006, Nov.) Electrophysiological investigations of emotional words in the Attentional Blink task. Poster presented at the annual meeting of the Psychonomic Society, Houston Texas.
- Ptito, A., Arnell, K. M., Jolicoeur, P., MacLeod, J. (2006, Nov.) *The attentional blink within and across sensory modalities: Electrophysiological evidence of an amodal bottleneck*. Talk presented at the annual Object, Perception, Attention and Memory (OPAM) meeting, Houston Texas.
- Aquino, K. M., Arnell, K. M. (2006, Nov.) *Attentional capture for sexual, but not threat related words: Dissociating the effects of arousal words*. Poster presented at the 11th annual meeting of the Psychonomic Society, Toronto, Canada.
- Arnell, K. M., Mathewson, K. E., Javz, K. M., Killman, K. F. (2006, Nov.) *Attentional enhancement for arousing distractors and targets in RSVP search*. Poster presented at the 11th annual meeting of the Psychonomic Society, Minneapolis, MN.
- Arnell, K. M., Killman, K. F., Javz, K. M. (2005, May). *Blinded by emotions: Target misses follow attentional capture by arousing distractors in RSVP*. Poster presented at the 11th annual Vision Sciences Society Meeting, Sarasota, FL.
- Arnell, K. M. (2005, Nov.) *Electrophysiological investigations of dual-task identification delays*. Poster presented at the 11th annual meeting of the Psychonomic Society, Vancouver, BC, Canada.
- Arnell, K. M., Joannis, K. E., Klein, B., Fannock, B., Barr, R. (2005, May). *Rapid naming and its contribution to reading ability: Cognitive neuroscience and genetics*. Poster presented at the annual conference of the Canadian Language and Literacy Research Network, Victoria, Canada.
- Arnell, K. M., Pasieka, K. M. (2005, Nov.) *Electrophysiological investigations of stimulus identification delays in dual-task paradigm*. Poster presented at the 11th annual meeting of the Psychonomic Society, Kansas City, MO.
- Arnell, K. M., Hurdelbrink, K. M. (2005, April). *Solving sources of dual-task interference using the event-related potential*. Poster presented at the 11th Annual Cognitive Neuroscience Meeting, San Francisco, CA.
- Rohrer, K. M., Wittrock, K. A., Arnell, K. M. (2005, March). *The effects of pain and vigilance on attentional task performance in individuals with recurrent tension-type headache*. Presented at the 60th Annual Scientific Meeting of the American Psychosomatic Society, Barcelona, Spain. (Abstract: *Psychosomatic Medicine*, 64, 188, \*).
- Rokke, P. K., Arnell, K. M., Seifert, K. A., Mvig, K. A. (2005, Nov.) *Central processing limitations link depression and attention*. In P. K. Rokke (Chair), *Cognitive neuroscience approaches to the study of depression*, 11th Annual Convention of the Association for Advancement of Behavioral Therapy, Philadelphia, PA.
- Arnell, K. M., Ferguson, K. A., Larson, K. M., Hurdelbrink, K. M. (2005, March) *Event related potential dissociates response bottlenecks in dual-task paradigms*. Poster presented at the 11th Annual Cognitive Neuroscience Meeting, New York, NY.
- Arnell, K. M., Frangsrud, K. E., Hammes, K. A., Larson, K. M. (2005, Nov.) *Perceptual versus attentional sources of dual-task costs*. Poster presented at the 11th annual meeting of the Psychonomic Society, New Orleans, LA.
- Koch, K. M., Andrews, K. M., Arnell, K. M., Rokke, P. K. (2005, Nov.) *Dual task attention deficits in depression*. Poster presented at the 11th Annual Convention of the Association for Advancement of Behavioral Therapy, New Orleans, LA.
- Arnell, K. M., Larson, K. M. (2005, Nov.) *A cross-modal attentional blink without task switching*. Poster presented at the 11th annual meeting of the Psychonomic Society, Los Angeles, CA.

- Arnell, K. M., & Duncan, C. L. (1990, Oct.). *Central processing limitations on stimulus encoding: Evidence from cross-modal presentations*. Paper presented at the Cross-modal Interactions conference, Oxford, England.
- Arnell, K. M., & Duncan, C. L. (1990, Nov.). *Substantial interference between response selection and stimulus encoding*. Poster presented at the 39th annual Psychonomic Society Meeting, Dallas, TX.
- Arnell, K. M., & Duncan, C. L. (1990, Nov.). *Speeded responses or masking can produce an attentional blink*. Poster presented at the 38th annual Psychonomic Society Meeting, Philadelphia, PA.
- Vandenberg, R. J., Duncan, C. L., Arnell, K. M., Herrod, C. J., & Liberman, M. C. (1990, Oct.). *Shifting or maintaining attention within hemifield: A PET study of covert attention*. Paper presented at the annual Neuroscience's Meeting, New Orleans, LA.
- Arnell, K. M., & Holicoeur, P. (1991, Aug.). *The attentional blink across stimulus modalities*. Paper presented at the 26th International Congress of Psychology, Montreal, Canada.
- Arnell, K. M., & Holicoeur, P. (1991, Aug.). *The attentional blink across stimulus modalities: Evidence for limitation of central attention*. Poster presented at the 6th Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science, Montreal, Canada.
- Arnell, K. M., & Holicoeur, P. (1991, July). *The attentional blink across stimulus modalities: Evidence against visual interference theories*. Paper presented at the 3rd annual meeting of the Cognitive Science Association for Interdisciplinary Learning, Hood River, Oregon.
- Arnell, K. M., & Holicoeur, P. (1991, Nov.). *Allocating attention across stimulus modality: Evidence from the attentional blink phenomenon*. Poster presented at the 6th annual Psychonomic Society Meeting, Los Angeles, CA.
- Arnell, K. M., Shapiro, K. L., & Sorensen, R. J. (1991, Nov.). *The "Cocktail Party" effect reveals attenuated repetition blindness*. Poster presented at the 6th annual Psychonomic Society Meeting, Los Angeles, CA.
- Arnell, K. M., & Holicoeur, P. (1991, June). *Allocating attention across time and stimulus modality: Evidence from the attentional blink phenomenon*. Paper presented at the "Allocating attention" symposium at the 11th Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science, Halifax, Canada.
- Arnell, K. M., Shapiro, K. L., & Sorensen, R. J. (1991, June). *Reduced repetition blindness for one's own name: Evidence for conceptual representations*. Poster presented at the 11th Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science, Halifax, Canada.
- Arnell, K. M., & Holicoeur, P. (1991, July). *Development of repetition blindness task does not require object naming*. Presented at the 3rd Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science, Toronto, Canada.
- Shapiro, K. L., & Arnell, K. M. (1991). *Target identification alone is not sufficient to cause an attentional blink*. Paper presented at the 11th International Congress of Psychology: Brussels, Belgium. [Abstract] *The International Journal of Psychology*, 5(9), 1-10.
- Raymond, J. E., Shapiro, K. L., & Arnell, K. M. (1991). *The role of post-target stimulation in producing "attentional blinks" in RSVP*. Paper presented at the 11th International Congress of Psychology: Brussels. [Abstract] *The International Journal of Psychology*, 5(9), 1-10.
- Shapiro, K. L., Arnell, K. M., & Drake, K. A. (1991). *Stimulus complexity mediates target detection in visual attention search*. Poster presented at the ARF Meeting: Sarasota, FL. [Abstract] *Investigative Ophthalmology - Visual Science*, 15(1), 1-10.
- Raymond, J. E., & Arnell, K. M. (1990, Nov.). *Factors producing a temporary "blink" in attention in an RSVP task*. Poster presented at the 31st annual Psychonomic Society Meeting, New Orleans, LA.

**KAREN L. CAMPBELL****Curriculum Vitae**

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**ACADEMIC POSITIONS**

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|--------------|------------------------------------------------------------------------------------------------------------------------------|
| 2017-present | Assistant Professor and Canada Research Chair in Cognitive Neuroscience of Aging, Department of Psychology, Brock University |
| 2015-2016    | Postdoctoral Fellow, Department of Psychology, Harvard University<br>Advisor: Prof. Daniel Schacter                          |
| 2013-2015    | Postdoctoral Associate, Department of Psychology, University of Cambridge<br>Advisors: Profs. Lorraine Tyler and Rik Henson  |

**EDUCATION**

- |      |                                                                                             |
|------|---------------------------------------------------------------------------------------------|
| 2012 | Ph.D. in Psychology, University of Toronto<br>Advisors: Profs. Lynn Hasher and Cheryl Grady |
| 2007 | M.A. in Psychology, University of Toronto                                                   |
| 2004 | B.Sc. in Psychology with High Distinction, University of Toronto                            |

**RESEARCH GRANTS**

- |           |                                                                                                                                                                                                                                                       |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2020-2022 | <b>Campbell, K. L.</b> , <i>The effect of age and episodic simulation on willingness to help during the COVID-19 pandemic</i> , Council for Research in the Social Sciences (CRISS) Seed Grant, Faculty of Social Sciences, Brock University (\$3000) |
| 2019-2024 | <b>Campbell, K. L.</b> , <i>Aging and associative memory: Neural mechanisms and implications for everyday life</i> . Ontario Ministry of Research, Innovation and Science, Early Researcher Award (\$150,000)                                         |
| 2019      | <b>Campbell, K. L.</b> , <i>Eye movements and electrophysiological activity as markers of age-related cognitive change</i> . Canadian Foundation for Innovation, John R. Evans Leaders Fund (\$190,690)                                               |
| 2017-2022 | <b>Campbell, K. L.</b> , <i>Aging and the loss of control over memory</i> . Natural Sciences and Engineering Research Council (NSERC) Discovery Grant (\$150,000)                                                                                     |
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- 2017-2022      **Campbell, K. L.**, *Aging and memory: The ubiquitous effects of reduced attentional control*. Natural Sciences and Engineering Research Council (NSERC) Tier 2 Canada Research Chair (\$500,000)
- 2017-2019      **Campbell, K. L.**, *Neural mechanisms of stereotype threat in aging: Why expecting to fail makes you fail*, Council for Research in the Social Sciences (CRISS) Seed Grant, Faculty of Social Sciences, Brock University (\$3000)
- 2017-2018      **Campbell, K. L.**, *Age differences in voluntary vs involuntary retrieval*, Toronto Neuroimaging Facility Stimulus Grant, Department of Psychology, University of Toronto (20 hours of free scanning, equivalent to \$9000)

### SELECTED SCHOLARSHIPS AND AWARDS

- 2020              Early Career Award, Psychonomic Society (\$2500)
- 2016              Canadian Institutes of Health Research Travel Award (\$1000)
- 2016              Postdoctoral Award for Professional Development, Harvard University (\$750)
- 2015-2017      Canadian Institutes of Health Research Postdoc Fellowship (\$100,000, declined)
- 2014              Charles Slater Travel Award, University of Cambridge (£500)
- 2011-2012      Ontario Graduate Scholarship (\$15,000)
- 2011-2012      Doctoral Completion Award (\$18,000, declined)
- 2011              Canadian Institutes of Health Research Age + Prize (\$1000), for my paper "Hyper-binding: A unique age effect" in *Psychological Science*.
- 2011              J. Davidson Ketchum Graduate Scholarship in Psychology (\$5000)
- 2008-2010      Natural Sciences and Engineering Research Council Post-Graduate Scholarship (\$42,000)
- 2009              APA Convention Poster Award, 1<sup>st</sup> place in Experimental Psychology
- 2004              Treble Gold Medal for highest graduating GPA in Life Sciences, Victoria College, University of Toronto

### PUBLICATIONS

#### *Peer-Reviewed Journal Articles*

\* Denotes a graduate student collaborator

\*\* Denotes an undergraduate student collaborator

**Campbell, K. L.**, Lustig, C., & Hasher, L. (in press). Aging and inhibition: Introduction to the special issue. *Psychology and Aging*.

Davis, E. E.\* , Foy, E. A.\*\* , Giovanello, K. S., & **Campbell, K. L.** (2020). Implicit associative memory remains intact with age and extends to target-distractor pairs. *Aging, Neuropsychology, & Cognition*. DOI: 10.1080/13825585.2020.1782827

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O'Connor, A. M.\*, **Campbell, K. L.**, & Mahy, C. E. V. (2020). Younger and older adults' prospective memory: The role of delay task difficulty. *Aging, Neuropsychology, and Cognition*, DOI: 10.1080/13825585.2020.1724866.

Strömmer, J. M.\*, Davis, S. W., Henson, R. N., Tyler, L. K., Cam-CAN, & **Campbell, K. L.** (2020). Physical activity predicts population-level age-related differences in frontal white matter. *Journals of Gerontology: Biological Sciences*, *75*, 236-243.

Geerligs, L., Cam-CAN, & **Campbell, K. L.** (2018). Age-related differences in information processing during movie watching. *Neurobiology of Aging*, *72*, 106-120.

**Campbell, K. L.**, & Tyler, L. K. (2018). Language-related domain-specific and domain-general systems in the human brain. *Current Opinion in Behavioral Sciences*, *21*, 132-137.

**Campbell, K. L.**, Madore, K. P., Benoit, R. G., Thakral, P. P., & Schacter, D. L. (2018). Increased hippocampus to ventromedial prefrontal connectivity during the construction of episodic future events. *Hippocampus*, *28*, 76-80.

**Campbell, K. L.**, & Hasher, L. (2018). Hyper-binding only apparent under fully implicit test conditions. *Psychology and Aging*, *33*, 176-181.

Price, D., Tyler, L. K., Neto Henriques, R., **Campbell, K. L.**, Williams, N. Treder, M., CamCAN, & Henson, R. N. (2017). Age-related delay in visual and auditory evoked responses is mediated by white and gray matter differences. *Nature Communications*, *8*: 15671.

**Campbell, K. L.**, Benoit, R. G., & Schacter, D. L. (2017). Priming, not inhibition, of related concepts during future imagining. *Memory*, *25*, 1235-1245.

Samu, D., **Campbell, K. L.**, Tsvetanov, K. A., Shafto, M. A., Cam-CAN, & Tyler, L. K. (2017). Preserved cognitive functions with age are determined by domain-dependent shifts in network responsiveness. *Nature Communications*, *8*: 14743.

**Campbell, K. L.**, & Schacter, D. L. (2017). Aging and the resting state: Cognition is not obsolete. *Language, Cognition, and Neuroscience*, *32*, 692-694.

**Campbell, K. L.**, & Schacter, D. L. (2017). Aging and the resting state: Is cognition obsolete? *Language, Cognition, and Neuroscience*, *32*, 661-668.

\*This was a special target article to which several leaders in the field replied.

Amer, T., **Campbell, K. L.**, & Hasher, L. (2016). Cognitive control as a double-edged sword. *Trends in Cognitive Sciences*, *20*, 905-915.

Anderson, J. A. E., Sarraf, S., Amer, T., Bellana, B., Man, V., **Campbell, K. L.**, Hasher, L., & Grady, C. L. (2016). Task-linked diurnal brain network reorganization in older adults: A graph theoretical approach. *Journal of Cognitive Neuroscience*, *29*, 560-572.

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Henson, R. N., **Campbell, K. L.**, Davis, S. W., Taylor, J. R., Emery, T., Erzinclioglu, S., Cam-CAN, & Kievit, R. A. (2016). Multiple determinants of lifespan memory differences. *Scientific Reports*, *6*, 1-14. doi:10.1038/srep32527

Amer, T., Anderson, J. A. E., **Campbell, K. L.**, Hasher, L., & Grady, C. L. (2016). Age differences in the neural correlates of distraction regulation: A network interaction approach. *NeuroImage*, *139*, 231-239.

**Campbell, K. L.**, Samu, D., Davis, S. W., Geerligs, L., Mustafa, A., Cam-CAN, & Tyler, L. K. (2016). Robust resilience of the frontotemporal syntax system to aging. *Journal of Neuroscience*, *36*, 5214-5227.

Grady, C. L., Saman, S., Saverino, C., & **Campbell, K. L.** (2016). Age differences in the functional interactions among the default, frontoparietal control, and dorsal attention networks. *Neurobiology of Aging*, *41*, 159-172.

**Campbell, K. L.**, Shafto, M. A., Wright, P., Tsvetanov, K. A., Geerligs, L., Cusack, R., Cam-CAN, & Tyler, L. K. (2015). Idiosyncratic responding during movie-watching predicted by age differences in attentional control. *Neurobiology of Aging*, *36*, 3045-3055.

Anderson, J. A. E., **Campbell, K. L.**, Amer, T., Grady, C. L., & Hasher, L. (2014). Timing is everything: Age differences in the cognitive control network are modulated by time of day. *Psychology and Aging*, *29*, 648-57.

**Campbell, K. L.**, Trelle, A.\*\*, & Hasher, L. (2014). Age differences in hyper-binding across time. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *40*, 293-299.

**Campbell, K. L.**, Grigg, O., Saverino, C., Churchill, N., & Grady, C. L. (2013). Age differences in the intrinsic functional connectivity of default network subsystems. *Frontiers in Aging Neuroscience*, *5*:73. doi: 10.3389/fnagi.2013.00073

Healey, M. K., Hasher, L., & **Campbell, K. L.** (2013). The role of suppression in resolving interference: Evidence for an age-related deficit. *Psychology and Aging*, *28*, 721-728.

Biss, R. K., Ngo, K. W. J., Hasher, L., **Campbell, K. L.**, & Rowe, G. (2013). Distraction can reduce age-related forgetting. *Psychological Science*, *24*, 448-455.

Farb, N. A. S., Grady, C. L., Strother, S., Tang-Wai, D., Masellis, M., Black, S., Freedman, M., Pollock, B.G., **Campbell, K. L.**, Hasher, L., & Chow, T. (2013). Abnormal network connectivity in frontotemporal dementia: Evidence of prefrontal isolation. *Cortex*, *49*, 1856-73.

**Campbell, K. L.**, Grady, C. L., Ng, C., & Hasher, L. (2012). Age differences in the frontoparietal cognitive control network: Implications for distractibility. *Neuropsychologia*, *50*, 2212-2223.

Biss, R. K., **Campbell, K. L.**, & Hasher, L. (2012). Interference from previous distraction disrupts older adults' memory. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *68*, 558-561.

**Campbell, K. L.**, Zimmerman, S., Healey, M. K., Lee, M. S.\*\*\*, & Hasher, L. (2012). Age differences in visual statistical learning. *Psychology and Aging, 27*, 650-656.

Healey, M. K., **Campbell, K. L.**, Hasher, L., & Ossher, L. (2010). Direct evidence for the role of inhibition in resolving interference. *Psychological Science, 21*, 1464-1470.

**Campbell, K. L.**, Hasher, L., & Thomas, R. C. (2010). Hyper-binding: A unique age effect. *Psychological Science, 21*, 399-405. \*This paper won the Canadian Institutes of Health Research Age + Prize.

**Campbell, K. L.**, Al-Aidroos, N., Fatt\*\*, R., Pratt, J., & Hasher, L. (2009). The effects of multisensory targets on saccadic trajectory deviations: Eliminating age differences. *Experimental Brain Research, 201*, 385-392.

**Campbell, K. L.**, & Ryan, J. D. (2009). The effects of practice and external support on older adults' control of reflexive eye movements. *Aging, Neuropsychology, and Cognition, 16*, 745-763.

**Campbell, K. L.**, Al-Aidroos, N., Pratt, J., & Hasher, L. (2009). Repelling the young and attracting the old: Examining age-related differences in saccade trajectory deviations. *Psychology and Aging, 24*, 163-168.

### **Book Chapters**

Hasher, L., & **Campbell, K. L.** (in press). Inhibitory theory: Assumptions, findings, and relevance to interventions. In Thomas, A.K. & Gutchess A. (Eds.). *The Cambridge Handbook of Cognitive Aging: A Lifecourse Perspective*. Cambridge University Press, Cambridge, United Kingdom.

Healey, M. K., **Campbell, K. L.**, & Hasher, L. (2008). Cognitive aging and increased distractibility: Costs and potential benefits. In W. S. Sossin, J.-C. Lacaille, V. F. Castellucci, & S. Belleville (Eds.). *Progress in Brain Research*, Vol. 169. Elsevier, Amsterdam, pp. 353-363.

### **Submitted Manuscripts and Preprints**

Henderson, S. E.\*, Lockhart, H. A., Davis, E. E., Emrich, S. M., & **Campbell, K. L.** (submitted). Reduced attentional control in older adults leads to deficits in flexible prioritization of visual working memory. *Brain Sciences*.

Henderson, S. E.\*, Callegari, J. M.\*\*\*, Desjardins, J. A., Hall, S. A., Segalowitz, S. J., & **Campbell, K. L.** (submitted). Alpha suppression as a neural marker of task demands in voluntary vs involuntary retrieval in older and younger adults. *Neuropsychologia*.

O'Connor, A. M.\*, Davis, E. E.\*, Mahy, C. E. V., & **Campbell, K. L.** (submitted). The effects of aging and emotional distraction on the mere exposure effect. *Psychology and Aging*.

Geerligs, L., van Gerven, M., **Campbell, K. L.**, & Güçlü, U. (2019). Timescales and functional organization of neural event segmentation in the human brain. <http://doi.org/10.5281/zenodo.3250663>

Ryan, A. D.\*, & **Campbell, K. L.** (revision requested). Participating for pride versus credit: Age differences in motivation and the implications for neurocognitive aging. *Collabra: Psychology*.

#### INVITED RESEARCH TALKS

2019 Cognitive Neurosci Colloquium Series, **Michigan State** University, East Lansing, MI, USA  
 2018 Women in Neurosci, Brain and Mind Institute, **Western** University, London, Canada  
 2017 Neuroscience and Applied Cog Sci Speaker Series, University of **Guelph**, Guelph, Canada  
 2017 Brain, Perception, Action & Cog Group, **Ryerson** University, Toronto, Canada  
 2017 Ebbinghaus Empire, Dept of Psychology, University of **Toronto**, Toronto, Canada  
 2014 Department of Psychology, University of **Warwick**, Coventry, UK  
 2013 Oxford Centre for Human Brain Activity, University of **Oxford**, Oxford, UK  
 2013 Memory & Perception Group, Cognition & Brain Sciences Unit, **Cambridge**, UK  
 2012 Center for Cognitive Neuroscience, **Duke** University, Durham, NC, USA  
 2012 Ebbinghaus Empire, Dept of Psychology, University of **Toronto**, Toronto, Canada  
 2011 Memory & Perception Group, Cognition & Brain Sciences Unit, **Cambridge**, UK  
 2011 Brain, Perception, Action & Cog Group, **Ryerson** University, Toronto, Canada

#### SYMPOSIA ORGANIZED

**Campbell, K. L.** (2017, November). *Symposium (Festschrift) in Honour of Lynn Hasher*. University of Toronto, Toronto, Canada.

**Campbell, K. L.**, & Tyler, L. K. (2017, April). *Old brains, new insights*. British Neuroscience Association 2017: Festival of Neuroscience, Birmingham, United Kingdom.

**Campbell, K. L.**, (2015, April). *Insights on ageing and brain function from the Cam-CAN*. Third International Conference on Aging & Cognition, Dortmund, Germany.

#### CONFERENCE TALKS

**Campbell, K. L.** (2019, February). Something in the way we test: Neurocognitive aging and the pervasive influence of extraneous task demands. Invited Keynote talk presented at the 48<sup>th</sup> Annual Lake Ontario Visionary Establishment Conference, Niagara Falls, Canada.

**Campbell, K. L.**, Cam-CAN, & Geerligns, L. (2018, March). I did it my way: Explaining age-related declines in inter-subject synchronization during naturalistic viewing. Data blitz talk presented at the 25<sup>th</sup> annual Cognitive Neuroscience Society Meeting, Boston, MA, USA.

**Campbell, K. L.** (2017, November). Priming, not inhibition, of competing representations during future imagining. Presented at the Symposium in Honour of Lynn Hasher, Toronto, Canada.

**Campbell, K. L.**, Samu, D., & Tyler, L. K. (2017, August). Context-dependent shifts in network functionality with age. Invited talk at the 13<sup>th</sup> International Conference for Cognitive Neuroscience, Amsterdam, Netherlands.

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**Campbell, K. L.,** Cam-CAN, & Tyler, L. K. (2017, April). Finding the ageing brain's natural capacity. Presented at British Neuroscience Association 2017: Festival of Neuroscience, Birmingham, United Kingdom.

**Campbell, K. L.,** & Hasher, L. (2016, August). Age-related hyper-binding: Both a help and a hindrance? Invited talk at the 6<sup>th</sup> International Conference on Memory, Budapest, Hungary.

**Campbell, K. L.,** Hasher, L., Davis, S. W., Geerligs, L., Samu, D., Cam-CAN, & Tyler, L. K. (2016, May). The pervasive effects of reduced attentional control with age. Invited talk at Association for Psychological Science 28<sup>th</sup> Annual Convention, Chicago, IL, USA.

**Campbell, K. L.,** Shafto, M., Wright, P., Tsvetanov, K., Cusack, R., Cam-CAN, Tyler, L. K. (2015, April). Beyond the resting state: Age differences in neural networks identified during naturalistic viewing. Presented at the 3<sup>rd</sup> International Conference on Aging & Cognition, Dortmund, Germany.

**Campbell, K. L.,** Cam-CAN, & Tyler, L. K. (2015, March). Preserved syntactic processing across the lifespan. Data blitz talk presented at the 22<sup>nd</sup> annual Cognitive Neuroscience Society Meeting, San Francisco, CA, USA.

Price, D., Henson, R., Clarke, A., Treder, M. S., **Campbell, K. L.,** Cam-CAN, & Tyler, L. K. (2015, January). Neural delay and cognitive performance over the adult lifespan. Presented at the 9<sup>th</sup> Annual MEG UK Meeting, Birmingham, UK.

**Campbell, K. L.** (2014, May). The hyper-binding hypothesis: Age differences in attentional control and the implications for associative memory. Presented at the Cambridge Memory Meeting, Cambridge, UK.

Thomas, R. C., **Campbell, K. L.,** & Hasher, L. (2008, November). Implicit benefits of susceptibility to distraction. Presented at the 49<sup>th</sup> annual meeting of The Psychonomic Society, Chicago, IL, USA.

## SELECTED CONFERENCE POSTERS

Henderson, S. E., Lockhart, H. A., Davis, E. E., Emrich, S. M., & **Campbell, K. L.** (2020, February). Reduced attentional control in older adults leads to deficits in flexible prioritization of visual working memory. Poster presented at the 49<sup>th</sup> Annual Lake Ontario Visionary Establishment Conference, Niagara Falls, Canada.

Ryan, A. D., & **Campbell, K. L.** (2019, November). Stereotype-treat and memory in older adults: A negative association between cortisol and explicit memory. Poster presented at Psychonomics, Montreal, Quebec, Canada.

Davis, E. E., Chemnitz, E., Collins, T., & **Campbell, K.L.** (2019, November). No age differences in intersubject eye movement synchrony during naturalistic viewing: Implications for memory. Poster presented at Psychonomics, Montreal, Quebec, Canada.

Henderson, S. E., Callegari, J., Desjardins, J. A., Segalowitz, S. J., **Campbell, K. L.** (2019, March). Age differences in the neural underpinnings of voluntary vs involuntary memory retrieval. Poster presented at the 26<sup>th</sup> Annual Cognitive Neuroscience Society Meeting, San Francisco, CA, USA.

Davis, E., Foy, E., & **Campbell, K. L.** (2019, February). Reduced attentional control affects older adults' performance on implicit associations task. Poster presented at the 48<sup>th</sup> Annual Lake Ontario Visionary Establishment Conference, Niagara Falls, Canada.

Geerligs, L., Cam-CAN, & **Campbell, K. L.**, (2018, March). I did it my way: Explaining age-related declines in inter-subject synchronization during naturalistic viewing. Poster presented at the 25<sup>th</sup> annual Cognitive Neuroscience Society Meeting, Boston, MA, USA.

**Campbell, K. L.**, Madore, K. P., Benoit, R. G., Thakral, P. P., & Schacter, D. L. (2017, August). Increased hippocampus to ventromedial prefrontal connectivity during episodic future simulation. Poster session at the 13<sup>th</sup> International Conference for Cognitive Neuroscience, Amsterdam, Netherlands.

**Campbell, K. L.**, Benoit, R. G., Schacter, D. L. (2016, August). Priming of related concepts during future imagining. Poster session to be presented at the 6<sup>th</sup> International Conference on Memory, Budapest, Hungary.

Strömmer, J. M., **Campbell, K. L.**, Tyler, L. K., Cam-CAN, & Davis, S. W. (2016, July). Physical activity mitigates age-related frontal white matter loss. Poster session presented at the Federation of European Neuroscience Societies Forum, Copenhagen, Denmark.

**Campbell, K. L.**, Cam-CAN, & Tyler, L. K. (2014, August). Preserved language comprehension with age and its relationship to cognitive control. Poster session presented at the 6<sup>th</sup> Annual Meeting of the Society for the Neurobiology of Language, Amsterdam, Netherlands.

**Campbell, K. L.**, Shafto, M. A., Wright, P., Tsvetanov, K. A., Cusack, R., Cam-CAN, & Tyler, L. K. (2014, June). Beyond the resting state: Age differences in neural networks identified during naturalistic viewing. Poster session presented at the Annual Scientific Meeting of the Organization for Human Brain Mapping, Hamburg, Germany.

Anderson, J. A. E., **Campbell, K. L.**, Hasher, L., & Grady, C. L. (2013, June). Time of day affects functional connectivity in the elderly. Poster session presented at the 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping, Seattle, WA, USA.

**Campbell, K. L.**, & Hasher, L. (2012, April). The role of inhibition in constraining memory binding over time: Age differences in cross-pair associations. Poster session presented at the biannual Cognitive Aging Conference, Atlanta, GA, USA.

**Campbell, K. L.**, Grigg, O., & Grady, C. L. (2012, April). Fractionating the default mode in younger and older adults. Poster session presented at the 19<sup>th</sup> annual Cognitive Neuroscience Society Meeting, Chicago, IL, USA.

**Campbell, K. L.**, Zimmerman, S., Lee, M. S., & Hasher, L. (2010, November). Age-related advantage in visual statistical learning. Poster session presented at the 51<sup>st</sup> Annual Meeting of the Psychonomic Society, St. Louis, MO, USA.

**Campbell, K. L.,** Grady, C. L., & Hasher, L. (2010, April). Age differences in the recruitment of widespread neural networks: Implications for distractibility. Poster session presented at the 17<sup>th</sup> annual Cognitive Neuroscience Society Meeting, Montreal, QC, Canada.

Healey, M.K., **Campbell, K. L.,** Hasher, L., & Osher, L. (2009, August). Direct evidence for the role of inhibition in resolving interference. Poster session presented at the 117<sup>th</sup> annual American Psychological Association Convention, Toronto, ON, Canada.

Fatt, R., **Campbell, K. L.,** Al-Aidroos, N., & Hasher, L. (2009, August). Multisensory interactions in saccade curvature: Effects of bimodal targets. Poster session presented at the 117<sup>th</sup> annual American Psychological Association Convention, Toronto, ON, Canada.

**Campbell, K. L.,** & Hasher, L. (2009, March). Cross-trial associations: Implications for age differences in paired associate learning. Poster session presented at the annual Rotman Research Institute Conference, Toronto, ON, Canada.

**Campbell, K. L.,** Thomas, R. C., & Hasher, L. (2008, April). Aging and association formation: Binding too much rather than too little? Poster session presented at the biannual Cognitive Aging Conference, Atlanta, GA, USA.

**Campbell, K. L.,** & Ryan, J. D. (2008, April). Exercise a little restraint: Improving older adults' control of reflexive eye movements. Poster session presented at the biannual Cognitive Aging Conference, Atlanta, GA, USA.

## TEACHING

### Training

|      |                                                                                                                                              |
|------|----------------------------------------------------------------------------------------------------------------------------------------------|
| 2019 | Experiential Education 2-Day Institute, Brock University                                                                                     |
| 2017 | Instructional Skills Workshop, Brock University                                                                                              |
| 2011 | Teaching Fundamentals Certificate, Centre for Teaching Support & Innovation, University of Toronto (completed six 2-hour teaching workshops) |
| 2008 | Teaching Practicum, Department of Psychology, University of Toronto                                                                          |

### Experience

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|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2020      | Course Instructor, Developmental Neuroscience (PSYC 7V09)                                                                                               |
| 2019      | Course Instructor, Directed Research Techniques (PSYC 7P12 Neuroimaging Research Techniques – fMRI Research Methods and Statistical Parametric Mapping) |
| 2018-     | Course Instructor, Psychology of Aging (PSYC 3P19)                                                                                                      |
| 2017      | Course Instructor, Behavioural and Cognitive Neuroscience Focus Area Research Seminar (graduate level)                                                  |
| 2014      | Co-organizer, Neuroscience Workshop                                                                                                                     |
| 2012      | Course Instructor, Human Memory                                                                                                                         |
| 2011      | Course Instructor, Cognitive Neuroscience                                                                                                               |
| 2009-2011 | Guest Lecturer, Introduction to Cognition and Memory Seminar                                                                                            |
| 2005-2011 | Teaching assistant, multiple courses                                                                                                                    |

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**Student Supervision****Graduate Students**

- 2018- Tiago Guardia de Souza e Silva, PhD student, Brock University
- 2018- Emily Davis, MA student, Brock University
- 2018- Sarah Henderson, MA student, Brock University
- 2017- Dawn Ryan, MA student, Brock University
- 2014-2015 Juho Strömmer, PhD student, Cambridge University, *co-supervised with Lorraine Tyler*

**Graduate Committee Member**

- 2019- Samantha Moeller, MA student, Brock University
- 2019- Alison O'Connor, PhD student, Brock University
- 2019- Brent Pitchford, PhD student, Brock University
- 2019- Andrew Chung, PhD student, Brock University
- 2017- Christine Salahub, PhD student, Brock University
- 2017- Holly Lockhart, PhD student, Brock University
- 2017-2020 Reuben Howlett, MA student, Brock University

**Comprehensive Exam Committee Member**

- 2019 Holly Lockhart, PhD student, Brock University
- 2019 Brent Pitchford, PhD student, Brock University
- 2018 Christine Salahub, PhD student, Brock University
- 2018 Claire Matthews, PhD student, Brock University
- 2018 Caitlyn Gallant, PhD student, Brock University

**External Examiner**

- 2018 Dorothee Schoemaker, McGill University

**Honours Thesis Students**

- 2017-2018 Sarah Henderson, Psychology, Brock University
- 2017-2018 Emily Chemnitz, Neuroscience, Brock University
- 2017-2018 Ethan Foy, Neuroscience, Brock University
- 2011-2012 Ali Trelle, University of Toronto (paper in *JEP:LMC*), *co-supervised with Lynn Hasher*
- 2008-2009 Lynn Ossher, University of Toronto (paper in *Psychological Science*), *co-supervised with Lynn Hasher*

**Honours Thesis Committee Member**

- 2018 Janahan Selvanayagam, Neuroscience, Brock University
- 2018 Aaron Zwiep, Neuroscience, Brock University

**NSERC Undergraduate Student Research Award**

- 2018 Emily Chemnitz, Brock University
- 2017 Sarah Henderson, Brock University

**Match of Minds Summer Student Research Assistant**

- 2018 Sarah Henderson, Brock University
- 2017 Emily Davis, Brock University

### **Independent Research Project Students**

|      |                                                                                 |
|------|---------------------------------------------------------------------------------|
| 2016 | Jenny Sun, Harvard University                                                   |
| 2016 | Shirley Lin, Harvard University                                                 |
| 2015 | Chloe Withers, Cambridge University                                             |
| 2014 | Jennifer Champion, Cambridge University                                         |
| 2012 | Wei Lin, University of Toronto                                                  |
| 2010 | Michelle Lee, University of Toronto (paper in <i>Psychology &amp; Aging</i> )   |
| 2008 | Robb Fatt, University of Toronto (paper in <i>Experimental Brain Research</i> ) |
| 2007 | Ahn Nguyen, University of Toronto                                               |

### **PROFESSIONAL AND DEPARTMENTAL SERVICE**

#### **Professional Membership**

|       |                                                         |
|-------|---------------------------------------------------------|
| 2019- | Elected member of the Memory Disorders Research Society |
| 2018- | Fellow of the Psychonomic Society                       |
| 2012- | Member of the Cognitive Neuroscience Society            |

#### **Editorial Activities**

|           |                                                                                  |
|-----------|----------------------------------------------------------------------------------|
| 2020-     | Consulting Editor, <i>Psychology and Aging</i>                                   |
| 2019-2020 | Guest Editor, Special issue on Aging and Inhibition, <i>Psychology and Aging</i> |

#### **Ad Hoc Reviewer**

Aging, Neuropsychology, and Cognition \* Behavioural Brain Research \* Brain Research \* Cognition \* Cognition & Emotion \* Developmental Psychology \* Experimental Brain Research \* Human Brain Mapping \* Journal of Experimental Psychology: General \* Journal of Experimental Psychology: Human Perception and Performance \* Journal of Geriatric Psychiatry and Neurology \* Journal of Gerontology: Psychological Sciences \* Journal of Neuroscience \* Language, Cognition, & Neuroscience \* Memory \* Nature Human Behaviour \* Neurobiology of Aging \* Neurobiology of Language \* Psychological Bulletin \* Psychological Science \* Psychology and Aging \* Science \* Science Advances \* Trends in Neurosciences

#### **Grant Reviews**

|           |                                                                                     |
|-----------|-------------------------------------------------------------------------------------|
| 2019-     | NSERC Discovery Grant Program, External reviewer                                    |
| 2019-2020 | Swiss National Science Foundation, External reviewer                                |
| 2018      | McGill Healthy Brains for Healthy Lives Innovative Ideas Program, External reviewer |
| 2011-2012 | Rotman Research Institute, Internal reviewer of CIHR grant applications             |

#### **Departmental Service**

|              |                                                                                                                                      |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------|
| 2020         | Hiring Committee Member for Tenure-track position in Biological Psychology, Department of Psychology, Brock University               |
| 2019         | Hiring Committee Member for Canada Research Chair in Biological Psychology, Department of Psychology, Brock University               |
| 2017-present | Departmental Colloquium organizer, Department of Psychology, Brock University                                                        |
| 2010-2012    | Assistant organizer for Ebbinghaus Empire (cognitive group's weekly brown bag talks) Department of Psychology, University of Toronto |
| 2006-2008    | Social Coordinator, Psychology Graduate Students' Association, Department of Psychology, University of Toronto                       |

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**Public Outreach**

- 2019 Community talk for Brock University Retirees' Association, "Healthy Cognitive Aging: What You Should (and Shouldn't) Be Doing"
- 2018 Webinar lecture for Distress and Crisis Ontario's Learning Forum on Aging and the Elderly, "Cognitive and Emotional Aging"
- 2018 Community talk for Niagara Falls University Women's Club, "Healthy Cognitive Aging: What You Should (and Shouldn't) Be Doing"
- 2017 Podcast, Turtles All the Way Down with Jake Koseleci  
(<http://turtlesalltheway.libsyn.com/podcast>)
- 2017 Community Talk for Centre for Lifespan Development Research, Brock University, "Aging Well: Studying Healthy Cognitive Aging in Niagara"
- 2015 Community Talk for Cambridge Science Festival, University of Cambridge, "Ageing Artists & Creativity"

**MEDIA EXPOSURE**

- Sept. 8, 2017 "Brock researchers receive \$3.8M", St Catharines Standard,  
<http://www.stcatharinesstandard.ca/2017/09/08/brock-researchers-receive-38m>
- May 3, 2017 "Niagara aging population booming", St Catharines Standard  
<http://www.stcatharinesstandard.ca/2017/05/03/niagara-aging-population-booming>
- Dec. 2, 2016 "Brock University gains two new Canada Research Chairs in workplace injury, aging", The Brock News, <https://brocku.ca/brock-news/2016/12/brock-university-gains-two-new-canada-research-chairs-in-workplace-injury-aging/>
- July 16, 2016 "The brain's blueprint for aging is set early in life", Science News,  
<https://www.sciencenews.org/article/brain-blueprint-aging-set-early-life>
- May 12, 2016 "Older Adults Struggle More With Test Conditions Than Language Processing", Neuroscience News, [http://neurosciencenews.com/aging-language-processing-testing-4225/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+neuroscience-rss-feeds-neuroscience-news+%28Neuroscience+News+Updates%29](http://neurosciencenews.com/aging-language-processing-testing-4225/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+neuroscience-rss-feeds-neuroscience-news+%28Neuroscience+News+Updates%29)
- Oct. 29, 2015 "Scary Science: A Geek's Guide to Halloween", BuzzFeed,  
[https://www.buzzfeed.com/arranafrood/scary-science-a-geekas-guide-to-halloween-1mmog?utm\\_term=.seKPMEEg1#.wd30bZZ4o](https://www.buzzfeed.com/arranafrood/scary-science-a-geekas-guide-to-halloween-1mmog?utm_term=.seKPMEEg1#.wd30bZZ4o)
- Aug. 15, 2015 "Individual thinking comes with age", The Times,  
<https://www.thetimes.co.uk/article/individual-thinking-comes-with-age-db2j2673j22>
- Aug. 14, 2015 "Young minds think alike; older people are more distractible", Science Daily,  
<https://www.sciencedaily.com/releases/2015/08/150814101528.htm>
- Aug. 14, 2015 "Older People More Easily Distracted than the Young", Neuroscience News,  
<http://neurosciencenews.com/psychology-distraction-aging-2440/>

- May 1, 2010 "Gray Hair, Silver Lining: The Workings of Wisdom", Psychology Today,  
<https://www.psychologytoday.com/articles/201005/insights-news>
- Jan. 27, 2010 "Hyper-binding ain't for sissies", Association for Psychological Science News,  
<http://www.psychologicalscience.org/news/were-only-human/hyper-binding-aint-for-sissies.html>
- Jan. 25, 2010 "Older brains make good use of 'useless' information", Science Daily,  
<https://www.sciencedaily.com/releases/2010/01/100120161237.htm>
- Jan. 1, 2010 "Distractions may make us wiser in old age", NBC News,  
<http://www.nbcnews.com/id/35130479/ns/health-aging/t/distractions-may-make-us-wiser-old-age/#.Wh8YU0qnGU>



**Date Submitted:** 2019-10-04 13:02:06

**Confirmation Number:** 1047705

**Template:** NSERC\_Researcher

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## **Dr. Kimberly Ann Cote**

Correspondence language: English

### **Contact Information**

The primary information is denoted by (\*)

#### **Address**

Mailing (\*)

Brock University  
Psychology Department  
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St. Catharines Ontario L2S 3A1  
Canada

#### **Telephone**

|          |                              |
|----------|------------------------------|
| Fax      | 905-688-6922                 |
| Work (*) | 905-688-5550 extension: 4806 |

#### **Email**

|          |                 |
|----------|-----------------|
| Work (*) | kcote@brocku.ca |
|----------|-----------------|



Protected when completed

## Dr. Kimberly Cote

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### Language Skills

| Language | Read | Write | Speak | Understand | Peer Review |
|----------|------|-------|-------|------------|-------------|
| English  | Yes  | Yes   | Yes   | Yes        | Yes         |
| French   | No   | No    | No    | No         | No          |

### Degrees

- 1999/9                    Doctorate, Experimental Psychology, University of Ottawa  
Supervisors: Campbell, Kenneth, 1995/9 - 1999/9
- 1995/9                    Master's Thesis, Medical Science, University of Toronto  
Supervisors: Moldofsky, Harvey, 1993/9 - 1995/8
- 1993/6                    Bachelor's, Psychology, Brock University  
Supervisors: Ogilvie, Robert, 1990/9 - 1993/4

### User Profile

Research Specialization Keywords: arousal, attention, cognition, electroencephalography (EEG), emotion, event-related potentials (ERPs), human performance, sleep, sleep deprivation, sleep onset mechanisms

### Employment

- 2011/7                    Professor  
Psychology, Social Science, Brock University  
Full-time, Term, Professor  
Tenure Status: Tenure  
Academic
- 2019/7 - 2022/6        Chair  
Psychology, Social Science, Brock University  
Full-time, Term, Professor  
Tenure Status: Tenure
- 2018/7 - 2019/7        Associate Chair, Psychology Department  
Psychology, Social Science, Brock University  
Full-time, Term, Professor  
Tenure Status: Tenure  
Administrative / Academic

|                 |                                                                                                                                                                                                                                                      |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2009/7 - 2012/7 | Associate Chair, Psychology Department<br>Psychology, Social Science, Brock University<br>Full-time, Term, Associate Professor<br>Tenure Status: Tenure<br>Administrative / Academic                                                                 |
| 2004/7 - 2011/7 | Associate Professor<br>Psychology, Social Science, Brock University<br>Full-time, Term, Associate Professor<br>Tenure Status: Tenure<br>Academic                                                                                                     |
| 2006/7 - 2010/7 | Visiting Associate Professor<br>Psychiatry Department, School of Medicine and Dentistry, University of Rochester<br>Full-time, Visiting Professorship, Associate Professor<br>Tenure Status: Non Tenure Track<br>research collaboration / sabbatical |
| 2000/8 - 2004/7 | Assistant Professor<br>Psychology, Social Science, Brock University<br>Full-time, Term, Assistant Professor<br>Tenure Status: Tenure Track<br>Academic                                                                                               |
| 2000/1 - 2000/7 | Post-doctoral Fellow<br>Institute of Pharmacology and Toxicology, Irchel Campus, University of Zurich<br>Full-time, Term<br>Tenure Status: Non Tenure Track<br>research                                                                              |

## Research Funding History

### Awarded [n=4]

|                                        |                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2019/5 - 2024/4<br>Principal Applicant | Investigating the Functional Role of Sleep in Waking Cognitive and Emotion Processing,<br>Grant<br><br><b>Funding Sources:</b><br>Natural Sciences and Engineering Research Council of Canada (NSERC)<br>Discovery Grant<br>Total Funding - 140,000<br>Portion of Funding Received - 28,000<br>Funding Competitive?: Yes |
| 2014/4 - 2019/4<br>Principal Applicant | Neurobehavioural and Physiological Consequences of Sleep Deprivation in Humans,<br>Grant<br><br><b>Funding Sources:</b><br>Natural Sciences and Engineering Research Council of Canada (NSERC)<br>Discovery Grant<br>Total Funding - 130,000<br>Portion of Funding Received - 130,000<br>Funding Competitive?: Yes       |
| 2018/1 - 2019/1<br>Principal Applicant | Perception of Emotional Stimuli in Patients with Insomnia, Grant<br><br><b>Funding Sources:</b><br>Brock University<br>Brock University Advancement Fund (BUAF)                                                                                                                                                          |

Total Funding - 5,000  
 Portion of Funding Received - 5,000  
 Funding Competitive?: Yes

2017/11 - 2018/11  
 Principal Applicant Perception of Emotional Stimuli in Patients with Insomnia, Grant

**Funding Sources:**

Brock University  
 Council for Research in the Social Sciences (CRISS)  
 Total Funding - 3,000  
 Portion of Funding Received - 3,000  
 Funding Competitive?: Yes

**Completed [n=2]**

2015/6 - 2015/10  
 Principal Applicant Engaging Patients in Sleep Disorders Research, Grant

**Funding Sources:**

Canadian Institutes of Health Research (CIHR)  
 Planning and Dissemination Grants – Institute Community Support  
 Total Funding - 23,293  
 Portion of Funding Received - 0  
 Funding Competitive?: Yes

Co-applicant : John Peever, PhD; Julie Carrier, PhD; Robert Skomro, MD; Shelly Weiss, MD

2009/5 - 2014/4  
 Principal Applicant Electrophysiological Measures of Alertness and Performance during Sleep Deprivation, Grant

**Funding Sources:**

Natural Sciences and Engineering Research Council of Canada (NSERC)  
 Discovery Grant  
 Total Funding - 125,000  
 Portion of Funding Received - 125,000  
 Funding Competitive?: Yes

## Student/Postdoctoral Supervision

**Bachelor's Honours [n=11]**

2019/9 - 2020/5  
 Principal Supervisor Gorzalczynski, Amy (In Progress) , Brock University  
 Student Degree Expected Date: 2020/6  
 Thesis/Project Title: Neuroscience thesis: Effects of cannabis on sleep  
 Present Position: BSc student, Brock University

2019/9 - 2020/5  
 Principal Supervisor Miller, Patrick (In Progress) , Brock University  
 Student Degree Expected Date: 2020/6  
 Thesis/Project Title: Psyc thesis: Role of stress(self-report and cortisol) and sleep(duration and variability) in well-being in a student population  
 Present Position: BA student, Brock University

2017/5 - 2018/8  
 Principal Supervisor Schirmeister, Julia (In Progress) , Brock University  
 Student Degree Expected Date: 2019/6  
 Thesis/Project Title: Sleep, EEG, and ERP predictors of emotion and memory processing performance (**NSERC Undergraduate Student Research Award in 2017 and 2018**)  
 Present Position: undergraduate student, Brock University

|                                         |                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2016/9 - 2017/4<br>Principal Supervisor | Turpin, Victoria (Completed) , Brock University<br>Thesis/Project Title: Neuroscience Thesis: Stimulus-preceding negativity (SPN) potentials in anticipation of threat judgements following a nap<br>Present Position: Master's, Physiology & Pharmacology, McMaster University                             |
| 2016/9 - 2017/4<br>Principal Supervisor | Wojtowych, Katrina (Completed) , Brock University<br>Thesis/Project Title: Psyc Thesis: Processing emotionally expressive faces following a nap and rest period<br>Present Position: unknown                                                                                                                |
| 2015/9 - 2016/4<br>Principal Supervisor | Storace, Alexandra (Completed) , Brock University<br>Thesis/Project Title: Psyc Thesis: Working memory improvements following a nap and relation to working memory capacity<br>Present Position: MSc student, Guelph University                                                                             |
| 2015/5 - 2015/8<br>Principal Supervisor | Lockhart, Holly (Completed) , Brock University<br>Thesis/Project Title: Working memory performance following a daytime nap ( <b>NSERC Undergraduate Student Research Award</b> )<br>Present Position: PhD student, Brock University                                                                         |
| 2014/9 - 2016/8<br>Principal Supervisor | Lamache, Dennis (Completed) , Brock University<br>Thesis/Project Title: Neuroscience Thesis: EEG predictors of deficits in neurobehavioural performance following sleep restriction; paid RA Sept 2014-Apr 2015.<br>Present Position: graduate certificate in Pharmaceutical Regulation, Humber College     |
| 2013/9 - 2014/8<br>Principal Supervisor | Opal, Bianca (Completed) , Brock University<br>Thesis/Project Title: ERPs to emotional stimuli following acute sleep restriction ( <b>NSERC Undergraduate Student Research Award 2014; co-op</b> ); Volunteer RA 2013-14; paid RA Sept 2014-Apr 2015.<br>Present Position: Nursing degree, Brock Univeristy |
| 2012/9 - 2013/4<br>Principal Supervisor | Sergeeva, Valya (Completed) , Brock University<br>Thesis/Project Title: Psyc Thesis: P1 and N170 event-related potentials (ERPs) to emotional faces following sleep deprivation<br>Present Position: MA Western; Sleep Technologist, Sick Kids Hospital                                                     |
| 2012/9 - 2013/4<br>Principal Supervisor | Jancsar, Cara (Completed) , Brock University<br>Thesis/Project Title: Neuroscience Thesis: Event-related potentials (ERPs) to emotional picture scenes following sleep deprivation<br>Present Position: Dentistry field                                                                                     |

### Master's Thesis [n=4]

|                                          |                                                                                                                                                                                                                                                                                                    |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2017/9 - 2019/12<br>Principal Supervisor | Howlett, Reuben (In Progress) , Brock University<br>Student Degree Expected Date: 2020/6<br>Thesis/Project Title: Master's Thesis: Emotion perception and inhibitory control in patients with insomnia<br>Present Position: MA student, Brock Univeristy                                           |
| 2014/9 - 2016/8<br>Principal Supervisor  | Lustig, Kari (Completed) , Brock University<br>Thesis/Project Title: Master's Thesis: The role of sleep and hormones in processing emotional information (recipient of <b>NSERC PGS-Master's scholarship</b> )<br>Present Position: PhD candidate, Brock University                                |
| 2012/9 - 2016/9<br>Principal Supervisor  | Stoakley, Elizabeth (Completed) , Brock University<br>Thesis/Project Title: Master's Thesis (part-time): The role of cardiac vagal tone in predicting of individual differences in attention and emotion processing after sleep restriction<br>Present Position: Psychotherapist, Private practice |

2012/9 - 2014/9  
Principal Supervisor MacDonalD, Kevin (Completed) , Brock University  
Thesis/Project Title: Master's Thesis: The role of sleep in the selective reconsolidation of declarative memories (**recipient of NSERC PGS-Master's scholarship**)  
Present Position: PhD candidate, Brock University

### Doctorate [n=2]

2016/9 - 2020/9  
Principal Supervisor Lustig, Kari (In Progress) , Brock University  
Student Degree Expected Date: 2020/9  
Thesis/Project Title: Doctoral Dissertation: The role of sleep and hormones in emotion processing (**recipient of NSERC CGS-Doctoral scholarship**)  
Present Position: PhD student, Brock University

2014/9 - 2019/12  
Principal Supervisor MacDonalD, Kevin (In Progress) , Brock University  
Student Degree Expected Date: 2020/6  
Thesis/Project Title: Doctoral Dissertation: The dual role of REM and non-REM sleep mechanisms in learning and memory processes (**recipient of NSERC PGS-Doctoral scholarship**)  
Present Position: PhD candidate, Brock University

### Technician [n=7]

2018/9 - 2018/4  
Principal Supervisor Sanguenza, Julia (In Progress) , Brock University  
Thesis/Project Title: Part-time RA since Sept 2018  
Present Position: student, Brock University

2014/9 - 2016/4  
Principal Supervisor Sreetharan, Sharmilla (Completed) , Brock University  
Thesis/Project Title: Volunteer RA Jan-Apr 2015; paid full-time RA summer 2015; part-time RA Sept 2015 - Apr 2016.  
Present Position: Master's student, McMaster

2014/5 - 2014/8  
Principal Supervisor Calixto, Gabriel (Completed) , Brasil  
Thesis/Project Title: Full-time RA; visiting Brazilian medical student  
Present Position: Medical School, Brasil

2014/4 - 2014/8  
Principal Supervisor Barnfield, Rebecca (Completed) , Western  
Thesis/Project Title: Full-time volunteer RA from Western University summer 2014  
Present Position: Medical school, unknown

2013/9 - 2016/8  
Principal Supervisor Medland, Alexandra (Completed) , Brock University  
Thesis/Project Title: Volunteer RA in 2013-14; paid full-time co-op summer 2016 and paid full-time co-op summer 2017.  
Present Position: Psychometrist, Psychologist's Office

2013/4 - 2013/8  
Principal Supervisor Kremble, Andrew (Completed) , Brock University  
Thesis/Project Title: Full-time paid co-op Apr - Aug 2013  
Present Position: unknown

2012/9 - 2014/4  
Principal Supervisor Aldhelm-White, Corrie (Completed) , Brock University  
Thesis/Project Title: Paid part-time RA Sept 2012 - Apr 2014  
Present Position: Masters, Child & Youth Studies; unknown, Brock University

### Event Administration

2015/9 - 2017/9 member, International Scientific Committee, World Sleep Society Congress, Prague, Czech Republic, Conference, 2017/9 - 2017/9

|                   |                                                                                                                                                                                                                                                               |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2016/1 - 2017/5   | Chair, Fundraising Committee, 8th Conference of the Canadian Sleep Society (CSS), Calgary, Alberta, Conference, 2017/4 - 2017/5                                                                                                                               |
| 2016/1 - 2017/5   | member, Organizing Committee, 8th Conference of the Canadian Sleep Society (CSS), Calgary, Alberta, Conference, 2017/4 - 2017/5                                                                                                                               |
| 2016/1 - 2017/5   | member, Scientific Program Committee, 8th Conference of the Canadian Sleep Society (CSS), Calgary, Alberta, Conference, 2017/4 - 2017/5                                                                                                                       |
| 2013/4 - 2015/9   | member, Organizing Committee, 7th Conference of the Canadian Sleep Society (CSS), Toronto, Ontario, Conference, 2015/9 - 2015/9                                                                                                                               |
| 2013/4 - 2015/9   | co-chair, 7th Conference of the Canadian Sleep Society (CSS), Toronto, Ontario, Conference, 2015/9 - 2015/9                                                                                                                                                   |
| 2013/4 - 2015/9   | member, Fundraising Committee, 7th Conference of the Canadian Sleep Society (CSS), Toronto, Ontario, Conference, 2015/9 - 2015/9                                                                                                                              |
| 2013/4 - 2015/9   | member, Scientific Program Committee, 7th Conference of the Canadian Sleep Society (CSS), Toronto, Ontario, Conference, 2015/9 - 2015/9                                                                                                                       |
| 2013/3 - 2015/3   | member, International Scientific Program Committee, 6th World Congress of Sleep Medicine, Seoul, Korea, Conference, 2015/3 - 2015/3                                                                                                                           |
| 2013/3 - 2013/10  | proposer and chair, Symposium entitled, "Cognitive Neuroscience Approaches to Understanding Relationships between Sleep and Waking Function" at the 6th Scientific Conference of the Canadian Sleep Society, Halifax, Nova Scotia, Seminar, 2013/10 - 2013/10 |
| 2011/10 - 2013/10 | member, Fundraising Committee, 6th Conference of the Canadian Sleep Society (CSS), Halifax, Nova Scotia, Conference, 2013/10 - 2013/10                                                                                                                        |
| 2011/10 - 2013/10 | member, Scientific Program Committee, 6th Conference of the Canadian Sleep Society (CSS), Halifax, Nova Scotia, Conference, 2013/10 - 2013/10                                                                                                                 |
| 2011/9 - 2013/9   | member, International Scientific Program Committee, 5th World Congress of Sleep Medicine, Valencia, Spain, Conference, 2013/9 - 2013/9                                                                                                                        |

## Editorial Activities

|                 |                                                            |
|-----------------|------------------------------------------------------------|
| 2019/1 - 2021/1 | Editorial Board member, Behavioral Sleep Medicine, Journal |
|-----------------|------------------------------------------------------------|

## Knowledge and Technology Translation

|                 |                                                                                                                                                                                                                                                                                                     |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2019/6 - 2019/6 | <p>Presenter, Community Engagement<br/> Group/Organization/Business Serviced: Hewlett Packard<br/> Target Stakeholder: Industrial Association/Producer Group<br/> Outcome / Deliverable: Health and safety presentation live webinar<br/> Activity Description: Topic: The Importance of Sleep,</p> |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- 2016/2 - 2017/10  
 Organizer, Community Engagement  
 Group/Organization/Business Serviced: Canadian Sleep Society  
 Target Stakeholder: General Public  
 Outcome / Deliverable: Great Canadian Sleepwalk: Raise awareness about healthy sleep across the lifespan and raise funding for the Canadian Sleep Society (CSS) for programs on education.  
 Evidence of Uptake/Impact: For the inaugural event in 2016, 5km 'sleepwalks' were held in 4 cities (Halifax, Quebec City, Montreal, Niagara). Subsequent events were organized by Cote at CSS conference in Calgary in April 2017 and with Lung Association, Saskatchewan (LAS) in October 2017.  
 References / Citations / Web Sites: [www.canadiansleepwalk.ca](http://www.canadiansleepwalk.ca)  
 Activity Description: Initiated a national awareness and fundraising campaign called "The Great Canadian Sleepwalk", and organized the walks in Niagara (2016), Calgary (2017), and Saskatoon (2018).
- 2016/1 - 2016/4  
 Author, Community Engagement  
 Group/Organization/Business Serviced: Media Planet  
 Target Stakeholder: General Public  
 Outcome / Deliverable: Wrote an article, entitled, "Why Do We Need To Get Sleep Anyway?" for Media Planet.  
 References / Citations / Web Sites: <http://www.personalhealthnews.ca/education-and-advocacy/why-do-we-need-to-get-sleep-anyway>  
 Activity Description: Article published online and marketed to print publications.
- 2015/9 - 2016/3  
 Author, Community Engagement  
 Group/Organization/Business Serviced: Canadian Sleep Society  
 Target Stakeholder: General Public  
 Outcome / Deliverable: Revised a brochure written by me in 2003 on 'Normal Sleep'  
 Evidence of Uptake/Impact: Canadian Sleep Society (CSS) brochures accessed online frequently and numerous requests are made by individuals, organizations, and medical offices to distribute brochures.  
 References / Citations / Web Sites: <https://css-scs.ca/resources/brochures/normal-sleep>  
 Activity Description: The original brochure was written by Cote in 2003 and content significantly updated for the 2016 draft.
- 2012/9 - 2016/2  
 Mentor, Community Engagement  
 Group/Organization/Business Serviced: Brock Mentorship Program  
 Target Stakeholder: General Public  
 Outcome / Deliverable: Provided supervision and mentorship for senior high school students to carry out independent research projects in the Sleep Research Laboratory.  
 Evidence of Uptake/Impact: Presentations at annual Mentorship symposium  
 Activity Description: Supervised 2 students in last 6 years (2012; 2015). Students work on projects in the lab each afternoon, September to February.

- 2015/9 - 2015/9 Organizer, Community Engagement  
Group/Organization/Business Serviced: Canadian Sleep Society  
Target Stakeholder: Patients  
Outcome / Deliverable: Goals of workshop included: 1. Communicate current knowledge and gaps in four specific sleep disorders (Narcolepsy, apnea, insomnia, PLM/RLS); 2. Identify areas of priority and need from patients; 3. Discuss how patients may be integrated in the various steps of the research process; 4. Generate specific short-term goals (strategies and/or tools) to facilitate co-building between patients and researchers.  
References / Citations / Web Sites: Final report: [https://css-scs.ca/files/resources/publications/2015\\_CSS\\_CSCN\\_Report\\_PE\\_workshop.pdf](https://css-scs.ca/files/resources/publications/2015_CSS_CSCN_Report_PE_workshop.pdf)  
Activity Description: A CIHR-ICRH Planning and Dissemination Grant funded a half-day planning workshop that focussed on patient-engagement in research on sleep disorders. The workshop was held in conjunction with the biennial scientific conference of the Canadian Sleep Society (CSS), in partnership with the Canadian Sleep and Circadian Network (CSCN) group on September 25th, 2015. The workshop brought together scientists and clinicians working in the field with patients to discuss how to increase patient engagement in the research area.
- 2015/6 - 2015/9 Author, Community Engagement  
Group/Organization/Business Serviced: Scientific American Mind  
Target Stakeholder: General Public  
Outcome / Deliverable: Wrote an article for Scientific American Mind, entitled, "Does napping really help cognitive function?"  
References / Citations / Web Sites: <http://www.scientificamerican.com/article/can-napping-make-us-smarter1/>  
Activity Description: Article written by Cote for the "Ask the Experts" column in Scientific American Minds magazine. Edited by Jim Lohr.
- 2010/5 - 2015/5 Workshop leader, Community Engagement  
Group/Organization/Business Serviced: Scientifically Yours  
Target Stakeholder: General Public  
Outcome / Deliverable: 2-hour workshops in Sleep Research Laboratory  
Activity Description: Scientifically Yours program aims to encourage Grade 11 high-school girls to choose careers in sciences; participated 2010, 2011, 2012, 2015
- 2014/4 - 2014/4 Presenter, Community Engagement  
Group/Organization/Business Serviced: McMaster University  
Target Stakeholder: General Public  
Outcome / Deliverable: Spoke to students about healthy sleep  
Activity Description: Invited panel member for CIHR Café Scientifique entitled "No sleep for the weary", McMaster Health Forum, McMaster University, April 8th 2014.
- 2013/3 - 2013/3 Author, Community Engagement  
Group/Organization/Business Serviced: Brock University  
Target Stakeholder: Academic Personnel  
Outcome / Deliverable: Article written for Brock Health and Wellness magazine, entitled "Make time for sleep".

## Committee Memberships

- 2017/5 - 2019/9 Committee Member, Executive Board, Past-President, Canadian Sleep Society  
Past-President of the Canadian Sleep Society, a national professional organization.
- 2018/6 - 2019/6 Committee Member, Awards Nominating Committee, Sleep Research Society  
A professional organization for sleep researchers in the U.S.

- 2019/5 - 2019/5 Committee Member, Behavioural Sciences C committee (BSC), Canadian Institutes of Health Research  
grant review panel for project grant spring 2019 competition
- 2016/1 - 2019/1 Committee Member, Knowledge Mobilization Committee, Canadian Sleep and Circadian Network (CSCN)  
CSCN is a newly formed CIHR-funded research network. The Knowledge Translation Committee is responsible for advising on planning, organization, delivery and evaluation of knowledge translation initiatives within the network.
- 2018/5 - 2018/5 Committee Member, CIHR-ICRH-CSS Distinguished Lecturer Award in Sleep Sciences, Canadian Institutes of Health Research  
review panel, for CIHR-ICRH-CSS Distinguished Lecturer Award in Sleep Sciences.
- 2016/1 - 2018/1 Committee Member, Governing Council, World Sleep Society (WSS)  
World Sleep Society (WSS) is the newly formed amalgamation of the former World Sleep Federation (WSF) and the World Association of Sleep Medicine (WASM). The 14-member Governing Council is comprised of 4 officers, 5 society representatives, and 5 individual members representing different geographical regions. Cote was the governing council member for the Canadian Sleep Society.
- 2016/1 - 2018/1 Committee Member, Stakeholder Alliance Committee, Canadian Sleep and Circadian Network (CSCN)  
representing the Canadian Sleep Society as a stakeholder in the Canadian Sleep and Circadian Network (CSCN) committee, a national research network funded by CIHR
- 2017/10 - 2017/11 Committee Member, Behavioural Studies and Neural Imaging (BSC) committee, Canadian Institutes of Health Research  
grant review panel for the Project Grant Fall 2017 competition
- 2016/9 - 2017/9 Committee Member, Graduate Committee, Psychology Department, Brock University
- 2014/6 - 2017/5 Chair, Executive Board, President, Canadian Sleep Society  
President of the Canadian Sleep Society, a national professional organization.
- 2015/7 - 2016/7 Committee Member, Academic Integrity Officer, Brock University  
Departmental committee to set policy and procedures and adjudicate meetings with first-year Psychology students for academic integrity cases (60 cases in 2015-16 year)
- 2008/6 - 2015/6 Committee Member, Governing Council, World Sleep Federation (WSF)  
The Governing Council of WSF was made up of representatives from each of the 7 major professional sleep societies (e.g., Canadian, U.S., European, etc). I represented the Canadian Sleep Society in meetings in Baltimore 2008, Glasgow 2009, San Antonio 2010, and Seattle 2015.
- 2015/3 - 2015/4 Committee Member, Normal Workload Standards ad-hoc committee, Brock University  
Departmental committee to review workload and draft policy on normal workload standards
- 2013/10 - 2014/2 Committee Member, University NSERC Scholarship Ranking Committee, Brock University  
Committee members review applications for NSERC post-graduate scholarships from all disciplines, and meet to rank and vote on applications to be funded.
- 2012/7 - 2013/6 Committee Member, Search Committees for Associate Dean (undergraduate) and Associate Dean (Graduate) for both Faculty of Social Science (FOSS) and Faculty of Math and Science (FMS) at Brock University, Brock University  
Responsibilities of the Search Committee included meetings to establish procedures and advertisements, review of applications, and advising the Dean on two administrative positions in the Faculty.

## Other Memberships

- 2015/6 - 2020/6 member, Canadian Sleep and Circadian Network (CSCN)  
CSCN is a CIHR-funded national network (<https://www.cscnweb.ca>). Its mission is to generate new knowledge in sleep and circadian research and bridge gaps between research outcomes and impact on health. The network includes over 40 researchers from 18 universities in Canada. CSCN received a 4 million grant for the network from CIHR in June 2015.
- 1995/1 - 2018/12 member, Society for Psychophysiological Research (SPR)  
A professional association for scientists working in the field of Psychophysiology.
- 1992/1 - 2018/12 member, Sleep Research Society (SRS)  
A professional association in the U.S.A. for sleep researchers.
- 1989/1 - 2018/12 member, Canadian Sleep Society  
A professional association of scientists, clinicians, technologists and students whose aim is to improve sleep for all Canadians through: support for research, promotion of high quality clinical care, education of professionals and the public, and advocacy for sleep and sleep disorders medicine.

## Presentations

- (2018). Sleepy driving and the combined effects of drugs and alcohol. Invited presentation at the 7th Drugs and Driving Symposium, Center for Forensic Science, Toronto, Canada  
Main Audience: Knowledge User  
Invited?: Yes, Keynote?: No
- (2014). The role of sleep in behavioural and neural processing of emotional information and aggressive behaviour. Invited to give talk and for lab visit, by Hans Van Dongen, PhD (Director, Human Sleep and Cognition Laboratory; Assistant Director, Sleep and Performance Research Center; Washington State University), Spokane, United States  
Main Audience: Researcher  
Invited?: Yes, Keynote?: No
- (2013). The role of sleep deprivation in human performance and emotion. Invited keynote by K. Cote at the Interprofessional Health Research Conference, Saint John Regional Hospital, Saint John, Canada  
Main Audience: Researcher  
Invited?: Yes, Keynote?: Yes
- (2013). Impact of sleep loss on processing facial displays of emotion", in symposium entitled "Neurobehavioural, physiological and psychosocial consequences of chronic sleep restriction: New insights from animal models and human studies. Oral presentation by K. Cote at the 6th Scientific Conference of the Canadian Sleep Society (CSS), Halifax, Canada  
Main Audience: Researcher  
Invited?: Yes, Keynote?: No

## Broadcast Interviews

- 2018/05/25 - Does sleeping in on weekends improve long-term health outcomes?, live syndicate radio  
2018/05/25 in 13 Canadian cities, CBC radio
- 2018/09/20 - Stats Canada report on Sleep Duration, live syndicate radio in 8 Canadian cities, CBC  
2017/09/20 radio

|                            |                                                                                                                                                                                                                                                   |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2016/12/01 -<br>2016/12/01 | Napping, CKTB radio, CKTB radio                                                                                                                                                                                                                   |
| 2016/08/23 -<br>2016/08/23 | Good sleep habits, CKTB Radio 610, CKTB Radio 610                                                                                                                                                                                                 |
| 2015/08/15 -<br>2015/08/15 | Back to school sleep, 6pm news, CHCH TV                                                                                                                                                                                                           |
| 2015/02/08 -<br>2015/02/08 | Napping, radio, CBC                                                                                                                                                                                                                               |
| 2015/02/01 -<br>2015/02/01 | Sleep tracking devices, radio, CBC                                                                                                                                                                                                                |
| 2012/03/01 -<br>2012/03/01 | Sleep deprivation, The Road Less Travelled, Radio 102.7 FM in Thunder Bay and <a href="http://www.luradio.ca">www.luradio.ca</a>                                                                                                                  |
| 2011/03/01 -<br>2011/03/01 | Communications, technology use, and sleep, CTV news, CTV Television                                                                                                                                                                               |
| 2010/12/01 -<br>2010/12/01 | Pilot Fatigue, National news, Global National                                                                                                                                                                                                     |
| 2010/07/01 -<br>2010/07/01 | The Science of Sleep (Episode #69), Sceptically Speaking, a syndicated radio show and podcast based in Edmonton, Alberta, that broadcasts weekly across North America, <a href="http://www.skepticallyspeaking.ca">www.skepticallyspeaking.ca</a> |

## Text Interviews

|            |                                                                                                                                                                                                                                                    |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2018/09/29 | Student sleep, Student Health 101 magazine                                                                                                                                                                                                         |
| 2017/01/01 | Faculty spotlight, Brock Health                                                                                                                                                                                                                    |
| 2016/12/01 | My sleep deprivation research, Wall Street Journal                                                                                                                                                                                                 |
| 2016/08/21 | Great Canadian Sleepwalk, The Standard newspaper ( <a href="http://www.stcatharinesstandard.ca/2016/08/21/walking-for-sleep">http://www.stcatharinesstandard.ca/2016/08/21/walking-for-sleep</a> )                                                 |
| 2016/08/17 | Sleep and activity in children, The Standard newspaper ( <a href="http://www.stcatharinesstandard.ca/2016/08/16/inactive-kids-dont-sleep-well-at-night">http://www.stcatharinesstandard.ca/2016/08/16/inactive-kids-dont-sleep-well-at-night</a> ) |
| 2016/08/01 | Sleep deprivation, Chatelaine magazine                                                                                                                                                                                                             |
| 2016/06/01 | Napping, Yahoo Canada                                                                                                                                                                                                                              |
| 2016/02/01 | The Science of Naps, APA Monitor                                                                                                                                                                                                                   |
| 2016/01/01 | Napping, The National Post                                                                                                                                                                                                                         |
| 2015/11/01 | Napping, Chatelaine magazine                                                                                                                                                                                                                       |
| 2015/11/01 | Napping, Student Health 101                                                                                                                                                                                                                        |
| 2015/11/01 | Canadian Researchers Unravelling Why we Sleep, Chronicles of Neurology and Psychiatry                                                                                                                                                              |
| 2015/06/01 | Napping, Hiffington Post                                                                                                                                                                                                                           |
| 2015/02/23 | Personal sleep monitoring devices, Globe and Mail, interview with Nancy Carr                                                                                                                                                                       |
| 2015/02/01 | Sleep Gadgets, Globe and Mail                                                                                                                                                                                                                      |
| 2014/01/01 | Napping in the workplace, Canadian Business                                                                                                                                                                                                        |
| 2013/09/10 | Napping, The Wall Street Journal                                                                                                                                                                                                                   |

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|------------|------------------------------------------------------------------------------------------|
| 2013/02/01 | Sleep in Adolescents, Globe & Mail (national newspaper) interview with Erin Anderssen    |
| 2013/01/01 | Sleep in Children, St. Catharines Standard (local newspaper) interview with Cheryl Clock |

## Publications

### Journal Articles

1. \* Stoakley E., Mathewson, K., Schmidt L., Cote K.A. (2019). Respiratory sinus arrhythmia during waking and sleep states: Stability and relation to individual differences in affective style. *Journal of Psychophysiology*. 33(1): 1-12.  
Published  
Refereed?: Yes, Open Access?: Yes
2. Miskovic, V., \* MacDonald K.J., Rhodes, J., & Cote, K.A. (2019). Changes in EEG multiscale entropy and power-law frequency scaling during the human sleep cycle. *Human Brain Mapping*. 40(2): 538-551.  
Published  
Refereed?: Yes, Open Access?: Yes
3. \* MacDonald K.J., \* Lustig, K.A., Geniole, S.N., McCormick C.M., & Cote, K.A. (2019). Sex-hormone concentrations and reactive aggression in men and women after sleep restriction. *Aggressive Behavior*. 45: 193-205.  
Published  
Refereed?: Yes, Open Access?: Yes
4. \* Lustig, K.A., Cote, K.A., & Willoughby, T. (2019). Fluctuations in self-reported sleep over the first three years of university and the impact on emotion reactivity and regulation. *Sleep Medicine*.  
Submitted  
Refereed?: Yes
5. \* MacDonald K.J., \* Storage, A.C., \* Lockhart, H.A., Emrich, S.M., & Cote K.A. (2018). A daytime nap enhances visual working memory performance and alters Event-related Delay Activity. Published online July 26, 2018. *Cognitive, Affective, & Behavioral Neuroscience*. 18(6): 1105-1120.  
Published  
Refereed?: Yes, Open Access?: Yes
6. \* Lustig, K.A., \* Stoakley, E., \* MacDonald, K., Geniole, S.N., McCormick C.M., & Cote, K.A. (2018). Sex hormones play a role in vulnerability to sleep loss on emotion processing tasks. *Neurobiology and Sleep and Circadian Rhythms*. 5: 94-104.  
Published  
Refereed?: Yes, Open Access?: Yes
7. Dutil, C., Walsh, J.J., Featherstone, R.B., Gunnell, K.E., Tremblay, M.S., Gruber, R., Weiss, S.K., Cote, K.A., Sampson, M., & Chaput, J-P. (2018). Influence of sleep on developing brain functions and structures in children and adolescents: A systematic review. *Sleep Medicine Reviews*. 42: 184-201.  
Published  
Refereed?: Yes, Open Access?: Yes
8. Cote, K.A. (2016). Sleep on it: Everything will look better in the morning. Invited Guest Editorial. *Sleep Medicine Reviews*, <http://dx.doi.org/10.1016/j.smr.2016.04.003>. : 1-3.  
Published  
Refereed?: Yes, Open Access?: No
9. \* MacDonald K.J. & Cote K.A. (2016). Sleep physiology predicts memory retention after reactivation. *Journal of Sleep Research*. 25(6): 655-663.  
Published  
Refereed?: Yes, Open Access?: No

10. Cote, K.A., \* Milner, C.E., \* Speth, T.A. (2015). Altered sleep mechanisms following Traumatic Brain Injury and relation to waking function. *AIMS Neuroscience*. 2(4): 203-228.  
Published  
Refereed?: Yes, Open Access?: Yes
11. Cote KA, \* Jancsar C, \* Hunt B. (2015). Event-related neural response to emotional picture stimuli following sleep deprivation. *Psychology and Neuroscience*. 8(1): 102-113.  
Published  
Refereed?: Yes, Open Access?: No
12. Cote KA, Mondloch CJ, \* Sergeeva V, \* Taylor M, \* Semplonius T. (2014). Impact of total sleep deprivation on behavioural and neural processing of emotionally expressive faces. *Experimental Brain Research*. 232: 1429-42.  
Published  
Refereed?: Yes, Open Access?: No
13. Cote KA, McCormick CM, Geniole SN, \* Renn RP, \* MacAulay SD. (2013). Sleep deprivation lowers reactive aggression and testosterone in men. *Biological Psychology*. 92(2): 249-256.  
Published  
Refereed?: Yes, Open Access?: No
14. \* Renn RP, Cote KA. (2013). Performance monitoring following total sleep deprivation: Effects of task type and error rate. *International Journal of Psychophysiology*. 88(1): 64-73.  
Published  
Refereed?: Yes, Open Access?: No

## Book Chapters

1. Cote, K.A., \* Lustig, K.A., & \* MacDonald, K.J. (2019). Ch 33: The role of sleep in processing emotional information. H.C. Dringenberg. *Handbook of Sleep Research*. : 505-518.  
Published, Elsevier  
Refereed?: Yes

## Conference Publications

1. Cote, K.A.(PRESENTER), \* Lustig, K.A., \* Stoakley, E.M., \* MacDonald, K.J. (2016). One night of sleep restriction alters neural processing of positive emotional pictures. (note: no published abstracts). Gordon Research Conference for Sleep Regulation and Function, Galveston, United States  
Conference Date: 2016/3  
Poster  
Published  
Refereed?: Yes, Invited?: No
2. Cote KA (PRESENTER), \* Hunt B, \* Jancsar C. (2014). The late positive potential (LPP) shows greater encoding of emotional pictures and a negativity bias following sleep deprivation. *Sleep*, Vol 37. Poster presented at the 28th Annual Associated Professional Sleep Societies (APSS), Minneapolis, United States (A88)  
Conference Date: 2014/6  
Abstract  
Published  
Refereed?: Yes, Invited?: No

3. Cote, K.A. (PRESENTER). (2014). Probing stages of emotion processing affected by sleep deprivation using temporally sensitive event-related potential (ERP) techniques.(note: no published abstracts). Gordon Research Conference on Sleep Regulation & Function, "The Science of Sleep: Emerging Themes and Paradigm Shifts", Galveston, United States  
Conference Date: 2014/3  
Poster  
Published  
Refereed?: Yes, Invited?: No
4. Cote KA (PRESENTER), Mondloch C, \* Semplonius T, \* Hunt B, \* Sergeeva V, \* Taylor M. (2013). Information processing of emotional faces following total sleep deprivation: There's something special about sad faces. Sleep, Vol.36(Suppl). 27th Annual Meeting of the Associated Professional Sleep Societies (APSS), Baltimore, United States (A97)  
Conference Date: 2013/6  
Abstract  
Published  
Refereed?: Yes, Invited?: No

Curriculum Vitae  
Elizabeth P. Shulman, Ph.D.

[last updated August 31, 2020]

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## POSITIONS

- Jul 2020–present Associate Professor, Department of Psychology  
Brock University, St. Catharines, ON, Canada
- Jul 2014–Jun 2020 Assistant Professor, Department of Psychology  
Brock University, St. Catharines, ON, Canada
- Jul 2012–Jun 2014 Postdoctoral Fellow (at two institutions)  
University of Pennsylvania, Positive Psychology Center, Philadelphia, PA  
Mentor: Angela Duckworth, Ph.D.  
Temple University, Department of Psychology, Philadelphia, PA  
Mentor: Laurence Steinberg, Ph.D.

## EDUCATION

- Jun 2012 Ph.D. in Psychology and Social Behavior  
University of California, Irvine  
Major: Developmental Psychology  
Minor: Quantitative Methods  
Dissertation: *Deciding in the Dark: Developmental Differences between Adolescents and Adults in Unconscious Decision-Making*  
Chair: Elizabeth Cauffman, Ph.D.  
Members: Chuansheng Chen, Ph.D., AnneMarie M. Conley, Ph.D., Peter H. Ditto, Ph.D., and Jodi Quas, Ph.D.
- Jun 2007 M.A. in Social Ecology  
University of California, Irvine  
Thesis: *Adolescents' Adjustment to Incarceration: The Role of Coping*
- May 1999 B.A. in Psychology-Sociology with Honors  
Wesleyan University, Middletown, CT

## FUNDING OBTAINED

- Aug 2020 Social adjustment and risk taking among adolescents and young adults during COVID-19  
Brock SSHRC Explore Institutional Grant  
\$7,000 Principal Investigator
- June 2020 Prejudice and Public Health  
Brock/Mitacs Research Training Award  
\$12,000 Co-Principal Investigator (awarded to my MA student, Valerie Rothwell)

|          |                                                                                                                                                                                                                                                                                                      |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| May 2018 | Adolescent Risky Decision Making in Context<br>The Council for Research in the Social Sciences (CRISS), Brock University<br>\$2,984 Principal Investigator                                                                                                                                           |
| Apr 2017 | Age-Related Patterns in Intuition about Risk and Reward<br>Natural Sciences and Engineering Research Council (NSERC) Discovery Grant (2017-2022)<br>\$150,000 Principal Investigator                                                                                                                 |
| Jul 2016 | Brock Healthy Youth Project<br>Canadian Institutes of Health Research (CIHR) Project Grant (2016-2021)<br>\$1,433,440 Co-Applicant                                                                                                                                                                   |
| Jan 2016 | Dean's BUFA contribution for conference travel, Brock University<br>\$600                                                                                                                                                                                                                            |
| Oct 2015 | Evaluating Risk: Do the Mind and the Gut Disagree?<br>The Council for Research in the Social Sciences (CRISS), Brock University<br>\$2,000 Principal Investigator                                                                                                                                    |
| Nov 2011 | Deciding in the Dark: Developmental Differences between Adolescents and Adults in Unconscious Decision-Making<br>The American Psychology-Law Society Student Grants-in-Aid<br>\$750 Principal Investigator                                                                                           |
| Sep 2010 | Deciding in the Dark: Developmental Differences between Adolescents and Adults in Unconscious Decision-Making<br>F.J. McGuigan Dissertation Award<br>\$2,000 Principal Investigator                                                                                                                  |
| Aug 2010 | Doctoral Dissertation Research in DRMS: Deciding in the Dark--Developmental Differences between Adolescents and Adults in Unconscious Decision-Making<br>National Science Foundation Doctoral Dissertation Research Improvement Grant (Award number: SES-1024961)<br>\$12,071 Principal Investigator |
| May 2010 | Deciding in the Dark: Differences between Adolescents and Adults in Unconscious Decision-Making Processes<br>Social Ecology Dean's Data Gathering Stipend (U.C. Irvine)<br>\$3,000 Principal Investigator                                                                                            |
| Feb 2008 | Acculturation and Moral Foundations in Adolescence<br>University of California Institute for Mexico and the United States<br>\$1,500 Co-Principal Investigator                                                                                                                                       |
| Nov 2007 | Morality and Justice: The Middle Schooler's Perspective<br>American Psychology-Law Society Grants-in-Aid<br>\$600 Principal Investigator                                                                                                                                                             |

## PUBLICATIONS

### Journal Articles - Peer-Reviewed

Hafer, C. L., Drolet, C. E., Davis, E. E., Segalowitz, S. J., & **Shulman, E. P.** (2020). Evidence of a processing advantage for deservingness-relevant information. *Social Psychology*.

- Galla, B. M., **Shulman, E. P.**, Plummer, B. D., Gardner, M., Hutt, S. J., Goyer, J. P., Finn, A. S., D’Mello, S. K., & Duckworth, A. L. (2019). Why high school grades are better predictors of on-time college graduation than are admissions test scores: The role of self-regulation and cognitive ability. *American Educational Research Journal*, *56*, 2077-2115. doi:10.3102/0002831219843292
- Volk, A. A., Provenzano, D. A., Farrell, A. H., Dane, A. V., & **Shulman, E. P.** (2019). Personality and bullying: Pathways to adolescent social dominance. *Current Psychology*, 1-12. [online: <https://doi.org/10.1007/s12144-019-00182-4>]
- Steinberg, L., Icenogle, G., **Shulman, E. P.**, Breiner, K., Chein, J., Bacchini, D., ... & Fanti, K. A. (2018). Around the world, adolescence is a time of heightened sensation seeking and immature self-regulation. *Developmental Science*, *21*(2), e12532. doi: 10.1111/desc.12532
- Shulman, E. P.**, Bechtold, J., Kelly, E. L., & Cauffman, E. (2018). Mental health screening in juvenile justice settings: Evaluating the utility of the Massachusetts youth screening instrument, Version 2. *Criminal Justice Policy Review*, *29*(8), 849-872. doi: 10.1177/0887403416650250
- Shulman, E. P.**, Monahan, K. C., & Steinberg, L. (2017). Severe violence during adolescence and early adulthood and its relation to anticipated rewards and costs. *Child Development*, *88*, 16–26. doi: 10.1111/cdev.12684
- Silva, K., **Shulman, E. P.**, Chein, J., & Steinberg, L. (2016). Peers increase late adolescents' exploratory behavior and sensitivity to positive and negative feedback. *Journal of Research on Adolescence*, *26*, 696–705. doi: 10.1111/jora.12219
- Icenogle, G., Steinberg, L., Olino, T. M., **Shulman, E. P.**, Chein, J. et al. (September, 2017). Puberty predicts approach but not avoidance behavior on the Iowa Gambling Task. *Child Development*, *88*, 1598–1614. doi: 10.1111/cdev.12655
- Carleton, R. N., Duranceau, S., **Shulman, E. P.**, Zerff, M., Gonzales, J., & Mishra, S. (June, 2016). Self-Reported Intolerance of Uncertainty and Behavioural Decisions. *Journal of Behavior Therapy and Experimental Psychiatry*, *51*, 58–65. doi: <http://dx.doi.org/10.1016/j.jbtep.2015.12.004>
- Shulman, E. P.\***, Smith, A. R.\*, Silva, K., Icenogle, G., Duell, N., Chein, J., & Steinberg, L. (2016). The Dual Systems Model: Review, reappraisal, and reaffirmation. *Developmental Cognitive Neuroscience*, *17*, 103–117. doi: <http://dx.doi.org/10.1016/j.dcn.2015.12.010>  
\*Co-first authors
- Shulman, E. P.**, Harden, K. P., Chein, J. & Steinberg, L. (March, 2016). The development of impulse control and sensation-seeking in adolescence: Independent or interdependent processes? *Journal of Research on Adolescence*, *36*, 37–44. doi: 10.1111/jora.12181
- Eskreis-Winkler, L., **Shulman, E. P.**, Young, V., Tsukayama, E., & Duckworth, A. L. (2016). Using wise interventions to motivate deliberate practice. *Journal of Personality and Social Psychology*, *111*, 728–744. doi: 10.1037/pspp0000074
- Monahan, K. C., King, K. M., **Shulman, E. P.**, Cauffman, E., & Chassin, L. (2015) The effects of violence exposure on the development of impulse control and future orientation across adolescence and early adulthood: Time-specific and generalized effects in a sample of juvenile offenders. *Development and Psychopathology*, *27*, 1267–1283. doi:10.1017/S0954579414001394.
- Thornton, L. C., Frick, P. J., **Shulman, E. P.**, Ray, J. V., Steinberg, L., & Cauffman, E. (2015) Callous-Unemotional Traits and Adolescents' Role in Group Crime. *Law and Human Behavior*, *39*, 368-377. doi: <http://dx.doi.org/10.1037/lhb0000124>
- Duckworth, A. L., **Shulman, E. P.**, Mastrorarde, A. J., Patrick, S. D., Zhang, J., & Druckman, J. (2015). Will not want: Self-control rather than motivation explains the female advantage in report card grades. *Learning and Individual Differences*, *39*, 13-23. doi:10.1016/j.lindif.2015.02.006

- Shulman, E. P.,** Harden, K. P., Chein, J. & Steinberg, L. (2015). Sex differences in the developmental trajectories of impulse control and sensation-seeking from early adolescence to early adulthood. *Journal of Youth and Adolescence*, 44, 1–17. doi: 10.1007/s10964-014-0116-9
- Eskries-Winkler, L., **Shulman, E. P.,** & Duckworth, A. (May, 2014). Survivor mission: Do those who survive have a drive to thrive at work? *Journal of Positive Psychology* 9(3), 209–218. doi: 10.1080/17439760.2014.888579
- Malloy, L. C., **Shulman, E. P.,** & Cauffman, E. (April, 2014). Interrogations, confessions, and guilty pleas among serious adolescent offenders, *Law and Human Behavior*, 38, 181–193. doi: 10.1037/lhb0000065
- Eskries-Winkler, L., **Shulman, E. P.,** Beal, S., & Duckworth, A. (February, 2014). The grit effect: Predicting retention in the military, the workplace, school and marriage. *Frontiers in Personality: Science and Individual Differences*, 5(36), 1–12. doi: 10.3389/fpsyg.2014.00036
- Shulman, E. P.,** & Cauffman, E. (January, 2014). Deciding in the dark: Age differences in intuitive risk judgment. *Developmental Psychology*, 50, 167–177. doi: 10.1037/a0032778
- Bechtold, J., Cavanagh, C., **Shulman, E. P.,** & Cauffman, E. (December, 2013). Does Mother know best? Adolescent and mother report of impulsivity and subsequent delinquency. *Journal of Youth and Adolescence*, 43, 1903–1913. doi: 10.1007/s10964-013-0080-9
- Shulman, E. P.,** Steinberg, L., & Piquero, A. R. (November, 2013). A mistaken account of the age-crime curve: Response to Males and Brown (2013). *The Journal of Adolescent Research*, 12, 25–34. doi: 10.1177/0743558413493005
- Shulman, E. P.,** Steinberg, L., & Piquero, A. R. (June, 2013). The age-crime curve in adolescence and early adulthood is not due to age differences in economic status. *Journal of Youth and Adolescence*, 42(6), 848–860. doi: 10.1007/s10964-013-9950-4
- Shulman, E. P.,** & Cauffman, E. (December, 2013). Reward-biased risk appraisal and its relation to juvenile vs. adult crime. *Law and Human Behavior*, 37, 412–423. doi: 10.1037/lhb0000033
- Knowles, E. D., Lowry, B., **Shulman, E. P.,** & Schaumberg, R. (June, 2013). Race, ideology, and the Tea Party: A longitudinal study. *PLOS ONE*, 8(6), e67110. doi: 10.1371/journal.pone.0067110
- Shulman, E. P.,** Cauffman, E., Fagan, J., & Piquero, A. (November, 2011). Moral disengagement among serious juvenile offenders: A longitudinal study of the relations between moral cognition and offending. *Developmental Psychology*, 47, 1619–1632. doi: 10.1037/a0025404
- Shulman, E. P.,** & Cauffman, E. (December, 2011). Coping while incarcerated: A study of male juvenile offenders. *Journal of Research on Adolescence*, 21, 818–826. doi: 10.1111/j.1532-7795.2011.00740.x
- Cauffman, E., **Shulman, E. P.,** Steinberg, L., Claus, E., Banich, M. T., Graham, S., & Woolard, J. (January, 2010). Age differences in affective decision making as indexed by performance on the Iowa Gambling Task. *Developmental Psychology*, 46, 193–207. doi: 10.1037/a0016128
- Cauffman, E., Lexcen, F., Goldweber, A., **Shulman, E. P.,** & Grisso, T. (July, 2007). Gender differences in mental health symptoms among delinquent and community youth. *Youth Violence and Juvenile Justice*, 5, 287–307. doi: 10.1177/1541204007301292
- Seamon, J. G., Luo, C. R., **Shulman, E. P.,** Toner, S. K., & Caglar, S. (July, 2002). False memories are hard to inhibit: Differential effects of directed forgetting on accurate and false recall in the DRM procedure. *Memory*, 10, 225–237. doi:10.1080/09658210143000344

Wolfe, J. M., Klempen, N. L., & **Shulman, E. P.** (June, 1999). Which end is up? Two representations of orientation in visual search. *Vision Research*, 39 (12), 2075–2086. doi: 10.1016/S0042-6989(98)00260-0

### **Chapters and Reports - Non-Peer-Reviewed**

**Shulman, E. P.**, & Steinberg, L. (August, 2015). Human development and juvenile justice. In K. Heilbrun (Ed.), *APA handbook of psychology and juvenile justice* (pp. 69-90). Washington, DC: American Psychological Association.

Cauffman, E., **Shulman, E. P.**, Bechtold, J., & Steinberg, L. D. (March, 2015). Children and the law. In T. Leventhal & M. H. Bornstein (Eds.), *Handbook of child psychology and developmental science: Ecological settings and processes in developmental systems (7<sup>th</sup> Edition, Vol. 4*, pp. 616–651). Hoboken, NJ: Wiley.

**Shulman, E. P.**, Goldweber, A. M., & Cauffman, E. (August, 2009). *Mental health symptoms of incarcerated juvenile offenders: Change and continuity during the first three months in a secure facility*. Irvine, CA: UC Irvine Center for Evidence-Based Corrections.

Cauffman, E., & **Shulman, E. P.** (2006). *MAYSI~2 statewide screening – California: Description of alcohol/drug use & mental health symptoms among youth as identified by the Massachusetts Youth Screening Instrument~2*. San Jose, CA: County of Santa Clara Department of Alcohol and Drug Services.

Cauffman, E., **Shulman, E. P.**, Dickman, J., & Farruggia, S. (2006). *Mental health needs in Pennsylvania's secure juvenile detention population: A statewide study implementing the automated Massachusetts Youth Screening Instrument, Version 2*. Harrisburg, PA: Juvenile Detention Centers Association of Pennsylvania.

### PROFESSIONAL PRESENTATIONS

**Shulman, E.P.**, Paper Symposium Chair: Increased Risk-Taking Propensity in Adolescence? Only Under Certain Conditions (March, 2020). Accepted for presentation at the biennial meeting of the Society for Research on Adolescence, San Diego, California [Canceled due to COVID-19 pandemic]

Rothwell, V., **Shulman, E.P.**, Reward Sensitivity and its Role in Adolescent Risk Taking (March, 2020). Paper accepted for presentation at the biennial meeting of the Society for Research on Adolescence, San Diego, California [Canceled due to COVID-19 pandemic]

Volk, A. A., Provenzano, D. A., Farrell, A. H., Dane, A. V., & **Shulman, E. P.** (March, 2019). How might arrogant and impulsive adolescents achieve social dominance? Bullying! Paper presented at the biennial meeting of the Society for Research in Child Development, Baltimore, MD.

Dairywala, K., **Shulman, E. P.**, & Steinberg, L. (April, 2018). Do Age-Related Patterns in Risk Taking Differ Based on Socioeconomic Status? A Multi-National, Cross-Sectional Analysis Poster presented at the biennial meeting of the Society for Research on Adolescence, Minneapolis, MN.

Preotiuc-Pietro, D., Schwartz, H. A., Park, G., Eichstaedt, J., Kern, M., Ungar, L., & **Shulman, E. P.** (June, 2016). Modelling valence and arousal in Facebook posts. Paper presented at the 7th Workshop on Computational Approaches to Subjectivity, Sentiment & Social Media Analysis, San Diego, CA.

**Shulman, E. P.**, Ager, E. (April, 2016). *Do Impulsivity and Sensation Seeking Interact with Each Other or with Age to Predict Risk-Taking Propensity Across Adolescence?* Poster presented at the biennial meeting of the Society for Research on Adolescence, Baltimore, MD.

Silva, K., **Shulman, E. P.**, Chein, J., & Steinberg, L. (April, 2016). Peers increase adolescents' exploratory behavior and sensitivity to positive and negative feedback. Poster presented at the biennial meeting of the Society for Research on Adolescence, Baltimore, MD.

- Shulman, E. P.** (June, 2015). *Adolescent Brain Development: Implications for Legal Policy*. Presentation at the 2015 Forensic Science Conference (for public defenders), Washington, D.C.
- Shulman, E. P.,** & Steinberg, L. (March, 2015). *Is There Really Anything Wrong with Today's Twentysomethings?* Poster presented at the biennial meeting of the Society for Research in Child Development, Philadelphia, PA.
- Shulman, E. P.,** & Steinberg, L. (March, 2015). *A Multinational Investigation of Age Differences in Affective Decision-Making on the Iowa Gambling Task*. Paper presented at the International Convention of Psychological Science, Amsterdam, The Netherlands. [Presented for me by K. P. Harden as I could not attend.]
- Shulman, E. P.,** Bechtold, J., Cauffman, E., & Steinberg, L. (May, 2014). *Partners in crime: Co-offending in adolescence and early adulthood*. Paper presented at the annual meeting of the Life History Research Society, Pittsburgh, PA.
- Shulman, E. P.,** Monahan, K. M. & Steinberg, L. (March, 2014). *Perceived risks and rewards of crime in adolescence and early adulthood*. Paper presented at the biennial meeting of the Society for Research on Adolescence, Austin, TX.
- Hamilton, J., **Shulman, E. P.,** & Steinberg, L. (March, 2014). *Psychosocial maturity as a mechanism linking childhood peer victimization and risky behavior in adolescence*. Poster presented at the biennial meeting of the Society for Research on Adolescence, Austin, TX.
- Shulman, E. P.,** & Cauffman, E. (April, 2013). *Deciding in the dark: Age differences in intuitive risk judgment*. Paper presented at the biennial meeting of the Society for Research in Child Development, Seattle, WA.
- Shulman, E. P.,** Cauffman, E., Halpern-Felsher, H., & Millstein, S. G. (March, 2011). *Is knowing half the battle? Cognitive and psychosocial predictors of adolescent health-risk behavior*. Paper presented at the biennial meeting of the Society for Research in Child Development, Montreal, QC.
- Shulman, E. P.,** Kalder, A., & Cauffman, E. (August, 2010). *The significance of school bonding in scholastic and non-scholastic settings*. Paper selected for presentation at the invited symposium, "Young Researchers in Developmental Psychology Paper Session," at the annual convention of the American Psychological Association, San Diego, CA.
- Shulman, E. P.,** & Cauffman, E. (March, 2010). *The maturity disparity between offenders and non-offenders: Does it change with age?* Paper presented at the biennial meeting of the Society for Research on Adolescence, Philadelphia, PA.
- Shulman, E. P.,** & Cauffman, E. (March, 2010). *Adolescents' resistance to peer influence: Does it modulate family-based effects on externalizing behavior?* Paper presented at the biennial meeting of the Society for Research on Adolescence, Philadelphia, PA.
- Shulman, E. P.,** Cauffman, E., Piquero, A. R., & Fagan, J. (April, 2009). *Rationalization of wrongdoing among serious juvenile offenders: The role of moral disengagement in ongoing offending*. Paper presented at the biennial meeting of the Society for Research in Child Development, Denver, CO.
- Shulman, E. P.,** Boessen, A., Bechtold, J., & Cauffman, E. (March, 2009). *Iatrogenic effects of incarceration for first time juvenile offenders*. Paper presented at the annual meeting of the American Psychology-Law Society, San Antonio, TX.
- Goldweber, A. M., **Shulman, E. P.,** & Cauffman, E. (March, 2008). *Adjustment to incarceration: Examining adolescents' mental health, violent victimization and offending in the institution*. Paper presented at the biennial meeting of the Society for Research in Adolescence, Chicago, IL.

- Cauffman, E., **Shulman, E. P.**, Claus, E., Banich, M., Graham, S., Woolard, J., & Steinberg, L. (March, 2008). *Responding to reward versus punishment: How adolescents differ from adults in performance on the Iowa Gambling Task*. Paper presented at the biennial meeting of the Society for Research in Adolescence, Chicago, IL.
- Shulman, E. P.**, & Cauffman, E. (March, 2007). *The Experience of Incarceration: How do juvenile offenders cope?* Poster presented at the biennial meeting of the Society for Research in Child Development, Boston, MA.
- Cauffman, E., Goldweber, A., Dmitrieva, J., Kaasa, S., Kelly, E., Malloy, L., & **Shulman, E. P.** (November, 2006). *Improving services for mentally ill juvenile offenders*. Paper presented at the annual meeting of the American Society of Criminology, Los Angeles, CA.
- Cauffman, E. & **Shulman, E. P.** (May, 2006). *The MAYSI-2: California statewide screening*. Presentation to the County Alcohol and Drug Program Administrators Association of California, Sacramento, CA.

## TEACHING EXPERIENCE

### *Instructor*

- 2015-2020 Research Methods and Data Analysis, Graduate Level (Brock Psyc 5F01)  
 Lifespan Development Research Seminar, Graduate Level (Brock Psyc)  
 Adolescent Development, Undergraduate Level (Brock Psyc 3P18)  
 Multivariate Statistics for Psychological Research (Brock Psyc 7P11)

## SUPERVISION

- 2019-20 Honours thesis, Alex Puchalski, Brock University: *Title TBD*
- 2019-21 Master's thesis, Chelsie Resch, Brock University: *Title TBD*
- 2019-20 Honours thesis, Amanda Crocker, Brock University: *A Validation Assessment of a Novel Behavioural Reward Sensitivity Measure: The Reward Dot-Probe Task*
- 2018-20 Master's thesis, Valerie Rothwell (née Plante-Brisebois), Brock University: *Under Scrutiny: Examining the Effects of Virtual Peer Ratings on Risk Taking*
- 2016-18 Master's thesis, Khadija Dairywala, Brock University: *The Rise in Reward Sensitivity- Exploring the Role of Culture and Parental Education on Adolescent Development*
- 2015-17 Master's thesis committee, Taylor Heffer, Brock University: *A Count of Coping Strategies: A Longitudinal Study Investigating an Alternative Method to Understanding Coping and Adjustment*.
- 2015-16 Honors thesis, Emily Ager, Brock University: *Do Impulsivity and Sensation Seeking Interact to Predict Risk-Taking Propensity Across Adolescence?*

## SERVICE

- 2019-21 Member of the Social Science Research Ethics Board
- 2019 Wendy Murphy Memorial Award Selection Committee
- 2018-19 Graduate Committee, Psychology Department, Brock University
- 2018 Development 2018 Conference, Brock University, Chair of Student Awards Committee
- 2017-18 Undergraduate Committee, Psychology Department, Brock University
- 2016-19 Reviewer for CRISS awards, Faculty of Social Sciences, Brock University
- 2016-20 Reviewer for American Psychological Foundation's F.J. McGuigan Dissertation Award

2015-16 Academic Integrity Officer, Psychology, Brock University  
 2013 Reviewer for the 2014 American Psychology-Law Society Conference  
 2012 Reviewer for the Society for Research in Child Development Student and Early Career Council Dissertation Funding Award

2010–2020 Ad Hoc Reviewer for:  
 Child and Adolescent Psychiatry and Mental Health  
 Child Development  
 Clinical Psychological Science  
 Clinical Psychology Review  
 Developmental Psychology  
 Journal of Abnormal Child Psychology  
 Journal of Adolescence  
 Journal of Experimental Child Psychology  
 Journal of Personality and Social Psychology  
 Journal of Youth and Adolescence  
 Neuropsychologia  
 Perspectives on Psychological Science  
 Youth Violence and Juvenile Justice

## FELLOWSHIPS, AWARDS AND HONORS

Jul 2013 Featured in the Society for Research on Adolescence’s “Emerging Scholar Spotlight”  
 Jun 2012 Ellen Greenberger Excellence in Graduate Research Award (UC Irvine)  
 Nov 2011 Chancellor’s Club Fund for Excellence Fellowship (UC Irvine)  
 Jun 2012, ‘11, ‘09 Graduate Mentoring Award (UC Irvine)  
 Jul 2011 Dean’s Dissertation Writing Fellowship (UC Irvine)  
 Aug 2010 Best Student Paper Award – American Psychological Association, Division 7  
 Jun 2010 Alison Clarke-Stewart Graduate Dissertation Award (UC Irvine)  
 Sep 2006–2007 National Institute of Mental Health Training Grant Trainee (MH19958-07)  
 May 1999 Walkley Prize for excellence in psychology and original research (Wesleyan University)  
 May 1998 Phi Beta Kappa (Wesleyan University)

## OTHER TRAINING

2012 Maryland Neuroimaging Center Summer Institute on Social Developmental Neuroscience  
 2007 American Psychological Association Advanced Institute on Longitudinal Structural Equation Modeling

## PROFESSIONAL MEMBERSHIPS

American Psychological Association  
 Society for Research in Child Development  
 Society for Research on Adolescence  
 American Psychology-Law Society

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SCHOLARLY ACTIVITIES

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71. Busseri, M.A., Ferris, H. Lifesatisfaction and the end of history illusion: A reply to Quoidbach, Gilbert, and Wilson (2019). *Journal of Personality and Social Psychology*, 117(2), 287-297. doi:10.1037/a0053822

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72. Busseri, M.A., & Ferris, H. The full life revisited: Mining associations among hedonic and eudaimonic general orientations, motives for activities, and experiences of well-being. *Journal of Personality and Social Psychology*, 117(2), 287-297. doi:10.1037/a0053822

k

69. Chung, A., Busseri, M.A., & Arnell, K.M. Naturally occurring affect does not predict working memory performance: A latent variable modelling study. *Journal of Experimental Psychology: Applied*, 24(1), 1-11. doi:10.1037/xap0000187

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68. Busseri, M.A., Ferris, H., & Choma, B. When will I get it! I deserve it! A mining of personal beliefs about the just world from a temporally-expanded perspective. *Journal of Personality and Social Psychology*, 117(2), 287-297. doi:10.1037/a0053822

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67. Busseri, M.A., & Ferris, H. Bottom-up or top-down? A mining of global and domain-specific evaluations of how one's life is unfolding over time. *Journal of Personality and Social Psychology*, 117(2), 287-297. doi:10.1037/a0053822

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66. Ferris, H., Busseri, M.A., Rubel, K.N., Drolet, C.E., & Carrington, K.L. A latent 6-factor approach to beliefs about the just world and its association with well-being. *Journal of Personality and Social Psychology*, 117(2), 287-297. doi:10.1037/a0053822

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65. Ferris, H., & Busseri, M.A. (2019). Is there an end of history illusion for life satisfaction? Evidence from a three-wave longitudinal study. *Journal of Personality and Social Psychology*, 117(2), 287-297. doi:10.1037/a0053822

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64. Naisani, P., & Busseri, M.A. (2019). A mining of the link between mindfulness and temporal perspective. *Journal of Personality and Social Psychology*, 117(2), 287-297. doi:10.1037/a0053822

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63. Naisani, P., & Busseri, M.A. (2019). A systematic review of the relationship between perceived life script event gek and valence across the lifespan. *Journal of Personality and Social Psychology*, 117(2), 287-297. doi:10.1037/a0053822

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62. Bunda, K., & Busseri, M.A. (2019). Subjective trajectories for self-rated health: A predictor of changes in physical health over time: Results from a 20-year longitudinal study. *Journal of Personality and Social Psychology*, 117(2), 287-297. doi:10.1037/a0053822

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61. Busseri, M. A., & Isani, N. (2019). Lay theories for life satisfaction and the belief that life gets better and better. *Journal of Personality and Social Psychology*, 117, 647-1672.
60. Bunda, K., & Busseri, M. K. (2019). Lay theories of health, self-rated health, and health behavior intentions. *Journal of Personality and Social Psychology*, 117, 979-988.
- Busseri, M. K. (2018). Mining the structure of subjective well-being through meta-analyzing associations among positive affect, negative affect, and life satisfaction. *Journal of Personality and Social Psychology*, 115, 68-71.
- Metler, R., & Busseri, M. K. (2017). Further evaluation of the tripartite structure of subjective well-being: Evidence from longitudinal and experimental studies. *Journal of Personality and Social Psychology*, 113, 192-206.
- Hodson, G., MacInnis, C., & Busseri, M. K. (2017). Bowling and kicking: Rediscovering the fundamental link between generalized authoritarianism and generalized prejudice. *Journal of Personality and Social Psychology*, 113, 243-251.
56. Na, N., & Busseri, M. K. (2016). Life gets better and better: Cultural life script theory and subjective life satisfaction trajectories among young adults. *European Journal of Personality*, 30, 564-579.
- Busseri, M. A., & Choma, B. H. (2016). Re-evaluating the link between dispositional optimism and positive functioning using a temporally-expanded perspective. *Journal of Personality and Social Psychology*, 111, 286-302.
- Busseri, M. A., & Merrick, K. (2016). Subjective trajectories for life satisfaction: A self-discrepancy perspective. *Journal of Personality and Social Psychology*, 111, 389-403.
53. Geniole, S., Cunningham, C. E., Keyes, K. E., Busseri, M. A., & McCormick, C. M. (2015). Costly retaliation is promoted by threats to resources in women and by threats to status in men. *Journal of Personality and Social Psychology*, 109, 515-525.
- Skinner, L., Rose-Krasnor, L., Busseri, M. A., Bois, S., Bowker, A., & Findlay, H. (2015). Measuring psychological engagement in youth activity involvement. *Journal of Personality and Social Psychology*, 109, 237-249.
51. Busseri, M. K. (2015). Toward a resolution of the tripartite structure of subjective well-being. *Journal of Personality and Social Psychology*, 109, 413-428.
- Busseri, M. A., & Peck, K. (2015). Do (even) clinically depressed individuals believe that life gets better and better over time? The link between depression and subjective trajectories for life satisfaction. *Journal of Personality and Social Psychology*, 109, 715-725.

(~ Emrich, K. E., & Busseri, M. K. (2015). Give the bounce a raise: Re-evaluating the relationships among filtering activity, unnecessary storage, and visual working memory capacity. *Journal of Experimental Psychology: Applied*, 21(4), 589-597.

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\* Choma, B. L., Busseri, M. A., & Park, N. (2014). Deciphering subjective trajectories for life satisfaction using self-versus-normative other discrepancies, self-esteem, and hope. *Journal of Personality and Social Psychology*, 107(1), 107-119.

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~ Busseri, M. K. (2013). How dispositional optimists and pessimists view their past, present, and anticipated future life satisfaction: A lifespan approach. *Journal of Personality and Social Psychology*, 105(2), 185-199.

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46. Busseri, M. A., Malinowski, A., & Choma, B. L. (2013). Are dispositional optimists oriented uniquely toward the future? Investigating dispositional optimism from a temporally-expanded perspective. *Journal of Personality and Social Psychology*, 105(3), 533-538.

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~ Busseri, M. K., & Park, N. (2013). Subjective well-being is a dynamic and genetic system: Evidence from a longitudinal study. *Journal of Personality and Social Psychology*, 105(1), 112.

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~ Geniole, N., Busseri, M. A., & McCormick, I. M. (2013). Testosterone dynamics and psychopathic personality traits independently predict antagonistic behavior towards the loser of a competitive interaction. *Journal of Personality and Social Psychology*, 105(6), 790-798.

k

43. MacInnis, C., Busseri, M. A., Choma, B. L., & Hodson, G. (2013). The psychology of cycling: Mining the association between generalized authoritarianism and subjective well-being. *Journal of Personality and Social Psychology*, 105(6), 789-793.

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\$ Sylvester, B. D., Mack, K. E., Wilson, R. M., Busseri, M. A., & Beauchamp, M. K. (2012). Health-enhancing physical activity and well-being: How often, how long, and how much effort that matters? *Journal of Personality and Social Psychology*, 103(1), 141-147.

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41. Busseri, M. A., Choma, B. L., & Park, N. (2012). The past, present, and future of subjective well-being: Mining subjective temporal trajectories for life satisfaction, a positive effect, and negative effect. *Journal of Personality and Social Psychology*, 103(1), 15.

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~ Choma, B. L., Ferrel, C. L., Dywan, J., Segalowitz, R. J., & Busseri, M. K. (2012). Political liberalism and political conservatism: Functionally independent? *Journal of Personality and Social Psychology*, 103(3), 431-436.

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39. Hodson, G., & Busseri, M. K. (2012). Bright minds and dark attitudes: Lower cognitive ability predicts increased prejudice through socially conservative ideology. *Journal of Personality and Social Psychology*, 103(2), 187-195.

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JRNote: This article is identified as the most downloaded article published by the *Assessment*, 19(8), 1252-1259 (2012) (56,109 downloads).

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38. Martini, C.S., & Busseri, M.K. (2012). Emotion regulation and relationship quality in mother-adult child dyads. *Journal of Personality and Social Psychology*, 102(2), 285-295.

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37. Busseri, M.A., Costain, E.L., Campbell, E.M., & Rose-Krasnor, R. (2011). Engagement in sport and identity status. *Journal of Personality and Social Psychology*, 101(4), 1087-1091.

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36. Busseri, M.A., & Park, V. (2011). A review of the tripartite structure of subjective well-being: Implications for conceptualization, operationalization, and synthesis. *Journal of Personality and Social Psychology*, 101(3), 290-314.

k

35. Good, M., Willoughby, E., & Busseri, M.K. (2011). Stability and change in adolescent spirituality/religiosity: A person-centered approach. *Journal of Personality and Social Psychology*, 101(5), 838-850.

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34. Busseri, M.A., & Rose-Krasnor, R. (2010). Addressing three common issues in research on youth activities: Latent composite variable approach for operationalizing and analyzing involvement. *Journal of Personality and Social Psychology*, 99(3), 613-615.

33. Busseri, M.A., Rose-Krasnor, R., Noller, P.M., Kim, G., Birnie-Lefcovitch, S., Polivy, H., & Pratt, M.W. (2010). A longitudinal study of breadth and intensity of activity involvement and the transition to university. *Journal of Personality and Social Psychology*, 99(4), 512-518.

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32. Choma, B.L., Visser, B.A., Pozzebon, K.A., Bogaert, E.F., Busseri, M.A., & Park, V. (2010). Self-objectification, self-esteem, and gender: Testing a moderated mediation model. *Journal of Personality and Social Psychology*, 99(3), 645-656.

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31. MacLean, M., Arnell, E.M., & Busseri, M.K. (2010). Dispositional positive and negative affect predict temporal attentional costs in the attentional blink paradigm. *Journal of Personality and Social Psychology*, 99(10), 1431-1438.

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30. Martini, C.S., & Busseri, M.K. (2010). Emotion regulation strategies and goals as predictors of older mothers' and adult daughters' helping-related subjective well-being. *Journal of Personality and Social Psychology*, 99(1), 48-59.

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Choma, B.L., Busseri, M.A., Elnina, N., YouthNet, Milton, YouthNet, & Rose-Krasnor, R. (2010). Youth engagement and suicide risk: Testing a mediated model in a Canadian community sample. *Journal of Personality and Social Psychology*, 99(3), 243-258.

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Arnell, E.M., Joannisse, M.F., Klein, E.M., Busseri, M.A., & Connock, K.S. (2010). Decomposing the relation between automated reading fluency and reading ability. *Journal of Personality and Social Psychology*, 99(1), 173-184.

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\$~ Bourgeois, K. Y., Busseri, M. A., & Rose-Krasnor, L. S. (2009). Ethnolinguistic identity and youth activity involvement in a sample of minority Canadian Francophone youth. *Journal of Research on Adolescence, 19*(2), 287-307. doi:10.1111/j.1532-7795.2009.00161.x

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26. Busseri, M. A., Choma, B. L., & Rose-Krasnor, L. S. (2009). "As good as it gets" or "The best is yet to come"? How optimists and pessimists evaluate their life satisfaction and anticipated future life satisfaction. *Journal of Personality and Social Psychology, 96*(2), 352-356. doi:10.1037/a0015236

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\$~ Busseri, M. A., Choma, B. L., & Rose-Krasnor, L. S. (2009). Functional literacy: Mining the implications of subjective temporal perspective trajectories for life satisfaction. *Journal of Personality and Social Psychology, 96*(2), 295-308. doi:10.1037/a0015236

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\$, Busseri, M. A., & Rose-Krasnor, L. S. (2009). Breadth and intensity: Parental, separable, and developmentally significant dimensions of structured youth activity involvement. *Journal of Personality and Social Psychology, 96*(2), 907-933. doi:10.1037/a0015236

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23. Busseri, M. A., Rose-Krasnor, L. S., Molnar, K. S., & DeCourville, T. L. (2009). Person-centered approach to subjective well-being. *Journal of Personality and Social Psychology, 96*(2), 161-181. doi:10.1037/a0015236

k

Choma, B. L., Busseri, M. A., & Rose-Krasnor, L. S. (2009). Political liberalism and conservatism: Different routes to happiness? *Journal of Personality and Social Psychology, 96*(2), 502-505. doi:10.1037/a0015236

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21. Choma, B. L., Shove, C., Busseri, M. A., Rose-Krasnor, L. S., & Hosker, K. S. (2009). Mining the mediating versus moderating role of body weight coping strategies in the links between self-objectification, body shame, and well-being. *Journal of Personality and Social Psychology, 96*(2), 699-713. doi:10.1037/a0015236

k

\$~ Corbett, B. A., & Busseri, M. A. (2009). Tracking repeatedly measured variables in the 4-tional Longitudinal Survey of Children and Youth: An illustration of secondary volunteering during adolescence. *Journal of Research on Adolescence, 19*(2), 16-10. doi:10.1111/j.1532-7795.2009.00161.x

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,~ Tyler, k~ D, k~ Busseri, M. K., k~ King, k~ k~ (2003). kTreatment outcomes assessment practices of k psychology training clinics. k) - C8<~ -) < >~ = 0. 50k 44-147.k

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Busseri, M. K~ kCan k ppiness go k 5 k nd stay k 5F k n search of k long-lasting k improvements k in k subjective well-being. k Eur8>) 9 8A-9 28f, ) < 89 2; ?(submitted k August k 1, k S~)~ k

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Chung, k~ L., k~ Busseri, M. K., k~ Arnell, k~ M. kIndividual differences in naturally occurring k effect predict conceptual breadth: kEvidence for the importance of k rousal by valence k interactions. kManuscript submitted k ok 8! 9~; Q #) => <-> <9c~> 2 = 9d ~7> 2c ; ~89=k (submitted k August k 0, k S~)~ k

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DeGagne, k., k~ Busseri, M. K~ kThe belief that k my life gets k better k nd k better k over time: k k social k norms k perspectives. kManuscript submitted k ok k 8A-9 28f! >>9) = Stud~) k(submitted k June k 24, k S~)~ k

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Peck, E., k Busseri, M.K. k ) > < > = 890 9E) ; ?0 9d = A \*)c;~Q ; < \*)c; 8<) = f 8< 2f) = ;~f c;~89 > ' 8 - ) Q 9/ c 29c 22 d) > < > = f d 9d 9E 8A = 9d ~ C d A 2= .) 2) Q ; - ; 2f) !);=. );;< 9d . );;> < 8Q < ;~7) ! PosterlpresentedtothekCana' nCounsellingk ndk Psychotherapyk Associationk(Moncton, kNB; k February, k2014).

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Sylvester, B.D., Mack, E., Wilson, M., Busseri, M.A., & Beauchamp, M. Health-enhancing physical activity and well-being: Is it how often, how long, or how much effort that matters? Poster presented at the North American Society for Psychology of Sport and Physical Activity conference (Honolulu, USA, June 2012).

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# Wford, H., Busseri, M.A., & Rose-Krasnor, L. Acute effects of physical activity on adolescent well-being: A meta-analysis. Poster presented to the Society for Research on Adolescence (Montreal, QC, March, 2012).

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Busseri, M.A. The effects of physical activity on mental health: A meta-analysis. Poster presented to the Society for Personality and Social Psychology (San Diego, CA, January, 2012).

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Choma, B.L., Foster, M.D., & Busseri, M.A. The effects of physical activity on mental health: A meta-analysis. Poster presented to the Society for Personality and Social Psychology (San Diego, CA, January, 2012).

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Hodson, G., & Busseri, M.A. The effects of physical activity on mental health: A meta-analysis. Poster presented to the Society for Personality and Social Psychology (San Diego, CA, January, 2012).

Choma, B.L., & Busseri, M.A. The effects of physical activity on mental health: A meta-analysis. Poster presented to the European Association of Social Psychology (Stockholm, Sweden, July 2011).

k

Geniole, S., Busseri, M.A., & McCormick, C.M. The effects of physical activity on mental health: A meta-analysis. Poster presented to the Society for Scientific Study of Psychopathy (Montreal, QC, May 2011).

k

Malinowski, A., & Busseri, M.A. The effects of physical activity on mental health: A meta-analysis. Poster presented at the Ontario Undergraduate Psychology Thesis Conference (April 2011, Guelph, ON).

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Good, M., Willoughby, T., & Busseri, M.A. The effects of physical activity on mental health: A meta-analysis. Poster presented to the Society for Research on Adolescence (Montreal, QC, April 2011).

k

Busseri, M.A. The effects of physical activity on mental health: A meta-analysis. Poster presented to the Society for Personality and Social Psychology (San Antonio, TX, 2011).

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Choma, B.L., & Busseri, M.A. The effects of physical activity on mental health: A meta-analysis. Poster presented to the Society for Personality and Social Psychology (San Antonio, TX, 2011).

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Choma, B.L., & Busseri, M.A. The effects of physical activity on mental health: A meta-analysis. Poster presented to the Society for Personality and Social Psychology (San Antonio, TX, 2011).

Martini, IC. K. Busseri, M. K. E 7 8; 89 2 < ! A 2 ; 89 = ; < ; ! ) = 9 d ! 8 2 = => < d c ; 8 < 8 f < 2 ; 89 = > I A 2 ; ? 9 7 8 ; - ) < 8 8 A 9 ! d A 2 c - ~ d d ? d = Poster presented to the Society for Personality and Social Psychology: n. 2011, R nk Antonio, ICN ) k

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presented at the Annual Meeting of the Canadian Psychological Association (CPA), Halifax, Nova Scotia

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- va, IS. W., Busseri, M. A., Molnar, K. Perrier, C. (June, 2006) Poster presented at the Annual Meeting of the Canadian Psychological Association (CPA), Halifax, NS, June 2006

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MacLean, M., Arnell, M., Stokes, K., Busseri, M. A. (2006) Poster presented to the Canadian Society for Brain, Behaviour, and Cognitive Science, London, Ontario

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Busseri, M. A., Rose-Krasnor, L. (2006) Poster presented to the Society for Research on Adolescence, Chicago, Illinois

k

Busseri, M. A., Choma, B. L., Perrier, C., Molnar, K. (2006) Poster presented to the Society for Personality and Social Psychology, Albuquerque, NM

w

- va, IS. W., Busseri, M. A., Molnar, K. Perrier, C. (July, 2006) Poster presented to the European Congress of Psychology, Prague, Czech Republic

k

- va, IS. W., Busseri, M. A., Molnar, K. Perrier, C. (July, 2006) Poster presented to the European Congress of Psychology, Prague, Czech Republic

k

Perrier, C., Molnar, K., Busseri, M. A., Perrier, C. (June, 2006) Poster presented at the Annual Meeting of the Canadian Psychological Association, Ottawa, Ontario

k

Choma, B. L., Busseri, M. A., Perrier, C., Molnar, K. (June, 2006) Poster presented at the Annual Meeting of the Canadian Psychological Association, Ottawa, Ontario

k

Busseri, M. A., Rose-Krasnor, L. (March, 2006) Poster presented to the Society for Research on Child Development, Boston, MA

k

Busseri, M. A., Rose-Krasnor, L. (March, 2006) Poster presented to the Society for Research on Adolescence, San Francisco, CA

k

Busseri, M. A., Willoughby, K. T., Chalmers, H. L., & Bogaert (March, 2006). Ex 7 9 9! ; - ) 2Q = 8f  
 ⇒ EA 28 798 < ; ? 9d - ) ; ) < 8 ⇒ EA 2?8A ; - > S 7 ) 8 ⇒ E ; ; < c ; 89 9d = Ac ) = fA2 d82 = e ) 9 ;  
 d ) Q 2 > 7 ) 9 ; Poster presented to the Society for Research on Adolescence, nk  
 Francisco, CA. k

k

Rose-Krasnor, L., Busseri, M. A., Willoughby, K. T., & Chalmers, H. L. (March, 2006). k < ) d ; - 9d  
 9 ; ) 9 = ; ? 8f ? 8A ; - c ; C ; ? 9C82Q 7 ) 9 ; = c89 ; ) E ; f8 < > 8 = ; ~ Q d ) Q 2 > 7 ) 9 ; Poster  
 presented to the Society for Research on Adolescence, nk Francisco, CA. k

k

Campbell, K., Rose-Krasnor, L., Busseri, M. A., & Stack, R. K. (June, 2006) k ( ) ! ; ~ Q  
 ) 7 8 ; 89 2 ; ? 0 ) 9 ! ! ) 7 ) 9 ; 9 = ; < A A & d c ; C ; ) = 0 9d > = 2 - 8 - 8c ~ 2 d \* A = 7 ) 9 ; Poster  
 presented to the Canadian Psychological Association, Montreal, QUE. k

k

Stack, R. K., Rose-Krasnor, L., Busseri, M. A., & Campbell, K. (June, 2006) k 877 A9 ; ? ? 8A ; -  
 9C82Q 7 ) 9 ; 9d = ? ⇒ ; 8 Q 2 8A ; c 87 ) = Poster presented to the Canadian Psychological  
 Association, Montreal, QUE. k

k

Busseri, M. A., Willoughby, K. T., & Chalmers, H. L. (April, 2006) k App 2 9 ! ; - ) ~ - ) 8 < ? 8f ~ < ~ d ~ c  
 9f2A ) 9c ) ; 8 7 A2 ~ > 2 d 82 = e ) 9 ; - ) 2 - < 3 . ) - C 8 < # Poster presented to the Society for  
 Research on Child Development, Atlanta, GA. k

k

Willoughby, K. T., Chalmers, H. L., & Busseri, M. A. (April, 2006) k A 9 ) E > 2 < ; 89 8f d 82 = e ) 9 ; = D - 8  
 . = ; ~ 9 f < 87 7 A2 ~ > 2 < 3 . ) - C 8 < # Poster presented to the Society for Research on  
 Child Development, Atlanta, GA. k

k

Busseri, M. A., Rose-Krasnor, L., Campbell, K., & Stack, R. K. (April, 2006) k App 2 9 ! ? 8A ; -  
 ) 9 ! ! ) 7 ) 9 ; f < 7 ) D 8 < 3 ; 8 > & d ~ c ; 9 ! c 877 A9 ; ? 9C82Q 7 ) 9 ; Poster presented to the  
 Society for Research on Child Development, Atlanta, GA. k

k

Campbell, K., Stack, R. K., Rose-Krasnor, L., & Busseri, M. A. (April, 2006) k 9 ; 8Q < 890  
 ) 9 ! ! ) 7 ) 9 ; 0 9d > = 2 - 8 - 8c ~ 2d ) Q 2 > 7 ) 9 ; Poster presented to the Society for Research  
 on Child Development, Atlanta, GA. k

k

Busseri, M. A., Tyler, J., & King, K. L. (November, 2006) k Ex 7 9 ; 89 8f = ; A ) 9 ; d ~ 7 ~ = = 2 =  
 9d > 87 > ; d < ) = ! 9 ; 89 = f < 87 c 29 ~ c 2 > = 2 - 8 2 ! ? . - . ' . ; < 9 9 ! > 8 ! < 7 ⇒ ' 8 ) =  
 c 29 ~ c 2 c 87 > ; ) 9c ? 7 ; ; < Poster presented to the Association for the Advancement of  
 Behavior Therapy, New Orleans, LA. k

k

Willoughby, K. T., Chalmers, H. L., & Busseri, M. A. (July, 2006) k ( - ) < ~ = ; - ) = 9d < 87 ) 1  
 Ex 7 9 9 ! c 888ccA < ) 9c ) 7 89 ! 7 A2 ~ > 2 > 8 . 2 7 . ) - C 8 < = 9 d 82 = e ) 9c ) Poster  
 presented to the International Society for the Study of Behavioral Development, Ghent, k  
 Belgium. k

k

Campbell, K., Busseri, M. A., Rose-Krasnor, L., & Nicer, R. M. (June, 2006) k ~ = A = 890 ? 8A ; -  
 ) 9 ! ! ) 7 ) 9 ; 0 9d > > & c ~ ; 89 8f d ~ Q < = ; ? Poster presented to the Canadian  
 Psychological Associations, St. John's, NS. k

k

Zovkic, H., Rose-Krasnor, L., Busseri, M. A., & Rose-Krasnor, L. (June, 1998). Poster presented to the Canadian Psychological Association, St. John's, 148# k

k

Campbell, K., Rose-Krasnor, L., Busseri, M. A., & Rose-Krasnor, L. (June, 1998). Poster presented to the Jean Piaget Society Annual Meeting, Toronto, 1998 k

k

Busseri, M. A., Willoughby, K., & Chalmers, K. (March, 1999). Poster presented to the Society for Research on Adolescence, Baltimore, MA k

k

Rose-Krasnor, L., Busseri, M. A., & Rose-Krasnor, L. (March, 1999). Poster presented to the Society for Research on Adolescence, Baltimore, MA k

k

Rose-Krasnor, L., Busseri, M. A., & Rose-Krasnor, L. (March, 1999). Poster presented to the Society for Research on Adolescence, Baltimore, MA k

k

Busseri, M. A., Campbell, K., & Rose-Krasnor, L. (August, 2003). Poster presented to the American Psychological Association, Toronto, 1998 k

k

Rose-Krasnor, L., Campbell, K., & Loiselle, L. (June, 2003). Poster presented to the Canadian Psychological Association, Milton, 1998 k

k

Campbell, K., Busseri, M. A., Duff, A., & Loiselle, L. (April, 2003). Poster presented to the Society for Research on Child Development, 15, 18# k

k

Evans, J., & Busseri, M. A. (October, 2001). Poster presented at the Mayo Clinic, Rochester, MN k

k

Busseri, M. A., & Setterberg, K. (October, 2001). Poster presented at the Neuropsychiatric Research Institute, 18, 17 k

k

Setterberg, K., & Busseri, M. A. (May, 2001). Poster presented at the University of North Carolina Medical School, 18, 17 k

k

Tyler, J., & Busseri, M. A., & King, K. (April, 2001). Poster presented at the Annual Conference of the North Carolina Psychological Association, 18, 17 k

k

Wilson, B., Borowiak, D., Bishop, K., Busseri, M. A., & Holm, K. (November 2008). Poster presented at Association for Advancement of Behavior and Cognitive Therapy, New Orleans, LA.

k

Setterberg, K., & Busseri, M. K. (October 1999). Poster presented at the American Academy of Child and Adolescent Psychiatry, Chicago, IL.

k

Immer, P., & Busseri, M. K. (November 1998). Poster presented at the Martin Center for Architectural and Urban Studies, Cambridge, England.

k

Busseri, M. A., & Kerton, K. (April 1997). Poster presented at the American Council on Consumers' Interests Annual Conference, Salt Lake City, Utah, United States.

k

Busseri, M. A., & Kerton, K. (September 1996). Poster presented at the Center for Consumer Studies, University of Guelph, Ontario, Canada.

k

Busseri, M. K. (March 1995). Poster presented at the Undergraduate Psychology Thesis Conference, University of Toronto, Ontario, Canada.

k

**Funding in Chronological Order**

w

S8c~ 2Sc~)9c) = 9d !A 7 9~;)=#) => <- ^ 8A9c~28f^ 9 d -SSHRC/ B St 9d <d #) => <- %< 9; & "Investigating the belief that life gets better and better over time: Sources and implications of upward subjective trajectories for life satisfaction" (submitted November 2010). Funded: March 2011-March 2012 (21,427).

S8c~ 2Sc~)9c) = 9d !A 7 9~;)=#) => <- ^ 8A9c~28f^ 9 d -SSHRC/ B "9=-;-' ) Q 2>7) 9; %< 9; \* "Developing experimental procedures to identify causes of the widely-held belief that life gets better and better over time" (submitted February 2012). Not funded.

S8c~ 2Sc~)9c) = 9d !A 7 9~;)=#) => <- ^ 8A9c~28f^ 9 d -SSHRC/ B "9=-;-%< 9; \* "On the belief that life gets better and better, or worse and worse, over time: Content, causes, and consequences" (submitted November 2013). Not funded," (status).

+ff~c) 8f #) => <- S) <C) = 0~< 8c3 2 9~Q <=? B O R S & A & A d^9! & "On the belief that life gets better and better, or worse and worse, over time: Content, causes, and consequences across the lifespan". Funded: July 2014 (=\$~) k

k

S8c~ 2Sc~)9c) = 9d !A 7 9~;)=#) => <- ^ 8A9c~28f^ 9 d -SSHRC/ B "9=-;-%< 9; \* "On the belief that life gets better and better, or worse and worse over time: Causes and consequences across the lifespan." (submitted November 2014). Not funded," (status).

^ 8A9c~2f8<#) => <c- 9 S8c~ 2Sc~)9c) =-CRISS/0~<8c3 2 9~Q<=?& "Investigating individuals' k thoughts concerning how their lives k unfolding over time". k Funded: k February k 2015 k '=\$-~)~ k

k

+ff~c) 8f#) => <c- S) <C~) =0~<8c3 2 9~Q<=? BORS & A & Ad~9! & "On the belief that life gets k better nd better, k or worse k nd worse over time: k Causes k nd consequences k across the k lifespan." k Funded: k July k 2015 k =3500). k

w

S8c~ 2Sc~)9c) = 9d !A 7 9~;) =#) => <c- ^ 8A9c~2f8^ 9 d -SSHRC/ B "9=-!-; %< 9; \* "On the k belief that life gets k better k nd better, k or worse k nd worse over time: k Causes k nd k consequences k cross the k lifespan." (submitted k November k 2015). k Funded: k March k 2016 k 3 k March k 2019 k =75,438). k

k

+9; <8 ~<22A7 & 8A9d ;~89 BL8c 2, 8Q<;#) dAc ;~89 & Ad -LPRF/ %< 9; & "Evaluation of k the k impact k nd effectiveness of the k garal Prosperity Initiative" (submitted k December k 2017). k Funded: k uary k 2018 k 3 k December k \$~\$ k =514,574). k (Research k ea/ k member.) k

k

^ 8A9c~2f8<#) => <c- 9 S8c~ 2Sc~)9c) =-CRISS/0~<8c3 2 9~Q<=?& "The k impact of k gelon k how k individuals k view k their k lives k unfolding over time." k Funded: k May k \$~\$ k =3000). k

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Re~ arch-Relate! w#~/&#;~ w w

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SSHRC k y. k Office of k Research k Services. k (Brock k University, k May k 2013). k

k

An k Overview of the k Social Sciences k nd k / k nities k Research k Council's k (SSHRC) k Progra/ k Architecture k nd k Insight k Progra/ k Office of k Research k Services. k (Brock k University, k June, k 2011). k

k

Financial k Management of k Research k Accounts. k Office of k Research k Services. k (Brock k University, k April k 2011) k

k

Ethics k in k Psychological k Research. k Office of k Research k Services. k (Brock k University, k October, k 2010). k

k

How k to k Prepare k SSHRC k Standard k Research k Grant k (<^>) k Application. k Office of k Research k Services. k (Brock k University, k May k 2010). k

w

Grant k Writing: k The k Art of k Acquiring k Peer k Reviewed k Research k Funding k (Brock k University, k September, k \$~\*) k

k

How k to k Prepare k Successful k SSHRC k Standard k Research k Grant k Application k (Brock k University, k August k \$~\*) k

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**Media**

k

Invited blog post by M. K. Busseri (2019, November 4). In search of a satisfying life: Is it present, or future? - <https://www.spsp.org/news-center/blog/busseri-life-satisfaction-over-time#gsc.tab=0>

k

Research featured in article by C. Majtenik (2019). [Brook research examines how people perceive their lives as they get older](#) (September 10, 2019).

k

Research featured in article by C. Majtenik (2006). [Brook researchers receive \\$3.7 million funding from federal grant agency SSHRC](#) (September 19, 2016).

k

Interviewed and cited by author for: M. Allenberg (2016). Looking at the psychology of happiness. *St. ^ ; - <9) = St 9d <d ndk ) 229d <~. A9* (March 21, 2016).

k

Numerous media reports, including extensive on-line media coverage concerning the "Bright minds and risk attitudes" (Hodson & Busseri, 2012) and "Do (even) clinically depressed individuals believe that life gets better and better over time?" (Busseri & Peck, 2014).

k

Interviewed on live radio, NewsTalk 610 (610 AM). *1\$ ) 9; 2-) 2- 9d 2f) = ; ~f c; 89* (May 16, 2015).

k

Interviewed for radio podcast, CFBU-FM (103.7 FM). *September 2014: k - ; ! ~ Q = A = => 9 => 8f D) 2& ) 9! 1* (Podcast published on YouTube January 3, 2015).

k

Invited response for *A < ~ 8 = ; ? S - 8 > 0 # ) => < c - \$ ; ; ) < = ^ 8 A 9 c ~ 2 8 f + 9 ; < 8 2 9 ~ Q < ~ ; ) =>* April 2014. <http://yourontarioresearch.ca/curiosity-shop-answers/why-is-the-grass-always-greener-on-the-other-side/>

k

Interviewed by Michael Penders for *9IA ~ = ; ~ Q \$ 9d* radio program on CFBU-FM; broadcast December 8, 2013.

k

Interviewed and cited by author for Ricciuto, C. (March 20, 2013). You can't buy happiness but you can live it. *Published in the k ) 229d <~. A; , k & 8 < ; Er ~ ~ 7 ) =* Published in the k ( ~ ! < & 2 2 # ) C ) D k ndk St. ^ ; - < 9 ) = St 9d <d under the title "Come on, get happy".

k

Interviewed and cited by author for *7 rragh, C. (2010). Happiness. k ~ ! < \$ ! J 9) 05, 44-50.*

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**Teaching-Related Activities**

k

^ 8A< )= ~ A! -; -~<8c3 2 9~Q <~;?0' )> <7)9; 8f\_c=?c- 8Z! ?/

PSYCI3P3031 Critical Thinking in Psychology k : n.2010 to Apr.2010  
 k k k k k k k k : n.2011 to Apr.2011  
 k k k k k k k k : n.2012 to Apr.2012  
 k k k k k k k k : n.2013 to Apr.2013  
 k k k k k k k k Sept.2014 to Dec.2014

PSYCI4P3031 Positive Psychology k k k Sept.2012 to Dec.2012  
 k k k k k k k k : n.2014 to April 2014  
 k k k k k k k k : n.2015 to April 2015

PSYCI4P9313 Honours Thesis Seminar k k Sept.2010 to Apr.2010  
 k k k k k k k k Sept.2010 to Apr.2011  
 k k k k k k k k Sept.2011 to Apr.2012  
 k k k k k k k k Sept.2012 to Apr.2013  
 k k k k k k k k Sept.2014 to Apr.2015  
 Sept.2017 to Apr.2018  
 Sept.2018 to Apr.2019  
 Sept.2019 to Apr.2020

PSYCI6P3031 Research and Theory in Personality and Social Psychology k k k Sept.2010 to Dec.2010  
 k k k k k k k k Sept.2014 to Dec.2014 \*k  
 \*team taught

PSYCI7N2-; -N 31 Focus Area Research Seminar k Sept.2010 to Apr.2010  
 k k k k k k k k Sept.2010 to Apr.2011  
 k k k k k k k k Sept.2011 to Apr.2012  
 k k k k k k k k Sept.2012 to Apr.2013  
 k k k k k k k k Sept.2014 to Apr.2015  
 Sept.2015 to Apr.2016  
 k k k k k k k k Sept.2016 to Apr.2017  
 Sept.2017 to Apr.2018  
 k k k k k k k k Sept.2018 to Apr.2019  
 Sept.2019 to Apr.2020

PSYCI7V031 Longitudinal Data Analysis k k Sept.2011 to Dec.2011  
 k k k k k k k k Sept.2016 to Dec.2016

PSYCI7V031 Structural Equation Modeling k k : n.2014 to April 2014

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Brock University, Department of Psychology, Lifespan Development (PSYC 2P12), Sept. 2019.

k

Brock University, Department of Psychology, Lifespan Development (PSYC 2P12), Nov. 2018.

k

Brock University, Department of Psychology, Professional Issues in Psychology (PSYC 7P03), Feb. 2012.

k

Brock University, Department of Psychology, Professional Issues in Psychology (PSYC 7P03), n. 2010.

k

Brock University, Department of Psychology, Positive Psychology (PSYC 4P30), Oct. 2006.

k

Brock University, Department of Psychology, Adolescent Development (PSYC 3P18), Nov. 2006.

k

Brock University, Department of Psychology, Adolescent Development (PSYC 3P18), Dec. 2006.

k

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c- 9! 8#) 2 ;) d' 8<3= 8> A(<) => 9; ; 89=Att) 9d) d

Getting the most out of "E" = & #sa 2.9.3k5' tek nd innovations Center for Pedagogical Innovation (Brock University, May 2014).

k

Getting the most out of multiple-choice questions. 8 culty Workshop: Center for Pedagogical Innovation (Brock University, February 2013).

k

Redesigning reflective assignments to deepen learning. 8 culty Workshop: Center for Pedagogical Innovation (Brock University, December 2012).

k

9! t's new with copyright? Presentation by Copyright Coordinator to the Department of Psychology (Brock University, June 2012).

k

Web of Knowledge 3 Expert Searching. 8 culty Workshop: Center for Teaching, Learning, and Educational Technologies (Brock University, April 2012).

k

Know your author rights. 8 culty Workshop: Center for Teaching, Learning, and Educational Technologies (Brock University, April 2012).

k

Teaching Research Methods in Social/Personality Psychology. Society for Personality and Social Psychology ° n Diego CA, nuary 2012).

k

Pedagogical innovation: From knowledgeable to knowledge-able: Building new learning environments for new media environments. Center for Teaching, Learning, and Educational Technologies (Brock University, May 2011)

Moving beyond the textbook: Resource-based learning. Library Workshops for Graduate Students (Brock University, April 2011)

Turnitin: More than just a plagiarism detector. Library Workshops for Graduate Students (Brock University, April 2011)

Making your 2<sup>o</sup> course more interactive. Center for Teaching, Learning, and Educational Technologies (Brock University, August 2010).

Course Design for Meaningful Learning. 8<sup>o</sup> of Social Sciences 'Enhancing Teaching' Workshop (Brock University, April 2010).

Provision of University Goods and Services to Persons with Disabilities Policy. Accessibility Office and Resources (Brock University, March 2010).

New 8<sup>o</sup> Orientation. Center for Teaching, Learning, and Educational Technologies (Brock University, August 2010)

Introduction to the "E" Learning Management System. Center for Teaching, Learning, and Educational Technologies (Brock University, August 2010)

Inquiry Across the Disciplines. Center for Teaching, Learning, and Educational Technologies (Brock University, April 2010)

Integrating Teaching and Research. Center for Teaching, Learning, and Educational Technologies (Brock University, November 2006).

Workshop Groups and Seminars. Center for Teaching, Learning, and Educational Technologies (Brock University, October 2006).

Evaluation and Assessment Issues. Center for Teaching, Learning, and Educational Technologies (Brock University, March 2006).

Preparing a Teaching Dossier. Center for Teaching, Learning, and Educational Technologies (Brock University, December 2006)

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**Student Supervision Activities**

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%< dA ;) Stud) 9; Sup) <C=8<

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|            |                            |   |   |   |                          |
|------------|----------------------------|---|---|---|--------------------------|
| Taysa-Rhea | Mise, MA student           | k | k | k | Sept. 2012 to Sept. 2014 |
| ° / nthak  | Metler, MA student         | k | k | k | Sept. 2012 to Oct. 2014  |
| Mojani     | 4 isani-Sa/ ni, MA student | k | k | k | Sept. 2015 to Aug. 2017  |
| Brock      | DeGagne, MA student        | k | k | k | Sept. 2018 to Aug. 2018  |
| Brock      | DeGagne, MA student        | k | k | k | Sept. 2018 to present    |

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%< dA ;) Stud) 9; ^ 877 ~;)) \$ ) 7. ) <

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MA Students:

|         |            |           |   |   |                        |
|---------|------------|-----------|---|---|------------------------|
| ? mna!  | ! ! k      | k         | k | k | Dec 2019 to present    |
| Owen    | Dalyk      | k         | k | k | May 2018 to June 2019  |
| "/ ndak | Bolger     | k         | k | k | Sept 2011 to Oct 2014  |
| Beenish | E! nk      | k         | k | k | Sept 2011 to Nov 2012  |
| Mark    | Horvath    | k         | k | k | Sept 2011 to Sept 2012 |
| Alicia  | Rubel      | k         | k | k | Sept 2011 to Sept 2012 |
| °!      | wnk        | Geniole   | k | k | Sept 2011 to Sept 2012 |
| :       | mes        | Desjardin | k | k | Sept 2010 to Sept 2011 |
| Ashley  | Hosker     | k         | k | k | Sept 2010 to Aug 2011  |
| Kirsti  | K nDorrser | k         | k | k | Sept 2010 to Dec 2011  |
| Ben     | Sylvester  | k         | k | k | Sept 2010 to Aug 2011  |
| Chloe   | ? /H       | k         | k | k | Sept 2010 to Sept 2010 |

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MA!7 Students:

|       |                       |                       |   |   |                        |
|-------|-----------------------|-----------------------|---|---|------------------------|
| °!    | wnk                   | Geniole, MA!7 student | k | k | Sept 2012 to Aug 2016  |
| Carak | McInnis, MA!7 student | k                     | k | k | Sept 2010 to June 2013 |
| Mary  | McLean, MA!7 student  | k                     | k | k | Sept 2010 to June 2013 |

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|            |                        |   |          |       |          |                       |
|------------|------------------------|---|----------|-------|----------|-----------------------|
| Carak      | MacInnis, MA!7 student | 3 | Advanced | 7 tak | Analysis | May 2011 to Aug. 2011 |
| C ysa-Rhea | Mise, MA!7 Student     | 3 | Directed | Study | k        | : ni 2015 to May 2015 |

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%< dA ;) Stud) 9; AdC 9c) d Stud? , >) <#) d) <

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|         |                         |                       |   |   |             |
|---------|-------------------------|-----------------------|---|---|-------------|
| 4 rniak | Worth, MA!7 student     | k                     | k | k | Summer 2010 |
| Royette | IC vernier              | k                     | k | k | 8 II 2011   |
| Tina    | Brook, MA!7 student     | k                     | k | k | 8 II 2012   |
| Carak   | MacInnis, MA!7 Student  | k                     | k | k | Summer 2012 |
| Stephan | K nNoordt, MA!7 student | k                     | k | k | Summer 2012 |
| °!      | wnk                     | Geniole, MA!7 student | k | k | Summer 2013 |

%< dA ;) Stud) 9; Appr) 9; ~c) = ~> \$ ) 9; 8<

k  
k Kirk Stokes, %! 7! student 3 Teaching Apprenticeship : n. 2013 to k Apr. 2013 k

^ - ' Stud) 9; ^ 87 > ^ - ) 9 = Q Ex 7 ~ 9 ; ~ 89 ^ 877 ~ ; ) \$ ) 7 . ) <

Andrew Chung, %! 7! student k k k k Spring/Summer 2019 k

2 9d) < < dA ;) ^ = ? c - 8 X ! ? ! 89 8 A < = - ) = = A d C = 8 <

k  
k Emily Erb k k k k k k Sept. 2018 to k present k  
k Brook Light k k k k k k Sept. 2019 to k May 2020 k  
k #uren Kremble k k k k k k Sept. 2018 to k May 2019 k  
k Holly Merrisk k k k k k k Sept. 2017 to k May 2018 k  
k Charlie LeBlanc k k k k k k Sept. 2016 to k Apr. 2017 k  
k E thryn Bundak k k k k k k Sept. 2015 to k Apr. 2016 k  
k Erin! na! nk k k k k k k Sept. 2014 to k Apr. 2015 k  
k Emily Peck k k k k k k Sept. 2012 to k Apr. 2013 k  
k Helen Dykstra k k k k k k Sept. 2011 to k Apr. 2012 k  
k Jenna Jones (Williams) k k k k k k Sept. 2011 to k Apr. 2012 k  
k Annette Malinowski k k k k k k Sept. 2010 to k Apr. 2011 k

°& ` Scholarly Activitie` k

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%< 9; #) C) D) <

Social Sciences ndk / nities Research Council of Canada , Insight Grant k: n. 2019) k  
Israel Science Foundation (March 2018)  
Social Sciences ndk / nities Research Council of Canada , Insight Grant k: n. 2018) k  
Social Sciences ndk / nities Research Council of Canada , Insight Grant (Feb. 2015) k  
Ministry of Science, Technology ndk 5 cel of Israel k: n. 2015)  
MIT ACS Accelerate Internship Progra/ k (June 2013) k

\$ 9A e < > ; A )) < #) C) D) 9! - 8A 9 2 = > C) D) d f 8 < 0 c A 7 A 2 ; ~ Q /

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British Journal of Social Psychology k  
Child Development k  
Cognition ndk Emotion k  
Emotion k k  
European Journal of Personality k k  
European Journal of Social Psychology k  
Hormones ndk Behavior k  
International Journal of Well-Being k k  
International Society for the Study of Behavioral Development k k  
Journal of Applied Social Psychology k k  
Journal of Experimental Child Psychology k k

Journal of Experimental Psychology: Perception and Performance  
 Journal of Experimental Social Psychology  
 Journal of Experimental Social Psychology  
 Journal of Happiness Studies  
 Journal of Personality  
 Journal of Personality and Social Psychology  
 Journal of Well-Being Assessment  
 Memory  
 Personality and Individual Differences  
 Personality and Social Psychology Review  
 Perspectives on Psychological Science  
 Psychological Bulletin  
 Psychology and Aging  
 Psychological Assessment  
 Review of General Psychology  
 Open Access  
 Scandinavian Journal of Psychology  
 Social Cognition  
 k

~ -) = Ex 7 9 ; 89 ^ 877 ~ ; ) =  
 k

External+ minor, MA thesis, Wilfrid Laurier University, Dept of Psychology (July 2011)  
 External+ minor, MEd thesis, Western University, Dept of Psychology (Sept. 2013)  
 External+ minor, MEd thesis, Wilfrid Laurier University, Dept of Psychology (Aug. 2015)  
 External+ minor, MEd thesis, University of Calgary, Dept of Education (Dec. 2016)  
 Internal+ minor, MEd thesis, Brock University, Applied Health Sciences (Feb. 2017)  
 External+ minor, MEd thesis, Wilfrid Laurier University, Dept of Psychology (April 2018)  
 Defense Chair, MA thesis, Brock University, Dept of Critical Sociology (August, 2018)  
 External+ minor, MEd thesis, Deakin University, Dept of Psychology (February 2019)

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Brock University, Interactive Arts and Sciences Program, Speaker Series (Oct. 2019): IG ~ - )  
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Brock University, 2018 Lifespan Development Research Centre  
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Association for Research in Personality  
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Graduate Program / Director: July 2015 to June 2015

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Departmental Committee: \$~ ( k o l present k  
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Tenure-track position: Statistics Lifespan development k

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**CURRICULUM VITAE**

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Academic and Professional

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York University

1993-1998

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Department of Psychology

York University

1998-2003

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\* *Current Member of Journal Editorial Board*

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**Date Submitted:** 2020-07-27 11:26:10

**Confirmation Number:** 1166952

**Template:** SSHRC

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## **Professor Sabrina Thai**

Correspondence language: English

Date of Birth: 3/10

### **Contact Information**

The primary information is denoted by (\*)

#### **Address**

Primary Affiliation (\*)

Department of Psychology  
Brock University  
Niagara Region  
1812 Sir Isaac Brock Way  
St Catharines Ontario L2S3A1  
Canada

#### **Telephone**

Work (\*) 1-905-688-5550 extension: 4112

#### **Email**

Work (\*) sthai@brocku.ca

#### **Website**

Personal scramlab.ca

## Professor Sabrina Thai

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### Language Skills

| Language | Read | Write | Speak | Understand | Peer Review |
|----------|------|-------|-------|------------|-------------|
| English  | Yes  | Yes   | Yes   | Yes        | Yes         |

### Degrees

|                  |                                                                                                                                                                                                                                                 |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2010/9           | Master's Thesis, Masters of Science, Industrial/Organizational Psychology, University of Western Ontario<br>Degree Status: Withdrawn                                                                                                            |
| 2012/9 - 2017/6  | Doctorate, Doctor of Philosophy, Psychology, University of Toronto<br>Degree Status: Completed<br>Thesis Title: Redefining Social Comparisons: Self-other overlap and social comparisons of close others<br>Supervisors: Penelope Lockwood      |
| 2011/9 - 2012/11 | Master's Thesis, Masters of Arts, Psychology, University of Toronto<br>Degree Status: Completed<br>Thesis Title: The role of attachment avoidance in social comparisons between romantic partners<br>Supervisors: Penelope Lockwood             |
| 2006/9 - 2010/6  | Bachelor's Honours, Honours Bachelor's of Science, Psychology Research, University of Toronto<br>Degree Status: Completed<br>Thesis Title: How are we doing? Social comparisons across romantic relationships<br>Supervisors: Penelope Lockwood |

### Recognitions

|                 |                                                                                                                                 |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------|
| 2016/9 - 2017/8 | Doctoral Completion Award - 5,180<br>University of Toronto<br>Prize / Award                                                     |
| 2016/4          | Ken Dion Award for Most Outstanding Graduate Student in Social/Personality Psychology<br>University of Toronto<br>Prize / Award |
| 2014/7          | IARR Conference Student Submission Award - 380<br>International Association for Relationship Research<br>Prize / Award          |
| 2014/1          | Diversity Fund Travel Award - 500<br>Society for Personality and Social Psychology<br>Prize / Award                             |

|        |                                                                                                                          |
|--------|--------------------------------------------------------------------------------------------------------------------------|
| 2014/1 | Faculty of Arts and Science's Graduate Student Conference Travel Grant - 1,000<br>University of Toronto<br>Prize / Award |
| 2012/1 | Student Poster Award Finalist<br>Society for Personality and Social Psychology<br>Citation                               |

## User Profile

Research Specialization Keywords: Close Relationships, Experience Sampling Methodology, Social Cognition, Social Comparisons

## Employment

|                  |                                                                                                                          |
|------------------|--------------------------------------------------------------------------------------------------------------------------|
| 2019/1           | Assistant Professor<br>Psychology, Brock University<br>Full-time, Assistant Professor<br>Tenure Status: Tenure Track     |
| 2017/1 - 2018/12 | SSHRC Postdoctoral Fellow<br>Psychology, McGill University<br>Full-time<br>Tenure Status: Non Tenure Track               |
| 2017/7 - 2017/10 | Methodological Consultant<br>Cornell University                                                                          |
| 2011/9 - 2016/4  | Teaching Assistant<br>Psychology, University of Toronto<br>Part-time<br>Tenure Status: Non Tenure Track                  |
| 2011/5 - 2011/8  | Graduate Research Assistant<br>Psychology, University of Western Ontario<br>Part-time<br>Tenure Status: Non Tenure Track |
| 2010/9 - 2011/4  | Teaching Assistant<br>Psychology, University of Western Ontario<br>Part-time<br>Tenure Status: Non Tenure Track          |

## Research Funding History

### Awarded [n=5]

|                                         |                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2019/6 - 2021/5<br>Principal Applicant  | Implicit bias in the wild: Building smartphone tools to explore implicit bias in daily life,<br>Grant<br><br><b>Funding Sources:</b><br>Social Sciences and Humanities Research Council of Canada (SSHRC)<br>Insight Development Grant<br>Total Funding - 54,447<br><br>Co-applicant : Elizabeth Page-Gould |
| 2017/1 - 2018/12<br>Principal Applicant | Plenty of fish in the sea...for my partner: being compared by one's romantic partner,<br>Fellowship                                                                                                                                                                                                         |

**Funding Sources:**

Social Sciences and Humanities Research Council of Canada (SSHRC)  
 Postdoctoral Fellowship  
 Total Funding - 84,375

2015/9 - 2016/8  
 Principal Applicant

Expanded-self comparisons in daily life, Scholarship

**Funding Sources:**

Government of Ontario (Ottawa, ON)  
 Ontario Graduate Scholarship  
 Total Funding - 15,000

2012/9 - 2015/8  
 Principal Applicant

The role of relationship beliefs in cross-relationship comparisons, Scholarship

**Funding Sources:**

Social Sciences and Humanities Research Council of Canada (SSHRC)  
 Joseph-Armand Bombardier Canadian Graduate Scholarship (Doctoral)  
 Total Funding - 105,000

2010/9 - 2011/8  
 Principal Applicant

The role of social comparisons in coping with job burnout, Scholarship

**Funding Sources:**

Social Sciences and Humanities Research Council of Canada (SSHRC)  
 Canada Graduate Scholarships Program - Masters Scholarships  
 Total Funding - 17,500

**Completed [n=1]**

2017/9 - 2018/8  
 Co-investigator

Daily experiences and social class of college students, Grant

**Funding Sources:**

Society for Personality and Social Psychology (SPSP)  
 Small Research Grant  
 Total Funding - 1,500

**Declined [n=1]**

2019/9 - 2024/8  
 Principal Investigator

Everybody does it better than you: The effects of upward ex-partner comparisons on implicit ex-partner evaluations and romantic detachment, Grant

**Funding Sources:**

Social Sciences and Humanities Research Council of Canada (SSHRC)  
 Insight Grant  
 Total Funding - 173,150

**Under Review [n=1]**

2021/9 - 2026/8  
 Co-applicant

Dancing towards mental, physical, and social health? Developing a comprehensive biopsychosocial model of how and why participation in dance contributes to health from an interdisciplinary perspective, Grant

**Funding Sources:**

Social Sciences and Humanities Research Council of Canada (SSHRC)  
 New Frontiers in Research Fund Transformation Grant  
 Total Funding - 14,874,816

Co-applicant : Adam MacNeil; Deborah O'Leary; Justin Carré; Matthew Kwan; Maureen Connolly; Michael Holmes; Terrance Wade;

Principal Applicant : Danielle S. Molnar; Dawn Zinga

## Course Development

|        |                                                                                                                                |
|--------|--------------------------------------------------------------------------------------------------------------------------------|
| 2020/1 | Instructor, Psychology, Brock University<br>Course Title: Social Cognition<br>Course Level: Undergraduate                      |
| 2019/1 | Instructor, Psychology, Brock University<br>Course Title: Psychological Research<br>Course Level: Undergraduate                |
| 2019/1 | Instructor, Psychology, Brock University<br>Course Title: Psychology of Interpersonal Behaviour<br>Course Level: Undergraduate |
| 2015/1 | Instructor, Psychology, University of Toronto<br>Course Title: Social Psychology Laboratory<br>Course Level: Undergraduate     |

## Student/Postdoctoral Supervision

### Bachelor's [n=1]

Principal Supervisor Amy Holliday (Completed)  
Student Degree Received Date: 2020/6, Brock University - Graduate Student

### Bachelor's Honours [n=11]

Co-Supervisor Sarah Strickland (Completed)  
Student Degree Received Date: 2015/6, Halton Catholic District School Board

Co-Supervisor Shayne Sanscartier (Completed)  
Student Degree Received Date: 2016/6, Graduate Student at University of Toronto

Co-Supervisor Joyce C. He (Completed)  
Student Degree Received Date: 2016/6, Graduate Student at Rotman School of Management

Co-Supervisor Kyle Cleversey (Completed)  
Student Degree Received Date: 2014/6, Graduated with Masters in Counselling Psychology from University of Western Ontario

Co-Supervisor Rebecca Zhu (Completed)  
Student Degree Received Date: 2015/6, Graduate Student at UC Berkeley

Co-Supervisor Jessica Tran (Completed)  
Student Degree Received Date: 2015/6, Doctor of Optometry Student at New England College of Optometry

Co-Supervisor Samuel Y. Chen (Completed)  
Student Degree Received Date: 2013/6, Graduate Student at University of Sydney

Co-Supervisor Jenny Kang (Completed)  
Student Degree Received Date: 2012/6, Unknown

Principal Supervisor Schezreh Nauman (Completed)  
Student Degree Received Date: 2020/6

|               |                                                                                                                               |
|---------------|-------------------------------------------------------------------------------------------------------------------------------|
| Co-Supervisor | Michelle Hu (Completed)<br>Student Degree Received Date: 2015/6, Graduate Student at University of Toronto                    |
| Co-Supervisor | Marya Morozova (Completed)<br>Student Degree Received Date: 2013/6, Staff Clinician - Addiction Specialist at Homewood Health |

**Master's Thesis [n=1]**

|                      |                                                                   |
|----------------------|-------------------------------------------------------------------|
| Principal Supervisor | Amy Holiday (In Progress)<br>Student Degree Expected Date: 2022/6 |
|----------------------|-------------------------------------------------------------------|

**Doctorate [n=2]**

|                  |                                                                                                                        |
|------------------|------------------------------------------------------------------------------------------------------------------------|
| Academic Advisor | Emilie Auger (Completed)<br>Student Degree Received Date: 2018/11, FQRSC Postdoctoral Fellow at University of Waterloo |
| Academic Advisor | Claire Midgley (Completed)<br>Student Degree Received Date: 2019/6, Postdoctoral Fellow at University of Toronto       |

**Journal Review Activities**

|                 |                                                                                        |
|-----------------|----------------------------------------------------------------------------------------|
| 2017/11         | Journal of Research in Personality<br>Number of Works Reviewed / Refereed: 1           |
| 2017/10         | Social Media + Society<br>Number of Works Reviewed / Refereed: 1                       |
| 2016/9          | Sex Roles<br>Number of Works Reviewed / Refereed: 1                                    |
| 2015/1          | Journal of Social and Personal Relationships<br>Number of Works Reviewed / Refereed: 7 |
| 2020/6 - 2020/6 | Social Psychology and Personality Science<br>Number of Works Reviewed / Refereed: 1    |
| 2020/5 - 2020/5 | Self and Identity<br>Number of Works Reviewed / Refereed: 1                            |
| 2019/5 - 2020/5 | Journal of Experimental Social Psychology<br>Number of Works Reviewed / Refereed: 2    |
| 2020/2 - 2020/3 | Personality and Social Psychology Bulletin<br>Number of Works Reviewed / Refereed: 1   |

**Graduate Examination Activities**

|         |                                                           |
|---------|-----------------------------------------------------------|
| 2019/10 | Examiner, Lisa Do Couto, Psychology, University of Guelph |
|---------|-----------------------------------------------------------|

**Research Funding Application Assessment Activities**

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| 2020/3 - 2020/5 | Committee Member, Insight Development Grant Adjudication Committee, Funder, Academic Reviewer, Social Sciences and Humanities Research Council of Canada (SSHRC) |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Most Significant Contributions

- 2018/12 ExperienceSampler: An open-source scaffold for building smartphone apps for experience sampling  
 Thai and Page-Gould (2018) introduced ExperienceSampler, the open-source scaffold for designing experience-sampling smartphone apps, to the scientific community. This paper was one of the most downloaded preprints hosted on the Open Science Framework in 2017. To date, it has been downloaded 715 times and has already been cited 13 times according to Google Scholar. Moreover, researchers in various disciplines (e.g., kinesiology, organizational behaviour, anthropology, social psychology, clinical psychology) and institutions around the world (e.g., Eindhoven University, Cornell, UCLA, Columbia, Stanford) are using it to conduct research. Some of this research has also been recently published in a highly respected journal in my subfield (e.g., Zhao, Smoulders, Lakens, IJsselsteijn, 2018, Journal of Research in Personality).

## Presentations

1. Thai, S., Page-Gould, E., & Lockwood, P. (2020). The ups and downs of being us: Relationship comparisons in daily life. 21st Annual Meeting of the Society for Personality and Social Psychology, New Orleans, United States  
 Main Audience: Researcher  
 Invited?: No, Keynote?: No
2. Reese, Z. A., & Thai, S. (2020). Social comparison within romantic relationships: Consequences for self-esteem and relationship satisfaction. 21st Annual Meeting of the Society for Personality and Social Psychology, New Orleans, United States  
 Main Audience: Researcher  
 Invited?: No, Keynote?: No
3. (2020). Experience Sampling Methods and Implementation. 21st Annual Meeting of the Society for Personality and Social Psychology, New Orleans, United States  
 Main Audience: Researcher  
 Invited?: Yes, Keynote?: No
4. (2020). Experience Sampling Methods and Implementation. Convention of the Association for Psychological Science, Chicago, United States  
 Main Audience: Researcher  
 Invited?: Yes, Keynote?: No
5. Ford, B. Q., Feinberg, M., & Thai, S. (2019). Managing the daily stress of politics: Emotion regulation's trade-offs. Convention of the Association for Psychological Science, Washington, D.C., United States  
 Main Audience: Researcher  
 Invited?: No, Keynote?: No
6. Ford, B. Q., Feinberg, M., & Thai, S. (2019). Managing the daily stress of politics. International Society for Research on Emotion, Amsterdam, Netherlands  
 Main Audience: Researcher  
 Invited?: No, Keynote?: No
7. Auger, E., Thai, S., McGregor, I., & Lydon, J.E. (2019). Interpersonal understanding promotes relationship identification and meaning in life. Mini Conference of the International Association for Relationship Research (IARR), Ottawa, Canada  
 Main Audience: Researcher  
 Invited?: No, Keynote?: No

8. Ford, B. Q., Feinberg, M., & Thai, S. (2019). Managing the daily stress of politics. International Society for Research on Emotion, Amsterdam, Netherlands  
Main Audience: Researcher  
Invited?: No, Keynote?: No
9. Ford, B. Q., Feinberg, M., Thai, S. & Gatchpazian, A. (2019). Managing the daily stress of politics: Emotion Regulation's Trade-offs. Convention of the Society for Experimental Social Psychology, Toronto, Canada  
Main Audience: Researcher  
Invited?: No, Keynote?: No
10. Thai, S., & Lockwood, P. (2019). Expanded-self comparisons in daily life. 20th Annual Meeting of the Society for Personality and Social Psychology, Portland, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
11. Thai, S., Lockwood, P., He, J. C., & Li, Y. (2018). Relational consequences of parent comparisons. 19th Annual Meeting of the Society for Personality and Social Psychology, Atlanta, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
12. Thai, S. & Lydon, J. E. (2018). What the heart wants and doesn't want: Implicit and explicit attitudes towards attractive alternatives. 2018 International Association for Relationship Research Conference, Fort Collins, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
13. Tamminen, K.A., Page-Gould, E., Schellenberg, B. J. I., Palmateer, T., Thai, S., Sabiston, C., & Crocker, P. R. E. (2017). Longitudinal examination of interpersonal emotion regulation, social support, and team performance among varsity athletes. Canadian Society for Psychomotor Learning and Sport Psychology Conference, St. John's, Canada  
Main Audience: Researcher  
Invited?: No, Keynote?: No
14. Thai, S. (2017). ExperienceSampler. 18th Annual Meeting of the Society for Personality and Social Psychology, San Antonio, United States  
Main Audience: Researcher  
Invited?: Yes, Keynote?: No
15. Thai, S., Lockwood, P., Zhu, R., & He, C. J. (2016). The ups and downs of comparing your child: Parents' expanded-self comparisons. 2016 International Association for Relationship Research Conference, Toronto, Canada  
Main Audience: Researcher  
Invited?: No, Keynote?: No
16. Thai, S. & Lockwood, P. (2016). Comparing You = Comparing Me: Social comparisons of the expanded self. York-University of Toronto Social-Personality Abnormal Psychology Conference, Toronto, Canada  
Main Audience: Researcher  
Invited?: Yes, Keynote?: No
17. Thai, S. & Page-Gould, E. (2016). ExperienceSampler: Experience sampling studies for the masses. Methods in Lifespan Social-Personality Psychology: Experience Sampling and Other Micro-Longitudinal Analysis, at the Lifespan Social-Personality Preconference at Annual Meeting of the Society for Personality and Social Psychology, San Diego, United States  
Main Audience: Researcher  
Invited?: Yes, Keynote?: No

18. Thai, S., Hu, M., & Lockwood, P. (2016). Getting what you want vs. what you need: Ideal preferences, need fulfilment, and relationship outcomes. 17th Annual Meeting of the Society for Personality and Social Psychology, San Diego, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
19. Thai, S., Lockwood, P., Zhu, R., He, C. J., & Li, Y. (2016). Expanded-self comparisons in parent-child relationships. 18th Annual Meeting of the Society for Personality and Social Psychology, San Antonio, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
20. Thai, S., Lockwood, P., Quinn, S.K., & Boksh, R.J. (2015). Reassurance or Reassessment: Commitment determines reactions to superior romantic relationships. Canadian Psychological Association's 76th Annual Convention, Ottawa, Canada  
Main Audience: Researcher  
Invited?: No, Keynote?: No
21. Thai, S., Lockwood, P., Pinkus, R. T., & Chen, S. Y. (2015). Being better than you is better for us: Attachment avoidance and social comparisons within romantic relationships. 27th Annual Convention of the Association for Psychological Science, New York City, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
22. Thai, S. & Lockwood, P. (2015). Self-regulation of the expanded self: Partner-other comparison. IARR 2015 Self-Regulation and Close Relationships mini-conference, Amsterdam, Netherlands  
Main Audience: Researcher  
Invited?: No, Keynote?: No
23. Lockwood, P., & Thai, S. (2015). Social comparisons of the expanded self: Comparing in the context of relationships. 2015 Cologne Social Cognition Meeting on Relativity, Cologne, Germany  
Main Audience: Researcher  
Invited?: Yes, Keynote?: No
24. Thai, S. & Page-Gould, E. (2015). So you want to do an experience sampling study: An open-source smartphone app. 16th Annual Meeting of the Society for Personality and Social Psychology, Long Beach, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
25. Lockwood, P., & Thai, S. (2014). Social comparisons of the expanded self. 17th European Association of Social Psychology General Meeting, Amsterdam, Netherlands  
Main Audience: Researcher  
Invited?: No, Keynote?: No
26. Thai, S., & Lockwood, P. (2014). Comparing You = Comparing Me: Comparing One's Romantic Partner to Others. 15th Annual Meeting of the Society for Personality and Social Psychology, Austin, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
27. Lockwood, P., & Thai, S. (2014). Social comparisons of the expanded self: Motivation to protect romantic partners following upward comparisons. Canadian Psychological Association 75th Annual Convention, Vancouver, Canada  
Main Audience: Researcher  
Invited?: No, Keynote?: No

## Broadcast Interviews

2015/06/12                The science of sport: Using data to win medals, The National, CBC

## Text Interviews

2015/07/28                Comparing your partner to others is not always a bad idea, The Toronto Star

## Publications

### Journal Articles

1. Midgley, C., Debues-Stafford, G., Lockwood, P., & Thai, S. (2020). She needs to see it to be it: The importance of same-gender athletic role models. *Sex Roles*.  
Revision Requested  
Refereed?: Yes, Open Access?: No  
Contribution Percentage: 11-20
2. Thai, S., Lockwood, P., & Boksh, R. J. (2020). Committed to succeed: Commitment determines responses to upward relationship comparisons. *Personal Relationships*. 27: 303-335.  
Published  
Refereed?: Yes, Open Access?: No  
Contribution Percentage: 51-60
3. Midgley, C., Thai, S., Lockwood, P., Kovacheff, C. & Page-Gould, E. (2020). When every day is a high school reunion: Social media comparisons and self-esteem. *Journal of Personality and Social Psychology*.  
In Press  
Refereed?: Yes, Open Access?: No  
Contribution Percentage: 31-40
4. Tamminen, K. A., Page-Gould, E., Schellenberg, B., Palmateer, T., Thai, S., Sabiston, C. M., Eys, M., & Crocker, P. R. E. (2019). A longitudinal examination of interpersonal emotionregulation, social support, and team performance among varsity athletes. *Psychology of Sport & Exercise*.  
Submitted  
Refereed?: Yes, Open Access?: No  
Contribution Percentage: 11-20
5. Thai, S., Lockwood, P., Zhu, R., Li, Y., & He, J. C. (2019). The family ties that protect: Expanded-selfcomparisons in parent-child relationships. *Journal of Social and Personal Relationships*. 36: 1041-1066.  
Published  
Refereed?: Yes, Open Access?: No  
Contribution Percentage: 61-70
6. Midgley, C., Thai, S., Lockwood, P., Kovacheff, C. & Page-Gould, E. (2019). When every day is a high school reunion: Social mediacomparisons and self-esteem.*Journal of Personality and Social Psychology*.  
Submitted  
Refereed?: Yes, Open Access?: No  
Contribution Percentage: 31-40
7. Thai, S., & Page-Gould, E. (2018). ExperienceSampler: An open-source scaffold for building smartphone apps for experience sampling. *Psychological Methods*. 23: 729-739.  
Published  
Refereed?: Yes, Open Access?: No  
Contribution Percentage: 61-70

8. Thai, S., Lockwood, P., Pinkus, R.T., & Chen, S. Y. (2016). Being better than you is better for us: Attachment avoidance and social comparisons within romantic relationships. *Journal of Social and Personal Relationships*. 33: 989-1004.  
Published  
Refereed?: Yes, Open Access?: No  
Contribution Percentage: 41-50
9. Thai, S., & Lockwood, P. (2015). Comparing You = Comparing Me: Social comparisons of the expanded self. *Personality and Social Psychological Bulletin*. 41: 989-1004.  
Published  
Refereed?: Yes, Open Access?: No  
Contribution Percentage: 71-80

### **Book Chapters**

1. Pinkus, R. T., Thai, S., & Lockwood, P. (2018). Social comparisons in close relationships. J. Suls, R. L. Collins, & L. Wheeler. *Social comparison in judgment and behaviour*. : unknown.  
Submitted, Oxford University Press  
Refereed?: No  
Contribution Percentage: 31-40

### **Thesis/Dissertation**

1. Redefining Social Comparisons: Self-Other Overlap and Social Comparisons of Close Others. (2016). University of Toronto. Doctorate. Supervisor: Penelope Lockwood

### **Online Resources**

- [1.](#) Thai, S., & Page-Gould, E. ExperienceSampler. (2015).  
Contribution Percentage: 81-90  
Description / Contribution Value: Online tutorial for ExperienceSampler, the open source scaffold for building smartphone apps for experience sampling studies. This online tutorial is the companion site for my *Psychological Methods* publication.



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## Professor Stefan Michael Bruzynski

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### Contact Information

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## Professor Stefan Bruzynski

### Language Skills

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The courses included: Delirium Series of 5 lectures, task-based integrated multidisciplinary course with emphasis on effects of chemical agents on brain functions. The course also included Delirium Seminar (about 6 calls), presentation of emotional states in rodents for neurobiologists, task-related 2-hr seminars on topics associated with history of Neuroscience, and organization of graduate studies in Canada.

### Research Funding History

#### awarded [n=2]

Principal Applicant Research Discovery Grant National Sciences and Engineering Research Council of Canada, Grant #

#### Funding Sources

- National Sciences and Engineering Research Council of Canada + # /K
- Discovery Grant Program (Indirect)
- Total funding received \$25,000
- Portion of funding received \$25,000 - funding competition
- National Sciences and Engineering Research Council of Canada Discovery Development Grant (Indirect)
- Portion of funding received \$40,000 - funding competition

### Student/Postdoctoral Supervision

#### Bachelor's Honours [n=5]

- 2015/9-2016-2017 Simone Larin (Completed, Brock University) Thesis/Project Title: Effects of conspecific sex on rodent vocalizations
- 2015/4-2016-2017 Christina Jobson (Completed, Brock University) Thesis/Project Title: The involvement of the cerebellum in the production of ultrasonic vocalizations. Presentation: Master's degree, McMaster University
- 2016-2017 Travis Bico (Completed, Brock University) Thesis/Project Title: Histological analysis of the rodent olfactory bulb in the brain.
- 2016-2017 Nicole Gallaher (Completed, Brock University) Thesis/Project Title: Discrimination of amplitude and frequency-modulated ultrasonic signals in Rats for regicis.
- 2011/5-2012-2013 Mandy Donk (Completed, Brock University) Thesis/Project Title: Discrimination of ultrasonic signals in Long-Ears.

#### Master's Thesis [n=3]

- 2012/5-2013 Michael Silks (Completed, Brock University) Thesis/Project Title: Interaction between cholinergic and dopaminergic systems during the production of ultrasonic vocalizations in rats. Presentation: PhD candidate, Brock University

~ °\* K 2015/6 Tim Woodford Completed, Brock University  
 Principal Supervisor Thesis/Project Title: Pharmacological Analysis of 50/36 SK Vocalisations in the  
 ~ °\* K (°~ K Ale! a Morden Completed, Brock University  
 Principal Supervisor Thesis/Project Title: The Role of Core! in " K!an! ier! and K!e!mission! of K!trasonic  
 Vocalisations in K!s. K

Present Position: Research Assistant, Brock University  
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~ °\* K K °0 K 6 ein 6 c! i hill Completed, Brock University  
 Principal Supervisor Thesis/Project Title: Investigation of the Role of the K!c!c!s! acc!mbens! K!  
 amphetamine-induced 50/36 SK trasonic Vocalisations in the K!  
 Present Position: PhD Student, Brock University

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~ °\* K K °0 K 6 ein 6 c! i hill Completed, Brock University  
 Principal Supervisor Thesis/Project Title: Studies of the ascending mesolimbic dopaminergic system in the  
 initiation of appetitive emotional arousal and emission of trasonic vocalisations.  
 Present Position: Postdoctoral Fellow in Department of Physiology, Development and  
 Neuroscience, Girton College, University of Cambridge, Cambridge, Great Britain. K

~ °\* K K °0 K Michael Silsone Completed, Brock University  
 Principal Supervisor Thesis/Project Title: Interaction of ascending mesolimbic dopaminergic and  
 cholinergic systems in the initiation of emotional arousal in K!s. K

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~ °. K K °) K 6 senia Me! Sa! Completed, Polish Academy of Sciences, Warsaw, Poland  
 Principal Supervisor Thesis/Project Title: Studies of trasonic vocalisations emitted by K!s during emotional  
 stress and aversive conditioning.  
 Present Position: Assistant Professor, Polish Academy of Sciences, Warsaw, Poland

**Event Administration**

~ °. ( K 2011/5 Organizer and Chair, Symposium "think meeting of the Canadian College of Neuro-  
 Psychopharmacology in Montreal 2011., Conference, 2011/5 K 2011/5 K  
 ~ °. ° K 2010/5 Chief Organizer, " think Annual Meeting of the Southern Ontario Neuroscience Association  
 +&@~ / Organizer, Brock University, Conference, 2010/5 K 2010/5 K

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**Editorial Activities**

~ °. °. K K °) °. K Editor, Handbook of Ultrasonic Vocalisation. K Windo " Kin! Brain Mechanisms of Emotion  
 and Motivation. Elsevier/Academic Press., Book, K b!shed 2018. K  
 ~ °) °. K K °. °. K Editor, Handbook of Mammalian Vocalisation. An Integrative Neuroscience Approach. K  
 Elsevier/Academic Press., Book, K b!shed K °. °. K

**Expert Witness Activities**

~ °. °. K K °. °. K Visiting Researcher, Delivering seminars and laboratory consultation. # chr! University  
 Boch!m, Germany. K

The topics included: K / K Delivering Seminars on "The Brain's Secrets of Emotionally Aroused and Emotionally Expression: K & Studies of K Praxionical Calibration", and K / K Impensive K conscription K laboratories of K Graduate School of Neuroscience, K remaining K recording and playback of K Praxionical Calibrations K K K.

2015/5K 2015/5K

Visiting Professor and Lecturer, Organization of K ðòKns ð ç ð onal Seminars K ð K Uniÿersitÿ K of K Lodÿ., K Poland, K LodÿK  
Organization and Delivery of K ðòKns ð ç ð onal Seminars: K / Seminar K aboç ð Krganiÿation and K operation of K North American Uniÿersities, and K / Seminar K aboç ð Krganiÿation of K Graduate K Programs K Canadian Uniÿersities, K reqçirements Korks ð ç ð çs, and K K K ð ç ð çs' K eÿalçation. K

### Org nization I Review ActivitiesK

2016/5K 2016/5K

' ðernal Reÿie" er, K Agence Nationale de K Recherche, K France K  
Appraisal of K major K application K of K National Grant K Agence K "# / K France. K  
Appraisal included K "riçon K eÿalçation of K " K riterions for K major K international K  
collaboratÿe K application K of K France National Grant K Agence K.

2015/7K 2015/7K

' ðernal Reÿie" er, K Şech Science Foundation K "% "# / K  
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Foundation K Grant K Agence K eske K Repçblik K.

2015/6K 2015/7K

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Technology, K Life Science and Health K Committee. K

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- 2015/8K 2015/8K Committee Member, Member of the Advisory Committee for Selection of the Associate Vice-President Research, Brock University  
The duties included evaluation of applications for the position of Vice-President Research and participation in the interview of candidates, and participation in all meetings associated with the process and final selection of the candidate.
- \* ~° K 2015/6K Committee Member, Program Committee for the graduate program in Life Sciences, Brock University  
The duties included contribution to the creation of a new interdisciplinary and integrated program in Life Sciences and the overall meeting of the academic bar.
- ~°0 K 2015/4K Committee Member, Chairs and Directors Committee of the Faculty of Mathematics and Science, Brock University  
The duties included participation in the annual meetings of the Committee and reports on activities of the Centre of Neuroscience and participation in discussions associated with current issues of the Faculty.
- ~°(° K K°(° K Committee Member, Internal Adjudication Committee for Research Tools and Instruments grant competition for NSERC, Natural Sciences and Engineering Research Council of Canada  
The duties included evaluation of all applications for the Research Tools and Instruments (RIT) competition and participation in all meetings associated with the final selection of successful applicants.
- ~°(° K K°(° K Committee Member, Tenure and Promotion Committee of the Faculty of Social Science, Brock University  
The duties included the meetings of the evaluation of all applications for promotion and/or tenure. Members of the Committee evaluated each applicant and discussed them in a comparative fashion.
- ~°°\* K K°°°\* K Committee Member, Examination Committee of Master's projects in the Department of Psychology, Brock University  
The duties included submission of a report on evaluation of Master's thesis and participation in the oral defense and examination of the candidate.
- ~°°( K K°°°( K Committee Member, Examination Committee for Master's thesis in the Department of Biological Sciences, Brock University  
The duties included submission of a report on evaluation of Master's thesis and participation in the oral defense and examination of the candidate.

Other memberships

- ~°°0 K K°°°° K Treasurer and Secretary, International Behavioral Neuroscience Society  
Work includes: Treasurer duties providing Treasurer Reports for the Council, filing for Society's taxes, authorizing major expenditures, Council member duties contributing to Society's plans, conducting meetings, policies, representing duties at the Neuroscience Meetings, Society's business meetings, and Society's receptions, Advertising (advertising the Secretary Council and different agendas related to the Society.  
2010/5K K°°°°0 K President and Past President and Councillor, Southern Ontario Neuroscience Association  
The duties included the functions as: Chair of the Organizing Committee, Councillor for & Catharines, President and Past President. The functions were associated with the coordination of activities of the Southern Ontario Neuroscience Association, an official local chapter of the I & S Society.



KKred?Yes,6eEnore?KNo.K

### TextInterviewsK

- Interview "KassociatEdK" in K2^ & KLife-TimeK AchievementsK" ardKandKesclingK article  
" rionK ElenalCholerisKendKChesondKofK emotions:Krefank2 dSnskiKöKbrainK  
sEsKsKniKareKemotionalsKasK, KTheK articleK askKdirectKofK membershipKofK  
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BehaïoçralKneçrosKscience.K KaskK publishedK2^ & Kne" sK illeçin, K2014, K61.K)+( /:K3-4.K
- Interview "KassociatEdK" in K2^ & KLife-TimeK AchievementsK" ardK KesclEdK inK articleK  
bE KFraserK DonK endK ProfK earnsK çdosK forK breakingK theK code". K Niagarak PeninsçlaK  
sçbscribersK ofK theK localK dailyK " spaperK & K " CatharinesK & K " standard", K7çE K24, K2014, K4.K  
ç( /, K5.K
- Interview "KassociatEdK" in K2^ & KLife-TimeK AchievementsK" ardK KesclEdK inK on-lineK  
pçblicationK " rionK E K indE K minor: K ElsevierK editorK " insK " ardK forK researchK onK kaK  
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pçblications.K K appearedK inK theK Elsevier'sK on-lineK pçblication: K SciTechK ConnectK Elsevier, K  
7çE K25, K2014.K

### PublicationsK

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- 1.K 2 çrgdorf, K.S., K2 çdSnski, K.S.M., KMoskal, K.R.K ~~~ / . K UsingK kaK çasonick çcaliçationK çsçdE K  
neçrobiologE K ofK emotion: K FromK basicK scienceK toK theK developmençK ofK theK çtherapeuçsK forK affectiveK  
disorders.K çrrenç opinionK inK NeçrobiologE, K60(Jan/ :K 92-200.K  
! çblishedK  
Refereed?Yes, K OpenK Access?K No.K
- 2.K 8 ç Hill, K.G., K2 çdSnski, K.S.M.K ~~~ / . K AssociationK ofK medialK corçcosçriak regionsK " inK amphetamine  
indçcedK emissionK ofK 50K36 ç çcaliçationsK asK çdiedK çE K if-268K ç | pressionK inK theK kaK brain.K BrainK Research, K  
ç 26(Jan/ :K 46505.K  
! çblishedK  
Refereed?Yes, K OpenK Access?K No.K K K
- 3.K Silksçone, K.M., K2 çdSnski, K.S.M.K ~~~, \* / . K DissimilarK inK eracçionK çeenK çopaminergicK andK cholinergicK  
sEsçemsK inK theK inçriçionK ofK emissionK ofK 50~36 ç andK ~36 ç çcaliçations.K PharmacologE, K BiochemisçE K andK  
Behaïor, Kç) + @ ç :K 72815.K  
! çblishedK  
Refereed?Yes, K OpenK Access?K No.K
- 4.K Silksçone, K.M., K2 çdSnski, K.S.M.K ~~~, \* / . K TheK antagonisçK relationshipK çeenK çersçyelK andK appetççE K  
emotionalsK çasçsK asK çdiedK çE K ç pharmacologicalE-indçcedK ç çasonick çcaliçationK fromK theK ççleçsK  
accçmbensç andK çerallK çepaçm.K PharmacologE, K BiochemisçE K andK Behaïor, Kç) ç çne/ :K 77-85.K  
! çblishedK  
Refereed?Yes, K OpenK Access?K No.K
- 5.K Silksçone, K.M., K2 çdSnski, K.S.M.K ~~~, \* / . K Inçacerebralk inççionK ofK #~+/-ApomorphineK inK ççleçsK  
accçmbensç K decreasedK ç carbachol-indçcedK ~36 ç ç çasonick çcaliçationsK inK çasçs.K BehaïoçralK BrainK  
Research, K64(MaE/ :K 0 ~~~ 3.K  
! çblishedK



- 16.K Moskal, K.R. & Irgdorf, K.S. & roes, R.A. & d\$nski, S.M. & Panksepp, J. & " / .K "o"eIK8\$" keceptoRK  
glEcine-siteparallagonisqGLYX-13, KasktherapeuicporentalkorKneKreamenKtrafism.KneCrosscienceK K  
BiobehavioralRevie"s. 35(9/:K\*) ~ -1988.K  
! bublishedK  
Refereed? Yes, OpenAccess? No.K
- 17.K 2 d\$nski, S.M. & A. HarnessKne"KSa"oE/, A. K" / .K " "E"CholinergickneCronsKneKareodorsalk  
egmentalkcleCskCringKmissionKofK" K6SKKcaliSationKneKas. BehaioCralBrainResearch. 225(1/:K 0~  
283.K  
! bublishedK  
Refereed? Yes, OpenAccess. No.K
- 18.K 2 Irgdorf, K. & roes, R.A. & Weiss, C. & Oh, M.M. & Diserhof, K.F. & d\$nski, S.M. & Panksepp, J. & Moskal, K.R. &  
+ " / .K Posi"eKemoCionalKearningKskegC"aredKneKneKmedialKprefrontalkCor"e, K"eIGlCN2B-containingK8\$" K  
receptoRs. Neuroscience. 192:K15-523.K  
! bublishedK  
Refereed? Yes, OpenAccess? No.K
- 19.K 2 d\$nski, S.M. & Silksone, M. & Comadoski, M. & ellion, S. & S"offCs, S. & Irgdorf, K. & roes, R.A. & Moskal, K.R. &  
Panksepp, J. & " / .K EffectsKofKtraaccCmbensKampheta"mineKoneKprodC"onKofK6SKKcaliSationsKneK  
threeKinesKofKselec"eKredKLong-E"ansKas. BehaioCralBrainResearch" / .K Feb/, K" + /:K" ~  
40.217+ /:K32-40.K  
! bublishedK  
Refereed? Yes, OpenAccess? No.K
- 20.K 2 d\$nski, S.M. & Gibson, B. & Silksone, M. & Irgdorf, K. & roes, R.A. & Moskal, K.R. & Panksepp, J. & " / .K Mo"oRK  
andKocomoRKesponsesKofK6SKampheta"mineKneKthreeKinesKofKselec"eKredKLong-E"ansK  
ras. Pharmacolog", Biochemis"eKandBehaioR. K" + /:K19-124.K  
! bublishedK  
Refereed? Yes, OpenAccess? No.K
- 21.K Ma"he" s, K.Z. & d\$nski, S.M. & McCormick, C.M. & " / .K HeightenedKocomo"o"ac"y"angKeffectsKofK  
ampheta"mineKadminis"eredKneKneKcleCksaccCmbensKneKadolescen"as. Kne"ernationalKJo"rnalKofK  
De"elopmentalkNeCrosscience. 29(5/:K101-507.K  
! bublishedK  
Refereed? Yes, OpenAccess? No.K

**BookChaptersK**

- K
- 1.K 2 d\$nski, S.M., Silksone, M.J.D., & I"ihill, G.G. & " / .K AscendingKac"y"angK6SKemsKofKneKbrainKorK  
emoCionalKroCsalKChap"erK" ( /:Kne: S.M. & d\$nskiKEd. /K HandbookKofKUL"asonickVocaliSation.K K Windo"K  
inKneKemoCionalBrain, K:K239-251.K
- 2.K ! bublished, AcademicPress/Else"ier, London, K6.K
- 3.K Simola, K., & d\$nski, S.M. & " / .K Reperto"eKandKbiologicalKnc"ionKofK6SKcaliSationsKneK  
adolescen"andKadC"asKChap"erK" / .Kne: S.M. & d\$nskiKEd. /K HandbookKofKUL"asonickVocaliSation.K K  
Windo"KinKneKemoCionalBrain, K:K177-185.K  
! bublished, AcademicPress/Else"ier, London, K6.K  
Refereed? Yes.K
- 4.K 2 d\$nski, S.M. & " / .K TheKconceptKofKne"o"ansmission: KRapidKemoCionalKcommCn"icationKChap"erK" / .K  
In: S.M. & d\$nskiKEd. /K HandbookKofKUL"asonickVocaliSation.K K Windo"KinKneKemoCionalBrain, K:K\*\*  
115.K

- ! published, Academic Press/Elsevier, London, 1966.  
Refereed? No.
- 5.K MacDonald, K., & Edsinski, S.M. (Eds.) / Ultrasound vocalizations, their recording and bioacoustic analysis (Chapter 1) / Eds: S.M. Edsinski / Handbook of Ultrasound Vocalization. Windo Kinok Emotional Brain. 1996.  
! published, Academic Press/Elsevier, London, 1966.  
Refereed? No.
- 6.K Edsinski, S.M., & Zeskind, P.S. (Eds.) / Introduction and overview of the Handbook of Ultrasound Vocalization (Chapter 1) / Eds: S.M. Edsinski / Handbook of Ultrasound Vocalization. Windo Kinok Emotional Brain. 1996.  
! published, Academic Press/Elsevier, London, 1966.  
Refereed? Yes.
- 7.K Edsinski, S.M. (Ed.) / Ascending efferent systems for emotional arousal. Eds: W. Zeigler-Hill, 1966. Shakerford Eds., Encyclopedia of Personality and Individual Differences, Cham, 1996.  
! published, Springer International Publishing AG, electronic edition.  
Refereed? No.
- 8.K Edsinski, S.M. (Ed.) / Communication of emotions in animals. Eds: Reference Module in Neuroscience and Biobehavioral Psychology, 1996.  
! published, ScienceDirect, Amsterdam, Holland, electronic edition.  
Refereed? Yes.
- 9.K Edsinski, S.M. (Ed.) / Social origin of vocal communication in rodents (Chapter 5) / Wipstan, G. Ed., Biocommunication of animals. 1996.  
! published, Springer Science+Business Media.  
Refereed? No.
- 10.K Edsinski, S.M. (Ed.) / Vocalizations as indicators of emotional states in cats and dogs (Chapter 5) / Altmann, I., & Schmidt, S. Zimmermann, Eds., Vol of emotional communication: From rodents to nonhuman mammals, speech and cognition in man. 1975-91.  
! published, Oxford University Press.  
Refereed? Yes.
- 11.K Edsinski, S.M. (Ed.) / Vocalizations as indicators of transmitter. Introduction of the Handbook of Mammalian Vocalization (Chapter 1) / Edsinski, S.M. Ed., Handbook of Mammalian Vocalization. An Integrative Neuroscience Approach. 1996.  
! published, Academic Press/Elsevier.  
Refereed? No.
- 12.K Edsinski, S.M. (Ed.) / Medial cholinergic vocalization in the cat and dog brains: a function of defensive vocalizations (Chapter 3) / Edsinski, S.M. Ed., Handbook of Mammalian Vocalization. An Integrative Neuroscience Approach. 1996.  
! published, Academic Press/Elsevier.  
Refereed? No.
- 13.K Edsinski, S.M. Fletcher, N.H. (Eds.) / Rat ultrasound vocalization: Short range communication (Chapter 3.3) / Edsinski, S.M. Ed., Handbook of Mammalian Vocalization. An Integrative Neuroscience Approach. 1996.  
! published, Academic Press/Elsevier.  
Refereed? No.
- 14.K Edsinski, S.M. (Ed.) / Communication of emotions in animals (Chapter 1) / Boob, G.F. LeMoal, M. Thompson, R.F. Eds., Encyclopedia of Behavioral Neuroscience. 1996.  
! published, Academic Press/Elsevier.  
Refereed? Yes.

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Conference PublicationsK

- 1.K 8 dYihill, H. G. dSnski, S.M. K~0 /. Dopaminergic modulation of behavioural-induced emission of 50K36 SK appearance in calyculin A-treated rats. International Behavioral Neuroscience Society Abstracts, 2016, Vol. 25. 25th Meeting of the International Behavioral Neuroscience Society, 2016, Singapore, Singapore. / Conference Date: K~0°0 K  
PosterK  
! blishedK  
Refereed? Yes, Reviewed? NoK
- 2.K Silksone, M. H. dYihill, H. G. Jobson, Ch. dSnski, S.M. K~0 /. Kind of 50K36 SK calyculin A-induced dopamine and apomorphine from nucleus accumbens and cerebral septum. K~ Abstract Booklet (online): K http://can-acn.org/2016-program. K~ Annual Meeting of the Canadian Association for Neuroscience., K Toronto, ON, Canada K~ / K  
Conference Date: 2016/5K  
PosterK  
! blishedK  
Refereed? Yes, Reviewed: NoK
- 3.K 2 dSnski, S.M. K2015/. Ultrasound calyculin A and emotional arousal systems. International Behavioral Neuroscience Society Abstracts, 2015, Vol. 24. K~ Annual Meeting of the International Behavioral Neuroscience Society, 2015, Victoria, BC, Canada K~ / K  
Conference Date: 2015/6K  
PaperK  
! blishedK  
Refereed? No, Reviewed? YesK
- 4.K 8 dYihill, H. G. dSnski, S.M. K~ / . Role of nucleus accumbens in generation of 50K36 SK calyculin A-induced 5-HT<sub>2A</sub> receptor-mediated amphetamine. International Behavioral Neuroscience Society Abstracts, 2014, Vol. 23. K 23rd International Behavioral Neuroscience Society Meeting., Las Vegas, NV, United States K~ / K  
Conference Date: K~°0 K  
PosterK  
! blishedK  
Refereed? Yes, Reviewed? NoK
- 5.K 8 dYihill, H. G. dSnski, S.M. K~ / . Profile differences in 50K36 SK calyculin A-induced 5-HT<sub>2A</sub> receptor in nucleus accumbens application of amphetamine. K~ Abstract Booklet (online): K~ .can-can.org/documents/K CAN\_Abstac\_Booklet.pdf. K~ Meeting of the Canadian Association for Neuroscience, Montreal, K #, K Canada K158/K  
Conference Date: 2014/5K  
PosterK  
! blishedK  
Refereed? Yes, Reviewed? NoK
- 6.K Silksone, M. dSnski, S.M. K~ ( /. Kind of species-specific 50K36 SK calyculin A-induced dopaminergic agents injected into the cerebral septum in the rat. International Behavioral Neuroscience Society Abstracts, K 2013, Vol. 22. 22nd International Behavioral Neuroscience Society Meeting, Malahide near Dublin, Ireland K+\* / K  
Conference Date: K~(°0 K  
PosterK

! publishedK

Refereed?Yes,KnYred?NoK

7.K 2 d\$Enski, S.M. Woodford, K. K... ( / . Ra... 36 \$K... calisatonsKndcedK... tra-accmbensKnectionsKofK  
dopamine. CANAbstractBookleK... /, Knpp://... .can-acn.org/meeting2013/abstracts, Annalk  
meetingKofKneCanadianAssociationKforKneKrosience, Ktron... , ON, CanadaK... /K

ConferenceDate:K2013/5K

PosterK

! publishedK

Refereed?Yes,KnYred?NoK

8.K 2 d\$Enski, S.M. K... ( / . CholinergicKniattonKofKle emotional-aYersiYeKresponsesKandKycallKsignallingKnfKas. K  
Lec... Abstracts, S-IX-4. KI, AK... nternationalK&EmposicmKofKCholinergicKMechanisms, KLangShoc, KChinaK... /K

ConferenceDate:K2013/5K

AbstractK

! publishedK

Refereed?No,KnYred?YesK

9.K Silksone, M. McDonnell, G. d\$Enski, S.M. K... ( / . K simpleKneKmodKofKmeasuringKneKmanKbodKbalanceK  
inKteachingKlaboratorKneKrosienceKMeetingKPlannerK2012. AnnalkMeetingKofKneSociaKforK  
NeKrosience, KneKOrleans, KA, KUnitedK... KProgramNo. K24.06. /K

ConferenceDate:K... K

PosterK

! publishedK

Refereed:Yes,KnYred?NoK

10.K Silksone, M. d\$Enski, S.M. K... ( / . K nctionalKantagonismKbe... eenKmissionKofK50K36 \$KandK... K36 \$K  
KtrasonickKcalisatons. KnternationalKBehaYioralKneKrosienceKsociaKAbstracts, K... K21. KnternationalK  
BehaYioralKneKrosienceKsociaKConference, Kailca-6ona, KI, KUnitedK... K51/ConferenceDate:K  
... K

PosterK

! publishedK

Refereed?Yes,KnYred?NoK

11.K d\$rgdorf, J.S. Kroes, R.A. Weiss, C. Oh, M.M. Diserhof, J.F. d\$Enski, S.M. Panksepp, J. Moskal, J.R.K  
+... / . K posiYeKle emotionalKlearning, KaskKmeasuredK... KedonicK50~36 \$KtrasonickKcalisatons, KskKegclardK  
inKneKmedialKprefrontalKcor... K... K2B-containingK8\$" Kceptors. KneKrosienceKMeetingKPlannerK  
2011. AnnalkMeetingKofKneSociaKforKneKrosience, KWashingon, KDC, KUnitedK... KProgramK... K41.07/K

ConferenceDate:K... K

PosterK

! publishedK

Refereed?Yes,KnYred?NoK

12.K Schmid, J. d\$rgdorf, J.S. Kroes, R.A. Crom... ell, C.R. Diehl, J.J. d\$Enski, S.M. Panksepp, J. Moskal, J.R.K  
+... / . K koYeK8\$" KceptorsK... Kline-sitelKpartialKagonistKGLYX-13, KaskKtherapeuKcKpotentiaKforK... K  
NeKrosienceKMeetingKPlannerK2011. AnnalkMeetingKofKneSociaKforKneKrosience, KWashingon, KDC, K  
UnitedK... KProgramK... K76.09/K

ConferenceDate:K... K

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! publishedK

Refereed?Yes,KnYred?NoK



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## **Dr. Stephen M Emrich**

Correspondence language: English

Sex: Male

Date of Birth: 3/06

## **Contact Information**

The primary information is denoted by (\*)

### **Address**

Primary Affiliation (\*)

Brock University  
Department of Psychology  
1812 Sir Isaac Brock Way  
St. Catharines Ontario L2S 3A1  
Canada

### **Telephone**

|          |                             |
|----------|-----------------------------|
| Fax      | 905-6886922                 |
| Work (*) | 905-6885550 extension: 6181 |

### **Email**

|          |                   |
|----------|-------------------|
| Work (*) | semrich@brocku.ca |
|----------|-------------------|

This is a draft version only. Do not submit to any funding organization. Only the final version from the History page can be submitted.



Protected when completed

## Dr. Stephen Emrich

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### Language Skills

| Language | Read | Write | Speak | Understand | Peer Review |
|----------|------|-------|-------|------------|-------------|
| English  | Yes  | Yes   | Yes   | Yes        | Yes         |

### Degrees

- 2006/9 - 2011/5      Doctorate, Doctor of Philosophy, Psychology, University of Toronto  
Degree Status: Completed  
Thesis Title: Competition in visual working memory  
Supervisors: Susanne Ferber, 2006/9 - 2011/3
- 2005/9 - 2006/8      Master's Thesis, Masters of Arts, Psychology, University of Toronto  
Degree Status: Completed  
Thesis Title: Examining the neural markers of objectsegregation and recognition in the human brain using magnetoencephalography  
Supervisors: Susanne Ferber, 2005/9 - 2006/8
- 2001/9 - 2005/4      Bachelor's Honours, Bachelor of Science, Psychology, University of Toronto  
Degree Status: Completed

### User Profile

Research Specialization Keywords: Attention, Capacity limitations, Conscious perception, EEG/ERPs, fMRI, Pattern classification, Visual working memory

Research Disciplines: Neurosciences, Psychology

### Employment

- 2017/7      Associate Professor  
Psychology, Brock University  
Full-time, Associate Professor  
Tenure Status: Tenure
- 2013/1 - 2017/7      Assistant Professor  
Psychology, Brock University  
Full-time, Assistant Professor  
Tenure Status: Tenure Track  
Research Disciplines: Psychology
- 2011/4 - 2012/11      Postdoctoral Research Fellow  
Psychiatry, University of Wisconsin - Madison  
Full-time  
Tenure Status: Non Tenure Track

## Research Funding History

### Awarded [n=3]

2019/5 - 2023/4  
Principal Investigator

Neural Mechanisms of the Representation, Prioritization, and Manipulation of Visual Working Memory, Grant, Operating Clinical Research Project?: No

Project Description: The current grant builds on our previous research, and aims to identify the neural mechanisms that support the top-down biasing of visual working memory by attention. In particular, we are using fMRI and EEG and measure neural activity while healthy young adults perform visual working memory tasks, in order to understand how the brain can use attention to select and enhance the memories for some visual objects. We are also using TMS to causally disrupt brain functioning in areas thought to support this process, so that we can more accurately identify their role in this behaviour. Finally, we are going to examine whether the process of selecting and enhancing some items in memory is similar to the processes involved when performing manipulations on the contents of memory (e.g., if you have to rotate an object in your mind).

#### Funding Sources:

2019/5 - 2024/4      Natural Sciences and Engineering Research Council of Canada (NSERC)  
Discovery Grants  
Total Funding - 140,000 (Canadian dollar) (Canadian dollar)  
Funding Reference Number: 2019-435945

2013/5 - 2019/4  
Principal Investigator

Exploring the Role of Active Visual Short-Term Memory Representations in Mediating Attentional Selection and Perception, Grant

#### Funding Sources:

2013/5 - 2018/4      Natural Sciences and Engineering Research Council of Canada (NSERC)  
Discovery Grant  
Total Funding - 180,000  
Portion of Funding Received - 180,000  
Funding Competitive?: Yes

2016/2 - 2018/2  
Principal Investigator

CRISS Research Award, Grant

#### Funding Sources:

Council for Research in Social Sciences (CRISS)  
Research Award  
Total Funding - 2,000  
Portion of Funding Received - 2,000  
Funding Competitive?: Yes

### Completed [n=1]

2014/5 - 2014/5  
Principal Applicant

NSERC Research Tools and Instruments Program, Grant, Equipment Clinical Research Project?: No

Project Description: Electroencephalography equipment grant

**Funding Sources:**

2014/5 - 2014/5      Natural Sciences and Engineering Research Council of Canada  
 (NSERC)  
 Research Tools and Instruments  
 Total Funding - 62,216  
 Portion of Funding Received - 100  
 Funding Competitive?: Yes

Co-applicant : Mondloch, Cathy

**Courses Taught**

Instructor, Psychology, Brock University  
 Course Title: Perception  
 Course Code: PSYC 2P49  
 Course Level: Undergraduate

**Student/Postdoctoral Supervision****Bachelor's Honours [n=19]**

|                                         |                                                                                                                                                                                                        |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2018/9 - 2020/4<br>Principal Supervisor | Mendonca, Arya (In Progress) , Brock University<br>Student Degree Expected Date: 2021/5<br>Thesis/Project Title: Memory and attention<br>Present Position: Student                                     |
| 2018/9 - 2019/4<br>Principal Supervisor | Mogawer, Maryam (In Progress) , Brock University<br>Student Degree Received Date: 2021/5<br>Thesis/Project Title: Memory and attention<br>Present Position: Student                                    |
| 2018/9 - 2019/5<br>Principal Supervisor | Pin, Peter (Completed) , Brock University<br>Student Degree Received Date: 2019/5<br>Thesis/Project Title: Flexible allocation in change detection<br>Present Position: Student                        |
| 2018/9 - 2019/5<br>Principal Supervisor | Schirmesiter, Julia (In Progress) , Brock University<br>Student Degree Expected Date: 2019/5<br>Thesis/Project Title: Alpha-band measures of attention in visual binding.<br>Present Position: Student |
| 2017/9 - 2018/4<br>Principal Supervisor | (name withheld) (In Progress) , Brock University<br>Student Degree Expected Date: 2020/5<br>Thesis/Project Title: Visual imagery and memory<br>Present Position: Undergraduate student                 |
| 2017/9 - 2019/4<br>Principal Supervisor | Ing, Koah (In Progress) , Brock University<br>Student Degree Expected Date: 2020/6<br>Thesis/Project Title: Exploring Neural Mechanisms of Attention and Magic<br>Present Position: Research Assistant |
| 2017/9 - 2018/5<br>Principal Supervisor | (name withheld) (Completed) , Brock University<br>Thesis/Project Title: EEG measures of neural variability<br>Present Position: Unknown                                                                |

- 2017/9 - 2018/5  
Principal Supervisor Pankow, Jon (In Progress) , Brock University  
Student Degree Start Date: 2014/9  
Student Degree Expected Date: 2019/1  
Thesis/Project Title: A signal-detection model of working memory data  
Present Position: Student, Brock University
- 2017/1 - 2019/5  
Principal Supervisor De Wit, Brenda (In Progress) , Brock University  
Student Degree Expected Date: 2019/5  
Thesis/Project Title: Measuring different modes of attention in behaviour and EEG  
Present Position: Undergraduate Student
- 2016/9 - 2017/5  
Principal Supervisor (name withheld) (Completed) , Brock University  
Thesis/Project Title: Unconscious priming in visual working memory  
Present Position: Unknown
- 2016/9 - 2017/5  
Principal Supervisor Dicosimo, Alexandria (In Progress) , Brock University  
Student Degree Expected Date: 2017/5  
Thesis/Project Title: EEG correlations of inhibition and facilitation in visual working memory  
Present Position: Medical Doctorate student
- 2015/9 - 2018/8  
Principal Supervisor Capozza, Joseph (Completed) , Brock University  
Thesis/Project Title: Common Neural Activity Between Executive Control of Attention and Working Memory Filtering  
Present Position: MA Student (Counselling Psychology), Western University
- 2015/9 - 2016/5  
Principal Supervisor (name withheld) (Completed) , Brock University  
Thesis/Project Title: ERP investigations into crowding in visual working memory  
Present Position: unknown
- 2015/9 - 2016/5  
Principal Supervisor Baker, Kristen (Completed) , Brock University  
Student Degree Start Date: 2012/9  
Student Degree Received Date: 2016/7  
Thesis/Project Title: Expectation and attention during the attentional blink  
Present Position: Doctoral Student, Brock University
- 2014/9 - 2016/4  
Principal Supervisor Seelert, Nick (Completed) , Brock University  
Thesis/Project Title: Classification of EEG data using machine-learning  
Present Position: Founder and Chief Technical Officer, Senso
- 2014/5 - 2015/5  
Principal Supervisor Lockhart, Holly (Completed) , Brock University  
Thesis/Project Title: The Effect of Top-Down Attention on Visual Working Memory Resource Distribution and Maintenance Indicated by Contralateral Delay Activity  
Present Position: PhD Student, Brock University
- 2013/9 - 2014/8  
Principal Supervisor Morningstar, Megan (Completed) , Brock University  
Thesis/Project Title: Interference in visual working memory  
Present Position: Applied therapy support worker, GAIN Learning Centre, Inc.
- 2013/9 - 2014/6  
Principal Supervisor Schutten, Daniel (Completed) , Brock University  
Thesis/Project Title: Attentional prioritization of visual working memory  
Present Position: Senior Analyst, Phase 5
- 2013/9 - 2014/4  
Principal Supervisor McVey, William (Completed) , Brock University  
Thesis/Project Title: Relating Processes of Attention and Memory  
Present Position: Unknown

**Master's Thesis [n=3]**

- 2015/9 - 2017/9  
Principal Supervisor Lockhart, Holly (Completed) , Brock University  
Student Degree Received Date: 2018/6  
Thesis/Project Title: fMRI investigation of top down attentional control in visual working memory  
Present Position: Doctoral Student, Brock University
- 2014/9 - 2016/9  
Principal Supervisor Salahub, Christine (Completed) , Brock University  
Student Degree Start Date: 2014/9  
Thesis/Project Title: An Investigation into ERP Measures of Attention and Awareness Using Object-Substitution Masking  
Present Position: PhD Student, Brock University
- 2014/9 - 2016/9  
Principal Supervisor Robitaille, Joel (Completed) , Brock University  
Student Degree Start Date: 2014/9  
Thesis/Project Title: Encoding Induced Alpha EEG Activity Reveals Visual Working Memory Representations and their Manipulations  
Present Position: PhD Student, Brock University

**Doctorate [n=3]**

- 2017/9 - 2022/7  
Principal Supervisor Lockhart, Holly (In Progress) , Brock University  
Student Degree Start Date: 2017/9  
Student Degree Expected Date: 2022/7  
Thesis/Project Title: fMRI and EEG measures of top-down attentional control in visual memory  
Present Position: PhD Student, Brock University
- 2016/9 - 2020/8  
Principal Supervisor Salahub, Christine (In Progress) , Brock University  
Student Degree Expected Date: 2020/8  
Thesis/Project Title: Individual differences in visual working memory and perception  
Present Position: Doctoral student, Brock University
- 2016/9 - 2021/5  
Principal Supervisor Robitaille, Joel (In Progress) , Brock University  
Student Degree Start Date: 2016/9  
Student Degree Expected Date: 2021/5  
Thesis/Project Title: Behavioural precision and neural representation of mental rotation  
Present Position: Doctoral Student, Brock University

**Technician [n=1]**

- 2013/3 - 2016/2  
Principal Supervisor Nelson, Thomas (Completed) , Brock University  
Thesis/Project Title: Studies of visual working memory  
Present Position: Lead Data Scientist, Senso

**Editorial Activities**

- Ad-Hoc Journal Referee, Psychological Research, Journal
- Ad-Hoc Journal Referee, Journal of Experimental Psychology: Learning, Memory & Cognition, Journal
- Ad-Hoc Journal Referee, Journal of Neurophysiology, Journal
- Ad-Hoc Journal Referee, Visual Cognition, Journal
- Ad-Hoc Journal Referee, eNeuro, Journal

Ad-Hoc Journal Referee, PLoS ONE, Journal  
 Ad-Hoc Journal Referee, Quarterly Journal of Experimental Psychology, Journal  
 Ad-Hoc Journal Referee, Journal of Neuroscience, Journal  
 Ad-Hoc Journal Referee, Canadian Journal of Experimental Psychology, Journal  
 Ad-Hoc Textbook Chapter Referee, Sensation & Perception (3rd Edition), Book Chapter  
 Ad-Hoc Textbook Chapter Referee, Cognitive Psychology: Connecting Mind, Research and Everyday Experience (4th Edition), Book Chapter  
 Ad-Hoc Journal Referee, Brain & Cognition, Journal  
 Ad-Hoc Journal Referee, Cerebral Cortex, Journal  
 Ad-Hoc Journal Referee, Journal of Experimental Psychology: Human Perception & Performance, Journal  
 Ad-Hoc Journal Referee, Consciousness & Cognition, Journal  
 Ad-Hoc Journal Referee, Journal of Vision, Journal  
 Ad-Hoc Journal Referee, Frontiers in Human Neuroscience, Journal  
 Ad-Hoc Journal Referee, Cognitive, Affective & Behavioral Neuroscience, Journal  
 Ad-Hoc Journal Referee, Brain, Journal  
 Ad-Hoc Journal Referee, Journal of Neuropsychology, Journal  
 Ad-Hoc Journal Referee, Frontiers in Perception Sciences, Journal  
 Ad-Hoc Journal Referee, Human Brain Mapping, Journal  
 Ad-Hoc Journal Referee, Scientific Reports, Journal  
 Ad-Hoc Journal Referee, Neuropsychologia, Journal  
 Ad-Hoc Journal Referee, Journal of Cognitive Neuroscience, Journal  
 Ad-Hoc Journal Referee, Neuroimage, Journal  
 Ad-Hoc Journal Referee, Seeing & Perceiving, Journal  
 Ad-Hoc Journal Referee, Attention, Perception & Psychophysics, Journal

## Committee Memberships

|                  |                                                                                           |
|------------------|-------------------------------------------------------------------------------------------|
| 2017/9 - 2018/12 | Committee Member, Biosciences Research Ethics Board (REB) Committee, Brock University     |
| 2014/9 - 2015/8  | Committee Member, Brock University NSERC PGS/CGS Evaluation Committee, Brock University   |
| 2014/9 - 2015/8  | Committee Member, Department of Psychology Graduate Committee, Brock University           |
| 2014/9 - 2015/8  | Committee Member, Department of Psychology Graduate Selection Committee, Brock University |

## Other Memberships

|                 |                                  |
|-----------------|----------------------------------|
| 2006/1 - 2016/1 | Member, Vision Science Society   |
| 2006/1 - 2016/1 | Member, Society for Neuroscience |

2004/1 - 2016/1

Member, Cognitive Neuroscience Society

## Presentations

1. Al-Aidroos N, Pratt J & Ferber S. The search for memory: visual short-term memory capacity predicts performance during visual search tasks. Vision Sciences Society 2008 Meeting, Naples, United States  
Invited?: No, Keynote?: No
2. Lee YF, Bostan SR & Ferber S. Enhance or inhibit? Behavioral and ERP effects of distractor memory on attentional competition. Vision Sciences Society 2010 Meeting, Naples, United States  
Invited?: No, Keynote?: No
3. Burianová H & Ferber S. The contribution of dorsal and ventral visual working memory areas to object recognition. Society for Neuroscience 2009 Meeting, Chicago, United States  
Invited?: No, Keynote?: No
4. Johnson JS, Sutterer DW & Postle BR. The effects of 10 Hz rTMS on sustained visual attention and visual short-term memory. Cognitive Neuroscience Society 2012 Meeting, Chicago, United States  
Invited?: No, Keynote?: No
5. Eichenbaum A, LaRocque JJ & Postle BR. The precision of short-term memory items retained inside and outside the focus of attention. Cognitive Neuroscience Society 2014 Meeting, Boston, United States  
Invited?: No, Keynote?: No
6. LaRocque JJ, Riggall AC & Postle BR. Within-category decoding of attended vs unattended items in short-term memory. Cognitive Neuroscience Society 2013 Meeting, San Francisco, United States  
Invited?: No, Keynote?: No
7. Ferber S. Transient neglect: how a visual short-term memory task leads to impaired awareness for objects in the left visual field. Toward a Science of Consciousness 2008, Tuscon, United States  
Invited?: No, Keynote?: No
8. Riggall AC, LaRocque JJ & Postle BR. The representation of stimulus identity for multiple items in short-term memory revealed using fMRI classification. Vision Sciences Society 2012 Meeting, Naples, United States  
Invited?: No, Keynote?: No
9. Postle BR, Johnson JS & Kundu B. Simultaneous (r)TMS and EEG reveals multiple functional roles for alpha-band oscillations. Cognitive Neuroscience Society 2014 Meeting, Boston, United States  
Invited?: No, Keynote?: No
10. Wilson KE, Hirsh JB, Noda M, Brienza V & Ferber S. Visual attention and personality: Electrophysiological dissociations between conscientious and open individuals on a localized attentional interference task. Cognitive Neuroscience Society 2011 Meeting, San Francisco, United States  
Invited?: No, Keynote?: No
11. Ferber S. A biased-competition model of visual working memory. Vision Sciences Society 2011 Meeting, Naples, United States  
Invited?: No, Keynote?: No
12. Pun C, Wilson KE & Ferber S. In and out of consciousness: the role of visual short-term memory. Vision Sciences Society 2010 Meeting, Naples, United States  
Invited?: No, Keynote?: No
13. (2019). Neural mechanisms of flexible prioritization in visual working memory. University of Texas - Austin Neuroscience Seminar Series, Austin, United States  
Main Audience: Researcher  
Invited?: Yes, Keynote?: Yes

14. Lockhart, H.A.\*. (2018). Top-down attentional mechanisms limit performance in visual working memory. Canadian Society for Brain, Behaviour and Cognitive Science & Experimental Psychology Society joint meeting, St. John's, Newfoundland, Canada  
Main Audience: Researcher  
Invited?: Yes, Keynote?: No
15. Dube, B. Al-Aidroos, N. (2017). More than a filter: Feature-based attention regulates the distribution of visual working memory resources. Attention: Features Session, Vision Sciences Society 2017 Meeting, St. Pete's Beach, FL, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No
16. (2015). Visual working memory capacity and precision: what are the roles of sensory and parietal cortex. Guelph University - Department of Psychology Colloquium Series, Guelph, Canada  
Main Audience: Researcher  
Invited?: Yes, Keynote?: No
17. Postle, B.R. Johnson, J.S. Kundu, B. (2014). Simultaneous (r)TMS and EEG reveals multiple functional roles for alpha-band oscillations. Mini-symposium, Cognitive Neuroscience Society 2014 Meeting, Boston, MA, United States  
Main Audience: Researcher, Keynote?: No
18. (2014). Visual working memory capacity and precision: what are the roles of sensory and parietal cortex. Brooklyn College (City University of New York – Brooklyn) - Department of Psychology Speaker Series, New York, United States  
Main Audience: Researcher  
Invited?: Yes, Keynote?: No, Competitive?: No
19. (2013). Sensory and Parietal Contributions to Capacity and Precision in Visual Short-Term Memory. Attention & Performance XXV, Saint-Hippolyte, Canada  
Main Audience: Researcher  
Invited?: Yes, Keynote?: No
20. Al-Aidroos N, Pratt J & Ferber S. (2010). Visual working memory mediates visual search efficiency. Cognitive Neuroscience Society 2010 Meeting, Montreal, Canada  
Invited?: No, Keynote?: No

## Broadcast Interviews

2015/02/27 - The Dress, The Larry Fedoruk Show, News Talk 610 CKTB, Larry Fedoruk  
2015/02/27

## Publications

### Journal Articles

1. Henderson, S.E.†, Lockhart, H.A.†\*, Davis, E.E., Emrich, S.M., & Campbell, K.L. (2020). Reduced attentional control in older adults leads to deficits in flexible prioritization of visual working memory. *Brain Sciences*. 10(8): 542.  
Co-Author,  
Refereed?: Yes, Open Access?: Yes  
Number of Contributors: 5

2. MacDonald, K.J. Lockhart, H.A.\* Emrich, S.M. Cote, K.A. (2019). A daytime nap enhances visual working memory performance and alters event-related delay activity. *Cognitive, Affective, & Behavioral Neuroscience*. 16(6): 1105-1120.  
Published,  
Refereed?: Yes, Open Access?: No
3. Salahub, C.\*, Lockhart, H.A. \*, Dube, B., Al-Aidroos, N. & Emrich, S.M. (2019). Electrophysiological correlates of the flexible allocation of visual working memory resources. *Scientific Reports*. 9: 19428.  
Last Author  
Published,  
Refereed?: Yes, Open Access?: Yes  
Number of Contributors: 5
4. Salahub C\*, Emrich SM. (2018). ERP evidence for temporal independence of set size and object updating in object substitution masking. *Attention, Perception, & Psychophysics*. 80(2): 387-401.  
<http://dx.doi.org/https://doi.org/10.3758/s13414-017-1459-6>  
Published,  
Refereed?: Yes
5. Zhou X, Mondloch C, Emrich SM. (2018). Encoding differences affect the number and precision of own- vs. other-race faces stored in visual working memory. *Attention, Perception & Psychophysics*. 80(3): 702-712.  
<http://dx.doi.org/https://doi.org/10.3758/s13414-017-1467-6>  
Published,  
Refereed?: Yes  
Number of Contributors: 3
6. Lockhart, H.A. & Emrich, S.M. (2018). Addressing properties and limitations of flexible resource allocation in visual short-term memory. *Attention, Perception & Psychophysics*.  
Submitted,  
Refereed?: Yes
7. Dube B, Emrich SM, Al-Aidroos N. (2017). More than a filter: Feature-based attention regulates the distribution of visual working memory resource. *Journal of Experimental Psychology: Human Perception & Performance*. 43(10): 1843-1854.  
<http://dx.doi.org/http://dx.doi.org/10.1037/xhp0000428>  
Co-Author  
Published,  
Refereed?: Yes  
Number of Contributors: 3  
Description of Contribution Role: Designed experiments, wrote manuscript, supervised analyses.
8. Emrich SM, Johnson JS, Sutterer DW & Postle BR. (2017). Comparing the Effects of 10-Hz rTMS on Tasks of Visual Short-Term Memory and Attention. *Journal of Cognitive Neuroscience*. 29(2): 286-297.  
[http://dx.doi.org/https://doi.org/10.1162/jocn\\_a\\_01043](http://dx.doi.org/https://doi.org/10.1162/jocn_a_01043)  
Published,  
Refereed?: Yes  
Number of Contributors: 4
9. Emrich SM, Lockhart HA\*, Al-Aidroos N. (2017). Attention mediates the flexible allocation of visual working memory resources. *Journal of Experimental Psychology: Human Perception & Performance*. 43(7): 1454-1465.  
<http://dx.doi.org/http://dx.doi.org.proxy.library.brocku.ca/10.1037/xhp0000398>  
Published,  
Refereed?: Yes, Open Access?: No  
Number of Contributors: 3

10. LaRocque JJ, Riggall AC, Emrich SM, Postle BR. (2017). Within-category decoding of information in different attentional states in short-term memory. *Cerebral Cortex*. 27(10): 4881-4890.  
<http://dx.doi.org/https://doi.org/10.1093/cercor/bhw283>  
Published,  
Refereed?: Yes
11. Dube B, Basciano A, Emrich SM, Al-Aidroos N. (2016). Visual working memory simultaneously guides facilitation and inhibition during visual search. *Attention, Perception, & Psychophysics*. 78(5): 1232-1244.  
<http://dx.doi.org/https://doi.org/10.3758/s13414-016-1105-8>  
Published,  
Refereed?: Yes
12. Salahub CM\*, Emrich SM. (2016). Tuning perception: visual working memory biases the quality of visual awareness. *Psychonomic Bulletin & Review*. 23(6): 1854-1859.  
<http://dx.doi.org/https://doi.org/10.3758/s13423-016-1064-z>  
Published,  
Refereed?: Yes  
Number of Contributors: 2
13. Emrich SM, Busseri M. (2015). Re-evaluating the relationships among filtering activity, unnecessary storage, and visual working memory capacity. *Cognitive, Affective & Behavioural Neuroscience*. 15(3): 583-597.  
<http://dx.doi.org/0.3758/s13415-015-0341-z>  
First Listed Author  
Published,  
Refereed?: Yes  
Number of Contributors: 2
14. LaRocque JJ, Eichenbaum AS, Starrett MJ, Rose NS, Emrich SM, Postle BR. (2015). The short- and long-term fate of memory items retained outside the focus of attention. *Memory & Cognition*. 43(3): 453-468.  
<http://dx.doi.org/10.3758/s13421-014-0486-y>  
Co-Author  
Published,  
Refereed?: Yes  
Number of Contributors: 6
15. Emrich SM, Rigall AC, LaRocque JJ & Postle BR. (2013). Distributed patterns of activity in sensory cortex reflect the precision of multiple items maintained in visual short-term memory. *Journal of Neuroscience*. 33(15): 6516-6523.  
<http://dx.doi.org/10.1523/JNEUROSCI.5732-12.2013>  
First Listed Author  
Published,  
Refereed?: Yes  
Number of Contributors: 4
16. Kundu B, Sutterer DW, Emrich SM & Postle BR. (2013). Strengthened Effective Connectivity Underlies Transfer of Working Memory Training to Tests of Short-Term Memory and Attention. *Journal of Neuroscience*. 33(20): 8705-8715.  
Co-Author  
Published,  
Refereed?: Yes  
Number of Contributors: 4
17. Emrich SM & Ferber S. (2012). Competition during encoding increases binding errors in visual working memory. *Journal of Vision*. 12(4): 1-16.  
Published,  
Refereed?: Yes

18. Al-Aidroos N, Emrich SM, Ferber S & Pratt J. (2012). Visual working memory can support the inhibition of previewed distractors in a preview search. *Journal of Experimental Psychology: Human Perception & Performance*. 38(3): 643-663.  
Published,  
Refereed?: Yes
19. Pun C, Emrich SM, Wilson KE & Ferber S. (2012). In and out of consciousness: sustained electrophysiological activity reflects individual differences in perceptual awareness. *Psychonomic Bulletin & Review*. 19(3): 429-435.  
Published,  
Refereed?: Yes
20. Emrich SM, Burianová H & Ferber S. (2011). Transient perceptual neglect: Visual working memory load affects conscious object processing. *Journal of Cognitive Neuroscience*. 23(10): 2968-2982.  
Published,  
Refereed?: Yes
21. Emrich SM, Al-Aidroos N, Pratt J & Ferber S. (2010). Finding memory in search: the effect of visual working memory load on visual search. *Quarterly Journal of Experimental Psychology*. 63(8): 1457-1466.  
Published,  
Refereed?: Yes
22. Emrich SM, Al-Aidroos N, Pratt J & Ferber S. (2009). Visual search elicits the electrophysiological marker of visual working memory. *PLoS ONE*. 4(11): e8042.  
Published,  
Refereed?: Yes
23. Cohn M, Emrich SM & Moscovitch M. (2008). Age-related deficits in associative memory: the influence of impaired strategic retrieval. *Psychology and Aging*. 23: 93-103.  
Published,  
Refereed?: Yes
24. Emrich SM, Ruppel JDN & Ferber S. (2008). The role of elaboration in the persistence of awareness for degraded objects. *Consciousness and Cognition*. 17: 319-329.  
Published,  
Refereed?: Yes
25. Emrich SM, Ruppel JDN, Al-Aidroos N, Pratt J & Ferber S. (2008). Out with the old: inhibition of old items in a preview search is limited. *Perception & Psychophysics*. 70: 1552-1557.  
Published,  
Refereed?: Yes

## Book Chapters

1. Emrich SM. (2015). What are the Roles of Sensory and Parietal Activity in VSTM?. Jolicoeur P, Lefebvre C & Martinez-Trujillo J. *Attention & Performance XXV*. : 59-73.  
Published, Academic Press,  
Refereed?: Yes

## Conference Publications

1. Salahub, C.\* Dube, B. Al-Aidroos, N. Emrich, S.M. (2018). ERP measures of target and distractor processing are affected by attentional prioritization. Vision Sciences Society 2018 Meeting, St. Pete Beach, FL, United States,  
Conference Date: 2018/5  
Poster  
Published  
Refereed?: Yes, Invited?: No
2. Robitaille, J.\* Emrich, S.M. (2018). The psychophysical properties of working memory and mental rotation reveal different processes. Vision Sciences Society 2018 Meeting, St. Pete Beach, FL., United States,  
Conference Date: 2018/5  
Poster  
Published  
Refereed?: Yes, Invited?: No
3. Lockhart, H.A.\* Ferber, S. Emrich, S.M. (2018). Neural measures accounting for flexibility in VSTM. Vision Sciences Society 2018 Meeting, St. Pete Beach, FL, United States,  
Conference Date: 2018/5  
Poster  
Published  
Refereed?: Yes, Invited?: No
4. Lockhart, H.A.\* Emrich, S.M. (2017). Maintaining multiple objects in memory with a flexible resource, a role for attentional control. OPAM 2017 Meeting, Vancouver, B.C., Canada,  
Conference Date: 2017/11  
Poster  
Published  
Refereed?: Yes, Invited?: No
5. Salahub, C.\* Emrich, S.M. (2017). Electrophysiological evidence for temporal independence of selective attention and object updating in object-substitution masking. OPAM 2017 Meeting, Vancouver, B.C., Canada,  
Conference Date: 2017/11  
Poster  
Published  
Refereed?: Yes, Invited?: No
6. Salahub, C. Emrich, S.M. (2017). The effect of emotion on processing distractor items in a visual working memory task. Vision Sciences Society 2017 Meeting, St. Pete Beach, FL, United States,  
Conference Date: 2017/5  
Poster  
Published  
Refereed?: Yes, Invited?: No
7. Lockhart, H.\* Emrich, S.M. (2017). Visual working memory for multiple preferred objects. Vision Sciences Society 2017 Meeting, St. Pete Beach, FL, United States,  
Conference Date: 2017/5  
Poster  
Published  
Refereed?: Yes, Invited?: No

8. Robitaille, J.\* Emrich, S.M. (2017). Bridging working memory and imagery: encoding induced alpha EEG activity reveals similar neural processes. Vision Sciences Society 2017 Meeting, St. Pete Beach, FL, United States,  
Conference Date: 2017/5  
Poster  
Published  
Refereed?: Yes, Invited?: No
9. Salahub, C.\* Emrich, S.M. (2017). Electrophysiological evidence for temporally distinct effects of encoding, maintenance, and perceptual fidelity in object-substitution masking. Cognitive Neurosciences Society 2017 Meeting, San Francisco, CA, United States,  
Conference Date: 2017/3  
Poster  
Published  
Refereed?: Yes, Invited?: No
10. Robitaille, J.\* Emrich, S.M. (2017). Encoding induced alpha EEG activity tracks changes in working memory manipulations. Cognitive Neurosciences Society 2017 Meeting, San Francisco, CA, United States,  
Conference Date: 2017/3  
Poster  
Published  
Refereed?: Yes, Invited?: No
11. Salahub, C.\* Emrich, S.M. (2016). Tuning perception: the content of visual working memory biases the quality of visual awareness. Vision Sciences Society 2016 Meeting, St. Pete Beach, FL, United States,  
Conference Date: 2016/5  
Poster  
Published  
Refereed?: Yes, Invited?: No
12. Lockhart, H.\* Emrich, S.M. (2016). What to do with Low-Priority Items: an ERP study of Resources Allocation in Visual Working Memory. Vision Sciences Society 2016 Meeting, St. Pete Beach, FL, United States,  
Conference Date: 2016/5  
Poster  
Published  
Refereed?: Yes, Invited?: No
13. Zhou, X.\* Mondloch, C. Emrich, S.M. (2016). The Own-Race Recognition Advantage is Attributable to Visual Working Memory: Evidence from a continuous-response paradigm. Vision Sciences Society 2016 Meeting, St. Pete Beach, FL, United States,  
Conference Date: 2016/5  
Poster  
Published  
Refereed?: Yes, Invited?: No
14. Robitaille, J.\* Vonk, R\*. Lockhart, H\*. Emrich, S.M. (2016). Predictive cues narrow the window of spatial attention in crowded visual displays: Evidence from ERPs. Vision Sciences Society 2016 Meeting, St. Pete Beach, FL, United States,  
Conference Date: 2016/5  
Poster  
Published  
Refereed?: Yes, Invited?: No

15. Lockhart, H.\* Emrich, S.M. (2015). Visual working memory performance is determined by the allocation of attentional resources: Evidence from probabilistic cueing. Vision Sciences Society 2015 Meeting, St. Pete Beach, FL, United States,  
Conference Date: 2015/5  
Poster  
Published  
Refereed?: Yes, Invited?: No
16. Robitaille, J.\* Lockhart, H.\* Emrich, S.M. (2015). Predictive spatial cues reduce competition between items in crowded visual displays: Evidence from ERPs. Vision Sciences Society 2015 Meeting, St. Pete Beach, FL, United States,  
Conference Date: 2015/5  
Poster  
Published  
Refereed?: Yes, Invited?: No
17. Lockhart, H.\* Emrich, S.M. (2015). Visual working memory performance is determined by the allocation of attentional resources: Evidence from probabilistic cueing. Lake Ontario Visionary Establishment (LOVE) 2015 Meeting, Niagara Falls, ON, Canada,  
Conference Date: 2015/2  
Poster  
Published  
Refereed?: Yes, Invited?: No
18. Emrich, S.M. Lockhart, H.\* Schutten, D\*. (2014). Limitations on the effectiveness of bottom-up and top-down attention during visual working memory encoding. Canadian Society for Brain, Behaviour and Cognitive Science 2014 Meeting, Toronto, ON, Canada,  
Conference Date: 2014/7  
Poster  
Published  
Refereed?: Yes, Invited?: No
19. Eichenbaum, A. LaRocque, J.J. Emrich, S.M. Postle, B.R. (2014). The precision of short-term memory items retained inside and outside the focus of attention. Cognitive Neuroscience Society 2014 Meeting, Boston, MA, United States,  
Conference Date: 2014/4  
Poster  
Published  
Refereed?: Yes, Invited?: No
20. LaRocque, J.J. Riggall, A.C. Emrich, S.M. Postle, B.R. (2013). Within-category decoding of attended vs unattended items in short-term memory. Cognitive Neuroscience Society 2013 Meeting, San Francisco, CA, United States,  
Conference Date: 2013/4  
Poster  
Published  
Refereed?: Yes, Invited?: No
21. Emrich, S.M. A.C. Riggall J.J. LaRocque Postle, B.R. (2012). The representation of stimulus identity for multiple items in short-term memory revealed using fMRI classification. Vision Sciences Society 2012 Meeting, Naples, FL, United States,  
Conference Date: 2012/5  
Poster  
Published  
Refereed?: Yes, Invited?: No

22. Emrich, S.M. Johnson, J.S. Sutterer, D.W. Postle, B.R. (2012). The effects of 10 Hz rTMS on sustained visual attention and visual short-term memory. Cognitive Neuroscience Society 2012 Meeting, Chicago, IL, United States,  
Conference Date: 2012/3  
Poster  
Published  
Refereed?: Yes, Invited?: No



***STUDENT SUPERVISION***

|                                      | <b>Primary Supervision</b> | <b>Committee Member/Co-reader</b> |
|--------------------------------------|----------------------------|-----------------------------------|
| <i>Completed PhD.</i>                | 1                          | 3                                 |
| <i>Completed MA</i>                  | 6                          | 8                                 |
| <i>Completed BA</i>                  | 25                         | 4                                 |
| <i>Ongoing MA</i>                    |                            | 1                                 |
| <i>Ongoing BA</i>                    | 0                          | N/A                               |
| <i>Independent Studies Projects</i>  | 7                          | N/A                               |
| <i>Co-op Supervision (400 hours)</i> | 6                          | N/A                               |

***COURSES TAUGHT***

Undergraduate

Introductory Psychology  
 Human Learning  
 Roadmap to Careers in Psychology  
 Psychology Students' Transition to Work  
 Research Methods  
 Introduction to Child Development  
 Honours Thesis Research  
 Critical Thinking  
 Childhood Psychopathology  
 Developmental Disabilities  
 Parenting  
 Social Development  
 Psychology of Aging  
 Exceptional Child  
 Human Emotion

Graduate

Social Development  
 Research Methods in Developmental Psychopathology

***RESEARCH GRANTS AND SCHOLARSHIPS***

| <b>Period</b> | <b>Source</b>                                            | <b>Amount</b> |
|---------------|----------------------------------------------------------|---------------|
| 2016-2019     | Brock University Teaching and Learning Fund              | \$ 9,000      |
| 2015          | Brock University Service Learning Grant                  | 2,856         |
| 2013-2015     | Brock University Internal Research Funding               | 6,679         |
| 2011-2013     | Higher Education Quality Council of Ontario              | 26,622        |
| 2009-2010     | Brock University Advancement Fund                        | 1,900         |
| 2008-2009     | Brock SSHRC Institutional Grant                          | 3,200         |
| 2004-2008     | Social Sciences and Humanities Research Council          | 127,205       |
| 1999&2001     | University of Windsor Women's Grant                      | 5,500         |
| 1999&2000     | University of Windsor Internal Grant                     | 9,850         |
| 1998&2000     | University of Windsor Social Sciences & Humanities Grant | 8,000         |

## ***PUBLICATIONS AND PRESENTATIONS***

Refereed Scholarly Publications: (NB: \* indicates students that I have supervised)

- Martini, T. S.,** \*Verby-Verutis, R., Grose, J., Clarke, B., & Elder, A. (2019). Canadian undergraduates' reports of co-curricular involvement across the degree. *Teaching and Learning Inquiry, 7*, 103-119.
- \*Lackner, C. & **Martini, T. S.** (2017). Helping university students succeed at employment interviews: The role of self-reflection. *Teaching and Learning Inquiry, 5*, 3-15.
- \*Norton, C., & **Martini, T. S.** (2017). Perceived benefits of an undergraduate degree. *Canadian Journal of Scholarship of Teaching and Learning, 8*.
- Starr, E., **Martini, T. S.,** & Kuo, B. C. H. (2016). Transition to kindergarten for children with Autism Spectrum Disorder: A focus group study with ethnically diverse parents, teachers, and early intervention service providers. *Focus on Autism and other Developmental Disorders, 31*, 115-128.
- Martini, T. S.,** \*Judges, R., & Belicki, K. (2015). Psychology undergraduates' beliefs about transferable skills developed across the degree. *Scholarship of Teaching and Learning in Psychology, 1*, 113-124.
- Martini, T. S.,** \*Rail, A., & \*Norton, C. (2015). Undergraduates' evaluations of transferable skills promoted by university assignments. *Teaching of Psychology, 42*, 335-338.
- Martini, T. S.,** & DiBattista, D. (2014). The transfer of learning associated with audio feedback on written work. *Canadian Journal of the Scholarship of Teaching and Learning, 5*.
- Matthews, K., et. al. (2013). Student perceptions of their degree-level program: An empirical investigation. *Teaching and Learning Inquiry, 1*, 79-84.
- Martini, T. S.,** & Busseri, M. A. (2012). Emotion regulation goals and strategies as predictors of relationship satisfaction between mothers and their young adult children. *Journal of Social and Personal Relationships, 29*, 185-205.
- \*Raval, V. V. & **Martini, T. S.** (2011). Making the child understand: Socialization of emotion in children in urban India. *Journal of Family Psychology, 25*, 847-856.
- Martini, T. S.** (2011). Effects of target audience on emotion regulation strategies and goals. *Social Psychology, 42*, 124-134.
- Martini, T. S.,** & Busseri, M. (2010). Emotion regulation goals and strategies as predictors of relationship satisfaction between mothers and their young adult children. *Psychology and Aging, 25*, 48-59.
- \*Raval, V. V., & **Martini, T. S.** (2010). Methods of, and reasons for, emotional expression and control in children with internalizing, externalizing, and somatic problems in urban India. *Social Development, 19*, 93-112.
- \*Raval, V. V., & **Martini, T. S.** (2009). Maternal socialization of children's anger, sadness, and physical pain in two communities in Gujarat, India. *International Journal of Behavioral Development, 33*, 215-229.
- \*Raval, V. V., & **Martini, T. S.,** & Raval, P. H. (2007). Would others think it is OK to express my feelings?: Regulation of anger, sadness and physical pain in Gujarati children in India. *Social Development, 16*, 79-105.
- Martini, T. S.,** Root, C. A., & Jenkins, J. J. (2004). Effects of child emotional response, child temperament, and parenting style on low and middle income mothers' regulation of negative emotion. *Social Development, 13*, 515-530.

- Martini, T. S.,** Grusec, J. E., & Bernardini, S. C. (2003). Help given to older mothers by their adult daughters: Ways of initiating help and type of help given. *International Journal of Aging and Human Development, 57*, 237-257.
- Martini, T. S.,** Grusec, J. E., & Bernardini, S. C. (2001). Effects of interpersonal control, perspective taking, and attributions on older mothers' and adult daughters' satisfaction with their helping relationships. *Journal of Family Psychology, 15*, 688-705.
- Martini, T. S.,** & Dion, K. L. (2001). Developmental expectations of personal change for the self and others. *Basic and Applied Social Psychology, 23*, 21-28.
- Grusec, J. E., Rudy, D. D., & **Martini, T. S.** (1997). The study of parenting cognitions: Some implications for understanding parenting behavior and children's internalization of values. In J. E. Grusec and L. Kuczynski, (Eds.) *Parenting strategies and children's internalization of values: A handbook of theoretical and research perspectives*. Toronto: Wiley.
- Martini, T. S.,** & Page, S. (1996). Attributional style and prediction of help-seeking in low literate adults. *Canadian Journal of Behavioural Science, 28*, 122-129.

Refereed papers and posters delivered to professional associations:

- Martini, T. S.,** \*Frangella, L., & \*VanderVlist, M. (2020, August). What skills are learned in college? Views of college students and working adults. In J. van Kirk (Chair), *From freshman to first job: Three checkpoints for bachelor's graduates*. Symposium presented at the annual meeting of the American Psychological Association, Washington, DC.
- Martini, T. S.** (2019, January). *Ready for work? Students' and working adults' views about the career-related skills learned at college*. Paper presented at the annual meeting of the National Institute for the Teaching of Psychology, Tampa, FL.
- Martini, T. S.,** \*Frangella, L., & \*VanderVlist, M. (2018, August). Students' ability to articulate career-relevant skills. In P. Hettich (Chair), *Skill-building practices that promote workplace preparedness for baccalaureate graduates*. Symposium presented at the annual meeting of the American Psychological Association, San Francisco, CA.
- Martini, T. S.,** \*Plante-Brisebois, V., \*Harder, J., & \*Lam, S. (2018, January). *Undergraduates' understanding of important career-related information*. Poster presented at the annual meeting of the National Institute for the Teaching of Psychology, Tampa, FL.
- Lackner, C. & **Martini, T. S.** (2017, January). *Helping university students succeed at employment interviews: The role of self-reflection*. Poster presented at the annual meeting of the National Institute for the Teaching of Psychology, Tampa, FL.
- Martini, T. S.,** & \*Roth, R. (2016, January). *Improving undergraduates' understanding of the skill-based learning fostered by course assignments*. Poster presented at the annual meeting of the National Institute for the Teaching of Psychology, Tampa, FL.
- Martini, T. S.** (2015, August). Articulation of the APA Guidelines Learning Outcomes 2.0: The student view. In J. Halonen (Chair), *Building the Assessment Archive for Guidelines 2.0*. Symposium presented at the annual meeting of the American Psychological Association, Toronto, ON.
- Martini, T. S.** (2014, June). *More than course content: Undergraduate perceptions of skill-based learning across the degree*. Paper presented at the annual meeting of the Society for Teaching and Learning in Higher Education, Kingston, ON.
- Martini, T. S.,** \*Capuana, L., \*Blank, C., \*Davis, C., & \*Judges, R. (2014, January). *Undergraduates' understanding of skill-based learning outcomes*. Poster presented at the

- annual meeting of the National Institute for the Teaching of Psychology, Tampa, FL.
- Martini, T. S.** (2013, April). *Using e-portfolios to showcase graduating students' perceptions of degree-level learning in the curriculum and co-curriculum*. Poster presented at Learning Outcomes Assessment: Practically Speaking, Toronto, ON
- Martini, T. S.,** \*Capuana, L., \*Hunter, J., & \*Fitzgerald, R. (2013, January). *E-portfolios as a tool to educate undergraduates about transferrable skills: Development and preliminary results*. Poster presented at the annual meeting of the National Institute for the Teaching of Psychology, Tampa, FL.
- Martini, T. S.,** \*Bolger, A., & \*Quinn, S. (2012, January). *Compassion and personal distress across the adult lifespan*. Paper presented at the annual meeting of the Society for Personality and Social Psychology, San Diego, CA.
- Martini, T. S.,** \*Zhu, Y., & \*Davis, C. (2012, January). *The cognitive consequences of upregulating positive and negative emotion*. Poster presented at the annual meeting of the Society for Personality and Social Psychology, San Diego, CA.
- Martini, T. S.,** & Busseri, M. A. (2011, January). *A dyadic investigation of emotion regulation and relationship quality in mother-young adult child dyads*. Poster presented at the annual meeting of the Society for Personality and Social Psychology, San Antonio, TX.
- Starr, E., **Martini, T. S.,** & Kuo, B. C. H. (2010, August). *Transition to kindergarten: Experiences of teachers and ethnically diverse families of children with Autism Spectrum Disorders*. Paper presented at the World Congress of Autism, Monterrey, Mexico.
- \*Zhu, Y. & **Martini, T. S.** (2010, January). *Cognitive consequences of suppressing emotion: Effects of sex and emotional valence*. Poster presented at the annual meeting of the Society for Personality and Social Psychology, Las Vegas, NV.
- Martini, T. S.,** & Busseri, M. A. (2009, February). *Emotion regulation strategies and goals as predictors of helping-related subjective well-being*. Poster presented at the annual meeting of the Society for Personality and Social Psychology, Tampa, FL.
- Martini, T. S.,** Root, C. A., & Jenkins, J. M. (2008, June). Maternal regulation of anger as a predictor of anger and aggression in low- and middle-income children. In P. Hastings (Chair), *Emotion socialization research in Canada: New studies of an emerging topic in developmental psychology*. Symposium presented at the annual meeting of the Canadian Psychological Association, Halifax, NS.
- Martini, T. S.** (2007, November). Discrepancies in physiological responding during older mother-adult daughter discussions of conflict. In V. Bedford (Chair), *Discrepancies between family informant reports and their implications*. Symposium presented at the annual meeting of the Gerontological Society of America, San Francisco, CA.
- \*Raval, V. V., & **Martini, T. S.** (2007, August). Socialization of emotion in children with behavior problems in India. In D. H. Rakison (Chair), *Cognitive, social, and emotional development*. Symposium presented at the annual meeting of the American Psychological Association, San Francisco, CA.
- \*Schoonderbeek, J., \*Loiselle, C., & **Martini, T. S.** (2007, June). *Emotion regulation goals as predictors of relationship quality in older mother-adult daughter dyads*. Poster presented at the annual meeting of the Canadian Psychological Association, Ottawa, ON.
- Martini, T. S.** (2007, January). *Emotion regulation goals and strategies as predictors of relationship satisfaction between mothers and their young adult children*. Poster presented at the annual meeting of the Society for Personality and Social Psychology, Memphis, TN.
- \*Dobson, J., & **Martini, T. S.** (2007, January). *Ambivalence as a predictor of helping satisfaction in older*

- mother-adult daughter dyads*. Poster presented at the annual meeting of the Society for Personality and Social Psychology, Memphis, TN.
- Martini, T. S.** (2006, January). *The effects of social context on the regulation of anger and disappointment*. Poster presented at the annual meeting of the Society of Personality and Social Psychology, Palm Springs, CA.
- \*Raval, V. V., & **Martini, T. S.** (2005, April). *Situational antecedents of anger, sadness and physical pain in Asian Indian children presenting with various forms of psychopathology*. Poster presented at the biennial meeting of the Society for Research in Child Development, Atlanta, GA.
- \*Raval, V. V., & **Martini, T. S.** (2005, April). *Emotion regulation, socialization, and psychopathology in Asian Indian children*. Poster presented at the biennial meeting of the Society for Research in Child Development, Atlanta, GA.
- \*Raval, V., & **Martini, T. S.** (2004, July). *Psychological and physical symptoms in Asian Indian children: Maternal beliefs about acceptability and controllability*. Poster presented at the biennial meeting of the International Society for the Study of Behavioral Development, Ghent, Belgium.
- \*Keith, B.H., & **Martini, T.S.** (2003, June). *Men's dispositional empathy and the regulation of anger toward boys versus girls*. Poster presented at the annual conference of the Canadian Psychological Association, Hamilton, ON.
- \*Raval, V., & **Martini, T. S.** (2003, April). *Asian Indian mothers' beliefs and responses to their children's displays of anger, sadness, and physical pain*. Poster presented at the biennial meeting of the Society for Research in Child Development, Tampa, FL.
- \*Raval, V., **Martini, T. S.**, & Raval, P. (2003, April). *Regulation of anger, sadness, and physical pain in Asian Indian children: Reasons and methods*. Poster presented at the biennial meeting of the Society for Research in Child Development, Tampa, FL
- \*Keith, B. H., & **Martini, T. S.** (2001, June). *Men's regulation of anger and individual differences in empathy to children*. Poster presented at the annual meeting of the Canadian Psychological Association, Quebec City, QC.
- \*Raval, V., & **Martini, T. S.** (2001, April). *Socialization of emotion regulation: Use of display rules in East Indian children*. Poster presented at the biennial meeting of the Society for Research in Child Development, Minneapolis, MN.
- Martini, T. S.** (2000, July). *Relationships between parents' expression and regulation of anger and their disciplinary behaviour*. Poster presented at the biennial meeting of the International Society for the Study of Behavioural Development, Beijing, China.
- Martini, T. S.**, \*Lee, C., & \*Reis, N. (2000, July). *Goals as predictors of older mothers' and adult daughters' emotional and behavioural responses in helping situations*. Poster presented at the biennial meeting of the International Society for the Study of Behavioural Development, Beijing, China.
- \*Nobel, R., & **Martini, T. S.** (2000, May). *Future teachers' beliefs about the socialization of emotional display rules*. Poster presented at Development 2000: A conference on Developmental Psychology, Waterloo, ON.
- Jenkins, J. M., **Martini, T. S.**, & Root, C. A. (1999, April). The role of family emotional expressive patterns in promoting different types of expressive disorders in children. In N. L. Stein & C. C. Piotrowski (Chairs), *Identifying and preventing destructive behaviors during family conflict*. Symposium conducted at the biennial meeting of the Society for Research in Child Development, Albuquerque, NM.
- Martini, T. S.**, & Root, C. A. (1999, April). *Suppression of parental emotions in response to children's*

- expressions of anger, sadness, and fear.* Poster presented at the biennial meeting of the Society for Research in Child Development, Albuquerque, NM.
- Martini, T. S.**, & Grusec, J. E. (1998, November). *Dyadic characteristics influencing the quality of helping relationships between older mothers and their adult daughters.* Paper presented at the annual meeting of the Gerontological Society of America, Philadelphia, PA.
- Jenkins, J., Root, C., & **Martini, T. S.** (1998, July). Emotion, conflict and psychopathology. In S. Crockenberg (Chair), *Conflict, emotion and children's adjustment.* Symposium conducted at the biennial meeting of the International Society for the Study of Behavioural Development, Berne, Switzerland.
- Martini, T. S.**, & Dion, K. L. (1996, August). *A self-other discrepancy in the evaluation of elderly targets.* Poster presented at the annual meeting of the American Psychological Association, Toronto, ON.
- Martini, T. S.**, & Martin, J. L. (1995, April). *Parents' perceived self-efficacy as a determinant of children's empathy.* Poster presented at the biennial meeting of the Society for Research in Child Development, Indianapolis, IN.
- Davey, A., **Martini, T. S.**, & Tainsh, S. M. M. (1993, October). *The assessment of the psychometric properties of the London Psychogeriatric Rating Scale.* Paper presented at the annual meeting of the Canadian Association on Gerontology, Montréal, QC.
- Davey, A., **Martini, T. S.**, & Tainsh, S. M. M. (1993, October). *Development of the Gero-Psychiatric Nursing Stressors Inventory.* Paper presented at the annual meeting of the Canadian Association on Gerontology, Montréal, QC.
- Martini, T. S.**, Davey, A., & Tainsh, S. M. M. (1993, October). *Perceived stressors of gero-psychiatric nursing.* Paper presented at the annual meeting of the Canadian Association on Gerontology, Montréal, QC.
- Jamieson, D. W., & **Martini, T. S.** (1993, June). *The attitude-behaviour inconsistency problem in promoting environmental sustainability: reconceptualizing evaluation in terms of attitudinal ambivalence.* Poster presented at the First Annual Environment and Health Symposium: Advances and Cross-Disciplinary Directions, Toronto, ON.
- Tainsh, S. M. M., Davey, A., & **Martini, T. S.** (1993, April). *Exploring the stressors of gero-psychiatric nursing.* Paper presented at the Quality of Nursing Worklife Conference, Toronto, ON.
- Martini, T. S.** (1992, June). *The robust nature of the dilution effect.* Poster presented at the meeting of the Canadian Psychological Association, Québec City, QC.

#### Non-refereed Publications and Presentations:

##### (a) Textbooks:

- Coon, D. M., Mitterer, J. O., & **Martini, T. S.** (2021). *Psychology: Gateways to mind and behavior.* (16<sup>th</sup> ed.). Boston: Cengage Learning.
- Coon, D. M., Mitterer, J. O., & **Martini, T. S.** (2021). *Psychology: Modules for active learning* (15<sup>th</sup> ed.). Boston: Cengage Learning.
- Coon, D. M., Mitterer, J. O., & **Martini, T. S.** (2018). *Psychology: Gateways to mind and behavior.* (15<sup>th</sup> ed.). Boston: Cengage Learning.
- Coon, D. M., Mitterer, J. O., & **Martini, T. S.** (2017). *Psychology: Modules for active learning* (14<sup>th</sup> ed.). Boston: Cengage Learning.
- Mitterer, J. O., Coon, D. M., & **Martini, T. S.** (2015). *Psychology: A modular approach* (1<sup>st</sup> Canadian edition). Toronto: Nelson.

(b) Essays:

Martini, T. S. (2019, June 27). *Why can't students see transferable skills?* Times Higher Education.

(c) Technical Reports:

**Martini, T. S., & Clare, M.** (2014). *Undergraduates' understanding of skill-based learning: Can e-portfolios help?* Toronto: Higher Education Quality Council of Ontario.

(d) Invited Addresses:

**Martini, T. S.** March, 2018. *Ready for work? Students' and working adults' views about the career-related skills that are learned at college.* Invited presentation at the Texas Community College Teachers' Association conference. Fresno, TX

**Martini, T. S.** February, 2017. *Backpacks to briefcases: What my students know about skill-based learning (and what they've taught me).* Invited presentation at the Texas Community College Teachers' Association conference. Austin, TX

**Martini, T. S.** June, 2012. *Undergraduates' understanding of skill-based learning.* Invited presentation at the Ontario Service Learning Network meeting. St. Catharines, ON

**Martini, T. S.** April, 2012. *Using e-portfolios to track undergraduate skill development.* Invited presentation at Brock University Centre for Pedagogical Innovation Spring Teaching and Learning Symposium. St. Catharines, ON

**Martini, T. S.** March, 2012. *Analyzing qualitative data.* Invited presentation at Higher Education Quality Council of Ontario Teaching and Learning Workshop. Toronto, ON

**Martini, T. S., & DiBattista, D.** May, 2011. *Providing feedback on written work: A sound approach.* Invited presentation at Brock University Centre for Teaching and Learning Spring Teaching and Learning Day. St. Catharines, ON

\*Keith, B.H., & **Martini, T.S.** June, 2003. *Men's dispositional empathy and the regulation of anger toward boys versus girls.* In M. Coons (Chair), Symposium for Outstanding Student Research. Symposium conducted at the annual conference of the Canadian Psychological Association, Hamilton, ON.

**Martini, T. S.** October, 1999. *Parent-child relationships in later life.* Invited presentation at the University of Windsor in celebration of the International Year of Older Persons. Windsor, ON

(e) Workshops:

**Martini, T. S.** July, 2019-2020. *Helping students to see the 'transfer' part of transferable skills.* Workshop presented at McMaster Conference on Education and Cognition. Hamilton, ON.

**Martini, T. S.** November, 2014-2016. *Creating an e-portfolio.* Workshop presented for Department of Communication, Popular Culture and Film, Brock University. St. Catharines, ON

**Martini, T. S.** May, 2014. *The e-portfolio: Going digital.* Workshop presented at Congress of the Humanities and Social Sciences. St. Catharines, ON

(f) Invited Paper Submission:

**Martini, T. S., Grusec, J. E., & Bernardini, S.** (Winter, 2005). *Helping relationships: Understanding older mother-adult daughter dynamics.* *Clinical Notes: Innovative Healthcare Solutions.*

Manuscripts under review:

**Martini, T. S.,** \*Frangella, L., & \*VanderVlist, M. (under review). What skills are learned at university? Views of students and working adults. *Teaching and Learning Inquiry*.

***PROFESSIONAL DEVELOPMENT  
AWARDS***

2013-2016 Brock University Chancellor's Chair for Teaching Excellence (\$15,000)  
2015 Brock University Distinguished Teaching Award  
2011 Brock University Faculty of Social Sciences Award for Excellence in Teaching

***SERVICE TO THE UNIVERSITY***

Brock University

2014-2017 Brock University Senate  
2014-2017 Brock University Senate Teaching and Learning Policy Committee  
2014-2016 Brock University Graduate Students' Vitae Advisory Committee  
2013-2018 Brock University Campus-wide Co-Curriculum Steering Committee  
2005-present Department of Psychology Undergraduate Studies Committee (Chair, 2009-2012)  
2008-2009 Department of Psychology Graduate Studies Committee  
2007-2009 Brock University Research Ethics Board  
2004 Adjudicator, Brock Undergraduate Student Research Award  
2004, 2005 Adjudicator, Brock Excellence in Research Award Selection Committee  
2004 Adjudicator, Canadian Psychological Association Thesis Award Selection Cmte  
2003-2006 Board of Directors, Rosalind Blauer Centre for Child Care, Brock University

University of Windsor

1998-2003 Undergraduate Studies Committee  
1998-2001 Participant Pool and Mass Testing Committee  
1999-2003 Coordinator, Developmental Psychopathology Graduate Program

***SERVICE OUTSIDE THE UNIVERSITY***

*Ad Hoc Journal Reviewer*

Scholarship of Teaching and Learning in Psychology  
Developmental Psychology  
Psychology and Aging  
Social Development  
Personal Relationships  
Journal of Family Psychology  
Ageing International  
Canadian Journal of Behavioural Science

*Reviewer*

National Institute for the Teaching of Psychology – Project Syllabus  
Social Sciences and Humanities Research Council - Standard Grants Program

## Ontario Graduate Scholarship program (Psychology PhD. applications)

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+ K Jaffer T, F illoughby K (in press). A longitudinal study investigating trajectories of sensitivity to punishment over time and their association with left-hemisphere asymmetry among children and adolescents. *Developmental Science*, 20(8), 1-10. doi:10.1111/desc.12582

> K F illoughby T, Jaffer T, Gykstra X, K! ! T, K raccio T (in press). A person-centred analysis of first-year university students' associations with psychosocial adjustment across seven years and post-university outcomes. *Journal of Personality and Social Psychology*, 108(2), 288-300. doi:10.1037/a0028882

K Gykstra X, F illoughby T, Wans J, G K (" ) K ying to friends: A mining of friendship quality and depressive symptoms over time during late childhood and adolescence. *Journal of Personality and Social Psychology*, 108(2), 288-300. doi:10.1037/a0028882

' K Galy T, F illoughby T (" ) K longitudinal person-centred examination of loneliness among children and adolescents. *Journal of Personality and Social Psychology*, 108(2), 288-300. doi:10.1037/a0028882

( K Jaffer T, F illoughby T (" ) K sensitivity to negative feedback among high and low worriers: A study investigating children and adolescents. *Journal of Personality and Social Psychology*, 108(2), 288-300. doi:10.1037/a0028882

K Gykstra X, F illoughby T, Wans J, G K (" ) K longitudinal examination of the relationship between adolescent dishonesty and adolescent relationship quality and depression. *Journal of Personality and Social Psychology*, 108(2), 288-300. doi:10.1037/a0028882

K acGonell W, F illoughby T (" ) K investigating honesty-humility and impulsivity as predictors of aggression in children and youth. *Journal of Personality and Social Psychology*, 108(2), 288-300. doi:10.1037/a0028882

K Gykstra X, F illoughby T, Wans J, G K (" ) K perceptions of dishonesty: A study of understanding reports of influence on children and adolescents. *Journal of Personality and Social Psychology*, 108(2), 288-300. doi:10.1037/a0028882

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 \$+ K ealth k & na' k' ("(-"(" ) k) k & entre of k excellence k for k T outh k engagement k k oronto k Q & laborator k nd k core k 5 rtrner kask H k of k T 0 &-CURA k 0 ead k) gency: k 5 tudents k & o mmission) k k lso k co- investigator k on k k research k project of k=# (~((( ] k \$600,000/year. k  
 17. KSSHRC k Standard k Research k Grant k ' k k o k 2003) k k hel k impact k' \$ k the k Internet k on k search k strategies k and k learning k for k both k educators k and k secondary k school k students: k oward k k model k' \$ k self-regulation k (Principal kvestigator, k with k Dr. k E. k Wood kask k co- investigator) k k \$92,889 k k  
 18. KSSHRC k Standard k Research k Grant k (1997 k to k 2001) k k Investigating k the k impact k' \$ k computer k instruction k for k cognitive k development k in k the k early k childhood k education k environment k [co- investigator k with k Dr. k J. k Specht k and k Dr. k E. k Wood k (principal kvestigator)] k k \$61,983 k k  
 19. KSSHRC k Standard k Research k Grant k (1996 k to k 1999) k k Cognitive k processes k underlying k successful k strategy k transfer k across k age k (Principal kvestigator) k k \$39,765 k k  
 k k

**D. w w SUPERVISOR | w EXPERIENCE w**

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**SSHRC POSTDOCTORAL FELLOW SUPERVISION w**

| ~ a! ~ w Student w w | Cours ~ No. w Started | Compl- ted | Status k |             |
|----------------------|-----------------------|------------|----------|-------------|
| Danielle k + k       | k                     | Sept/10 k  | Aug/11 k | Full-time k |

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**THESIS SUPERVISION w (GRADUATE): k**

| ~ a! ~ w Student w w | Cours ~ No. w Started | Compl- ted | Status k | k           |
|----------------------|-----------------------|------------|----------|-------------|
| Meghan k Borg k      | PSYCK Ph.D. k         | Sept/20 k  | Aug/24 k | Full-time k |
| aylor k Heffer k     | PSYCK Ph.D. k         | Sept/17 k  | Aug/21 k | Full-time k |

k

|                                        |            |          |          |              |
|----------------------------------------|------------|----------|----------|--------------|
| ElliottMcDonnellk                      | PSYCPH.D.k | Sept/17k | Jan/19k  | Full-timek   |
| ~ '! kSemploniusk                      | PSYCPH.D.k | Sept/13k | Feb/18k  | Full-timek   |
| inaBrookk                              | PSYCPH.Dk  | May/13k  | June/17k | Part-timek   |
| -)' kAdachik                           | PSYCPH.D.k | Sept/10k | June/15k | Full-timek   |
| ChloekHamzak                           | PSYCPH.Dk  | Sept/10k | June/15k | Full-timek   |
| Royettekavernierkk                     | PSYCPH.Dk  | Feb/11k  | Aug/14k  | Full-timek   |
| MarieGoodk                             | PSYCPH.D.k | Sept/07k | Aug/11k  | Full-timek   |
| MalindaDesjarlisk                      | PSYCPH.D.k | Sept/06k | July/10k | Full-timek   |
| SusanSolurshk@Universityk\$KWaterlook  | PSYCPH.D.k | Jan/98k  | July/04k | Withdrawnk   |
| LeekAnnForsyth-SellskEducationk        | EDUCPh.D.k | Sept/03k | Sept/04k | Withdrawnk   |
| HeatherChalmersk                       | PSYCPH.D.k | Sept/01k | Feb/04k  | Full-timek   |
| HamnahShahidk                          | PSYCM.A.k  | Sept/19k | Aug/21k  | Full-timek   |
| OwenDalyk                              | PSYCM.A.k  | Sept/17k | Aug/19k  | Full-timek   |
| aylorHefferkk                          | PSYCM.Ak   | Sept/15k | June/17k | Full-timek   |
| AdrianFortnerkk                        | PSYCM.Ak   | Sept/10k | Sept/12k | Full-timek   |
| AndreaDesRochesk                       | PSYCM.Ak   | Sept/10k | June/12k | Full-timek   |
| Royettekavernierk@CHYSk                | CHYSM.A.k  | Sept/09k | Feb/11k  | Full-timek   |
| -)' kAdachikk                          | PSYCM.A.k  | Sept/08k | Aug/10k  | Full-timek   |
| ChloekHamzakk                          | PSYCM.A.k  | Sept/08k | Aug/10k  | Full-timek   |
| MalindaDesjardaisk                     | PSYCM.A.k  | Sept/04k | Sept/06k | Full-timek   |
| JaselynHarvis-TrithardtkCHYSk          | CHYSM.A.k  | Sept/03k | Sept/05k | Full-timek   |
| MelissaSaakk@CHYSk                     | CHYSM.A.k  | Sept/02k | Aug/05k  | Full-timek   |
| JenniferMcLarenkEducationk             | EDUCM.Ed.k | Sept/01k | Aug/06k  | Part-timek   |
| PatDaynard-Marionk@CHYSk               | CHYSM.A.k  | Sept/03k | Sept/05k | Withdrawnk   |
| ElizabethHolmeskk                      | PSYCM.A.k  | Sept/99k | Sept/01k | Full-timek   |
| SusanSolurshk@Universityk\$KWaterlookk | PSYCM.A.k  | Sept/96k | Sept/98k | Full-timek   |
| anyakMcCreithk@Universityk\$KWaterlook | PSYCMASc.k | Sept/95k | Sept/96k | Full-timek   |
| LisaPorterk@Universityk\$KWaterlook    | PSYCMASc.k | Sept/95k | Sept/96k | Full-timek k |
| l!" kCavanaughk@AK\$KWaterlook         | PSYCMASc.k | Sept/94k | Sept/95k | Full-timek   |
| MarylGoerzen-ShoerdkAK\$KWaterlook     | PSYCMASc.k | Sept/94k | Sept/95k | Full-timekk  |
| JodiYoungerk@Universityk\$KWaterlook   | PSYCMASc.k | Sept/93k | Sept/94k | Full-timek   |
| AnnelBolgerk@Universityk\$KWaterlook   | PSYCMASc.k | Sept/93k | Sept/94k | Full-timek   |

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**THESIS COMMITTEE MEMBERSHIP (GRADUATE)k**

|                                        |            |          |           |              |
|----------------------------------------|------------|----------|-----------|--------------|
| BreanneWyliek                          | PSYCPH.D.k | Sept/19k | Aug/23k   | Full-timek   |
| KianaLaPierrek                         | PSYCPH.Dk  | Sept/17k | Aug/21k   | Full-timek   |
| AmandaHillk                            | PSYCPH.D.k | Sept/11k | Aug/17k   | Full-timek   |
| MarkHoffarthk                          | PSYCPH.D.k | Sept/13k | Aug/16k   | Full-timek   |
| MarinaFarrellk                         | PSYCPH.D.k | Sept/13k | April/17k | Full-timek   |
| NarniaWorthk                           | PSYCPH.D.k | Sept/14k | June/15k  | Full-timek k |
| AgnesWozniakk@Universityk\$KGuelphk    | PSYCPH.Dk  | Aug/13k  | Aug/15k   | Full-timek   |
| ChrissyLacknerk                        | PSYCPH.D.k | Sept/10k | June/15k  | Full-timek   |
| HeatherRamey                           | PSYCPH.D.k | Sept/07k | Oct/11k   | Full-timek   |
| RichardKennedyk(withdrawn)k            | PSYCPH.D.k | Sept/07k | Aug/10k   | Full-timek   |
| KellyCampbellk(withdrawn)k             | PSYCPH.D.k | Sept/04k | Aug/10k   | Part-timek   |
| VirginiaNuskal@Universityk\$KWaterlook | PSYCPH.D.k | Sept/96k | Aug/00k   | Full-timek   |

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|                                   |          |          |          |             |
|-----------------------------------|----------|----------|----------|-------------|
| Chelsea Resch                     | PSYCM.A. | Sept/20k | Aug/22k  | Full-timek  |
| Rachael Herlehyk                  | PSYCM.A. | Sept/18k | Aug/20k  | Full-timek  |
| ori Dykstrak                      | PSYCM.A. | Sept/18k | Aug/20k  | Full-timek  |
| Khadija Dairywalak                | PSYCM.A. | Sept/16k | Aug/18k  | Full-timek  |
| Elliott MacDonellk                | PSYCM.A. | Mar/16k  | Aug/17k  | Full-timek  |
| ina Hardmank                      | PSYCM.A. | Jan/13k  | Nov/14k  | Full-timek  |
| Jasmine Benderk                   | PSYCM.A. | Sept/12k | Sept/14k | Full-timek  |
| Christina Brookk                  | PSYCM.A. | Sept/07k | Aug/11k  | Part-timek  |
| Jayne Morrishk                    | PSYCM.A. | Sept/09k | Oct/11k  | Full-timek  |
| Amanda Hillk                      | PSYCM.A. | Sept/09k | Sept/11k | Full-timek  |
| Amanda Kirkwoodk-Health Sciencesk | CHSCM.A. | Sept/08k | Aug/10k  | Full-timekk |
| D ""! Gutknecht@CHYSk             | CHYSM.A. | Sept/07k | Sept/09k | Full-timek  |
| Sherry-Leigh Vervaeke@CHYSk       | CHYSM.A. | Sept/05k | Aug/07k  | Full-timek  |
| Shawn Hopkins@CHYSk               | CHYSM.A. | Sept/04k | Sept/06k | Full-timek  |
| Kate Moncur@CHYSk                 | CHYSM.A. | Sept/04k | Sept/06k | Full-timek  |
| Richard Kennedyk                  | PSYCM.A. | Sept/04k | Sept/07k | Full-timek  |
| Holly Stackk                      | PSYCM.A. | Sept/03k | Sept/05k | Full-timek  |
| Lynn Brownk-Niagara Universityk   | PSYCM.A. | Sept/03k | Sept/05k | Full-timek  |
| Carmine D' Ardisk                 | PSYCM.A. | Sept/03k | Sept/05k | Full-timek  |
| Alison \$\$ k                     | PSYCM.A. | Sept/01k | Sept/03k | Full-timek  |
| Mary-Claire Ferlisik              | PSYCM.A. | Sept/00k | Sept/02k | Full-timek  |
| Wendy Belbink                     | PSYCM.A. | Sept/00k | Sept/02k | Full-timek  |

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**ADVANCED STUD w SUPERVISION w GRADUATE) w**

|                     |             |          |         |            |
|---------------------|-------------|----------|---------|------------|
| ina Brookk          | PSYCK7P52k  | July/15k | Aug/15k | Full-timek |
| ~ '! Semploniusk    | PSYCK7P52k  | July/15k | Aug/15k | Full-timek |
| Chloe Hamzak        | PSYCK7P52k  | July/13k | Aug/13k | Full-timek |
| Royettek avernierk  | PSYCK7P52k  | Nov/12k  | Dec/13k | Full-timek |
| -)' kAdachik        | PSYCK7P52k  | July/13k | Aug/13k | Full-timek |
| ina Brookk          | PSYCK7P27kk | July/13k | Aug/13k | Full-timek |
| Chloe Hamzak        | PSYCK7P52k  | July/12k | Aug/12k | Full-timek |
| Royettek avernierkk | PSYCK7P52k  | July/12k | Aug/12k | Full-timek |
| -)' kAdachik        | PSYCK7P52k  | July/12k | Aug/12k | Full-timek |

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**RESEARCH w APPRENTICESHIP w SUPERVISOR w GRADUATE) w**

|                 |           |         |         |            |
|-----------------|-----------|---------|---------|------------|
| Kelly Campbellk | PSYC7P27k | Jan/04k | Apr/06k | Full-timek |
|-----------------|-----------|---------|---------|------------|

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**TEACHING w APPRENTICESHIP w SUPERVISOR w GRADUATE) w**

|               |           |         |         |            |
|---------------|-----------|---------|---------|------------|
| aylor Hefferk | PSYC7P27k | Jan/20k | Apr/20k | Full-timek |
|---------------|-----------|---------|---------|------------|

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**INDEPENDENT STUD w SUPERVISION w GRADUATE) w**

|                               |            |           |           |            |
|-------------------------------|------------|-----------|-----------|------------|
| -)' kAdachikk                 | PSYCK5V20k | Sept/09k  | Dec/09k   | Full-timek |
| Heather Rameyk                | PSYCK7P40k | April/08k | Aug/08k   | Full-timek |
| Malinda Desjarlaisk           | PSYCK7P40k | April/08k | Aug/08k   | Full-timek |
| Marie Goodk                   | PSYCK7P40k | April/07k | Aug/07k   | Full-timek |
| Jennifer McLaren-k Educationk | EDUCK7P51k | Sept/04k  | April/05k | Part-timek |

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|                                     |            |          |         |            |
|-------------------------------------|------------|----------|---------|------------|
| LeekAnnkForsyth-Sells-kEducationk   | EDUCk7P51k | Jan/04k  | May/04k | Part-timek |
| JaselynkJarvis-TrithardtkEducationk | EDUCk7P51k | Jan/04k  | May/04k | Part-timek |
| HeatherkChalmerskk                  | PSYCK7P40k | Sept/03k | Feb/04k | Full-timek |

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**RESEARCH TECHNIQUES COURSE INSTRUCTOR (GRADUATE)w**

|                   |            |         |         |              |
|-------------------|------------|---------|---------|--------------|
| KianakLaPierrek   | PSYCK7P27k | Jan/18k | Apr/19k | Full-timek k |
| KarikLustigk      | PSYCK7P27k | Jan/18k | Apr/19k | Full-timek k |
| AnnkFarrellkk     | PSYCK7P27k | Jan/15k | Apr/15k | Full-timek   |
| MarinakFarrellk   | PSYCK7P27k | Jan/15k | Apr/15k | Full-timek   |
| Royettekavernierk | PSYCK7P27k | Jan/13k | Apr/13k | Full-timek   |
| ChristinakBrookk  | PSYCK7P27k | Jan/13k | Apr/13k | Full-timek   |

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**HONOURS THESIS STUDENTS SUPERVISED (UNDERGRADUATE):k**

|                           |             |          |         |             |
|---------------------------|-------------|----------|---------|-------------|
| AnnelisekWiensk           | PSYCK4F91k  | Aug/20k  | Apr/21k | 8)", imek   |
| MorgankHawleyk            | PSYCK4F91k  | Aug/20k  | Apr/21k | 8)", imek   |
| CarlykLundalek            | PSYCK4F91k  | Aug/19k  | Apr/20k | 8)", imek   |
| KathleenkFerrisk          | PSYCK<8` k  | Aug/17k  | Apr/18k | Full-timekk |
| D` ~ kButlerkk            | PSYCK<8` k  | Aug/17k  | Apr/18k | Full-timek  |
| OwenkDalyk                | PSYCK<8` k  | Aug/16k  | Apr/17k | Full-timek  |
| AlexandrakHak             | PSYCK<8` k  | Aug/14k  | Apr/15k | Full-timek  |
| AlinakProtopopescuk       | PSYCK<8` k  | Aug/14k  | Apr/15k | Full-timek  |
| aylorkHefferk             | PSYCK<8` k  | Aug/14k  | Apr/15k | Full-timek  |
| MelaniekMunroek           | PSYCK<8` k  | Aug/13k  | Apr/14k | Full-timek  |
| rishakLeekHalamayk        | PSYCK<8` k  | Aug/13k  | Apr/14k | Full-timek  |
| CarolynkBlankk            | PSYCK<8` k  | Aug/13k  | Apr/14k | Full-timek  |
| SarahkZanettek            | PSYCK<8` k  | Aug/12k  | Apr/13k | Full-timek  |
| JennakArmientok           | PSYCK<8` k  | Aug/12k  | Apr/13k | Full-timek  |
| Setarehkhoooshmandk       | PSYCK<8` k  | Sept/10k | Apr/11k | Full-timek  |
| JesiquakRapleyk           | PSYCK<8` k  | Sept/10k | Apr/11k | Full-timek  |
| NataliakManayk            | PSYCK<8` k  | Sept/09k | Apr/10k | Full-timek  |
| JehanMoosk                | PSYCK<8` k  | Sept/09k | Apr/10k | Full-timek  |
| JennkDigiandomenicok      | PSYCK<8` kk | Sept/09k | Apr/10k | Full-timek  |
| CrystallkPaolonek         | PSYCK<8` k  | Sept/07k | Apr/08k | Full-timek  |
| ChristinekDennisk         | PSYCK<8` k  | Sept/07k | Apr/08k | Full-timek  |
| DavidkSpeedk              | PSYCK<8` k  | Sept/07k | Apr/08k | Full-timek  |
| AshleekRozonk             | PSYCK<8` k  | Sept/06k | Apr/07k | Full-timek  |
| StephaniekMcArthur-kCHYSk | CHYSk<8` k  | Sept/05k | Apr/06k | Full-timek  |
| PatrickkRyank-ICHYSk      | CHYSk<8` k  | Sept/04k | Apr/05k | Full-timek  |
| C! " kPerkins-kCHYSk      | CHYSk<8` k  | Sept/03k | Apr/04k | Full-timek  |
| MarieGood-kCHYSk          | CHYSk<8` k  | Sept/03k | Apr/04k | Full-timek  |
| ChrissyCerminina-kCHYSk   | CHYSk<8` k  | Sept/02k | Apr/03k | Full-timek  |
| JessicalGray-kCHYSk       | CHYSk<8` k  | Sept/02k | Apr/03k | Full-timek  |
| CarriePosner-kCHYSk       | CHYSk<8` k  | Sept/01k | Apr/02k | Full-timek  |
| KarenkCrow-kCHYSk         | CHYSk<8` k  | Sept/01k | Apr/02k | Full-timek  |
| JenniferMcLaren-kCHYSk    | CHYSk<8` k  | Sept/00k | Apr/01k | Full-timek  |

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|                                         |             |          |         |                 |
|-----------------------------------------|-------------|----------|---------|-----------------|
| Christine Gualtieri-ICHYSk              | CHYSk<8     | Sept/00k | Apr/01k | Full-timek      |
| Carrie Eberly-ICHYSk                    | CHYSk<8     | Sept/00k | Apr/01k | Full-timek      |
| Laura Sowa-ICHYSk                       | CHYSk<8     | Sept/99k | Apr/00k | Full-timek      |
| Ellen Carter-ICHYSk                     | CHYSk<8     | Sept/99k | Apr/00k | Full-timek      |
| Lindsay Lepp-ICHYSk                     | CHYSk<8     | Sept/98k | Apr/99k | Full-timek      |
| Melissa Nikols-ICHYSk                   | CHYSk<8     | Sept/98k | Apr/99k | Full-timek      |
| Sue Zakowski-ICHYSk                     | CHYSk<8     | Sept/98k | Apr/99k | Full-timek      |
| Christine Strecker-ICHYSk               | CHYSk<8     | Sept/97k | Apr/98k | Full-timek      |
| Sonya Patenaude-ICHYSk                  | CHYSk<8     | Sept/97k | Apr/98k | Full-timek      |
| Angel G@ICHYSk                          | CHYSk<8     | Sept/96k | Apr/97k | Full-timek      |
| ara Y earsley (University of Waterloo)k | Honk hesisk | Sept/94k | Apr/95k | Full-timek      |
| Lisa Porter (University of Waterloo)k   | Honk hesisk | Sept/94k | Apr/95k | Full-timek      |
| Laura Belsito (University of Waterloo)k | Honk hesisk | Sept/94k | Apr/95k | Full-timekkkkkk |

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**DIRECTED READING SUPERVISION (UNDERGRADUATE)w**

|                                         |             |          |           |             |
|-----------------------------------------|-------------|----------|-----------|-------------|
| Annelise Wiensk                         | PSYC3P48k   | May/20k  | June/20k  | 8)", imek   |
| Joelle Bracciok                         | PSYC3P49k   | Jan/20k  | Apr/20k   | 8)", imek   |
| Joelle Bracciok                         | PSYC3P48k   | Sept/19k | Dec/19k   | 8)", imek   |
| Owen Dalyk                              | PSYC4P10k   | Sept/16k | Dec/16k   | Full-timek  |
| Victoria Dykstrak                       | PSYC4P10k   | Sept/14k | Dec/14k   | Full-timek  |
| aylor Hefferk                           | PSYC4P11k   | Sept/14k | Dec/14k   | Full-timek  |
| Alina Protopopescuk                     | PSYC4P10k   | Sept/14k | Dec/14k   | Full-timek  |
| Alina Protopopescuk                     | PSYC3P49k   | July/14k | Aug/14k   | Full-timek  |
| Sarah Zanettek                          | PSYC4P10k   | Jan/13k  | Apr/13k   | Full-timek  |
| Jenna Armientok                         | PSYC4P11k   | Jan/13k  | Apr/13k   | Full-timek  |
| Sarah Zanettek                          | PSYC4P10k   | Sept/12k | Dec/12k   | Full-timek  |
| Jenna Armientok                         | PSYC4P11k   | Sept/12k | Dec/12k   | Full-timek  |
| Setareh Hooshmandkk                     | PSYCI4P10k  | Jan/11k  | April/11k | Full-timek  |
| Setareh Hooshmandk                      | PSYCK-<     | Sept/10k | Dec/10k   | Full-timek  |
| Kelsi Cumberlandk                       | PSYCI4P10k  | Sept/09k | Dec/09k   | Full-timek  |
| Natalia Manayk                          | PSYCK-<     | Jan/10k  | April/10k | Full-timek  |
| Jehan Moosk                             | PSYCK-<     | Jan/10k  | April/10k | Full-timek  |
| Jenni Digiandomenicok                   | PSYCK-<     | Jan/10k  | April/10k | Full-timek  |
| Natalia Manayk                          | PSYCI4P10k  | Sept/09k | Dec/09k   | Full-timek  |
| Jennifer Digiandomenicok                | PSYCI4P10k  | Sept/09k | Dec/09k   | Full-timekk |
| Jehan Moosk                             | PSYCI4P10kk | Sept/09k | Dec/09k   | Full-timek  |
| Katie Sykes @ Child and Youth Studiesk  | CHYSKE'     | Jan/09k  | April/09k | Full-timek  |
| Katie Sykes-Child and Youth Studiesk    | CHYS3V90k   | Sept/08k | Dec/09k   | Full-timek  |
| Crystal Paolonek                        | PSYCI4P10k  | Jan/08k  | Apr/08k   | Full-timek  |
| Christine Dennisk                       | PSYCI4P10k  | Jan/08k  | Apr/08k   | Full-timek  |
| Stefanie McArthur k                     | PSYCI4P10k  | Sept/06k | Dec/06k   | Full-timek  |
| Marie Good-Child and Youth Studiesk     | CHYS3V90k   | Jan/04k  | Apr/04k   | Full-timek  |
| C!" Perkins-Child and Youth Studiesk    | CHYS3V90k   | Jan/03k  | Apr/03k   | Full-timek  |
| Lindsay Lepp-Child and Youth Studiesk   | CHYSKE'     | Sept/98k | Dec/99k   | Full-timek  |
| Melissa Nikols-Child and Youth Studiesk | CHYSKE'     | Sept/98k | Dec/99k   | Full-timek  |
| Sue Zakowski-Child and Youth Studiesk   | CHYSKE'     | Sept/98k | Dec/99k   | Full-timek  |

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**3. External Examiners for Ph.D. thesis**

- K University of Guelph, Department of Family Relations and Nutrition, January, 2005
- K Wilfrid Laurier University, Department of Psychology, September, 2008
- K University of British Columbia, Faculty of Education, February, 2009
- K York University, Department of Psychology, October, 2011
- K York University, Department of Psychology, March, 2014
- K Queen's University, Department of Psychology, December, 2015
- K Queen's University, Department of Psychology, 2020

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**4. External Examiners for Master's thesis**

- K Wilfrid Laurier University, Department of Psychology, December, 2004
- K Wilfrid Laurier University, Department of Psychology, January, 2003
- K Wilfrid Laurier University, Department of Psychology, August, 2002
- K Wilfrid Laurier University, Department of Psychology, May, 2002
- K Brock University, Faculty of Education, August, 1997
- K Wilfrid Laurier University, Department of Psychology, September, 2000

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**E. ASSOCIATION MEMBERSHIPS**

- K 8th Grade Society
- K American Psychological Association
- K New York Academy of Sciences
- K Society for Research in Child Development
- K Society for Research in Adolescence
- K Canadian Psychology Association
- K International Society for the Study of Self-Injury

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**F. WORKSHOPS/COURSES ATTENDED**

1. Workshop at Brock University @ April 2017, 2018, 2019
2. Workshop at Brock University @ April 20-22, 2015
2. Salimetric SRCDI Preconference Workshop @ Spitt Camp, Seattle, WA, April 7, 2013
3. Audited Longitudinal Research Methods Graduate Statistics Class, PSYC 7V03, Fall, 2011
4. University of Kansas Stats Camps:
  - Structural Equation Modeling: Foundations and Extended Applications @ June 7-11, 2010
  - Structural Equation Modeling: Advanced Longitudinal Modeling, June 14-18, 2010
5. SPIDA, York University, Growth Curve Modeling course, 2007

w

**E. UNIVERSITY AND COMMUNITY SERVICE****at University Service:**

- K Co-Director of the Lifespan Transdisciplinary Hub, 2013 @ present
- K Member of the CIHR Doctoral Adjudication Committee, 2016
- K Member of the SSHRC Doctoral Adjudication Committee @ 2015, 2017, 2018
- K SSHRC % Workshop Panel Member, 2017
- K Associate Director @ Canadian Centre for Lifespan Development Research, 2007 @ present
- K Member of Advisory Committee for the Brock University/Owl Children, Youth and the

k

Media”group, 2003-2013

- K Member of Committee Ranking Graduate SSHRC applications, 2009-2010
- K Member of Promotions and tenure Appeal Committee, 2007-2008
- K Director, Brock Research Institute for Youth Studies, 2001-2007
- K Member of University Search Committee for E- Learning Advancement 2006-2007
- K Member of Research Board, University Committee on Research Grants Program, 2003-2005
- K Member of Canada Research Chair in Youth Wellness Selection Committee, 2004-2005
- K Asco-principal researcher of the CFI grant for the Lifespan Development Research Centre, collaborated with Drs. S. Segalowitz and J. Dywan, as well as the Development Office, on finding donors for the building.
- K Adjudicator for Research Grants in Lieu of Salary, 2003-2005
- K Member of Brock/CIHR Internal Adjudication Committee, 2003
- K Member of University Research Committee, 2000-2001
- K Member of Senate, 1997-2000
- K Chair of Committee on Computing and Communications Policy, 1999-2000
- K Member of Committee on Academic Policy, 1999-2000
- K Vice-Chair of Academic Program Committee, 2002, 2003
- K Vice-Chair of Research Committee, 1997-1998
- K Member of Accessibility Committee, 1997-1998
- K Member of Adjudication Committee for the President’s Funds for the Advancement Scholarship, 1997

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#### **Work Experience**

- K Chair of Hiring Committee for Community Psychology Position, 2020
- K Associate Chair of Psychology Department, 2015 to 2018
- K Member of Graduate Committee of Psychology Department, 1998, 2000, 2002, 2010 to 2018, 2020
- K Member of Graduate Admissions Committee of Psychology Department, 1998, 2000, 2002, 2010 to 2018, 2020
- K Member of Committee Ranking Psychology graduate SSHRC applications, 2010, 2016, 2017, 2018
- K Colloquium Coordinator, Psychology Department, 2009-2010
- K Chair of Space Committee, Child and Youth Studies Department, 2003, 2008
- K Member of Rules and Procedures Committee of Child and Youth Studies Department, 2003-2009
- K Member of Vision Committee, Child and Youth Studies Department, 2002-2004
- K Representative for Life-Span Development Division of Psychology Department, 1998/1999, 2000/2001, 2002/2003, 2010/2011, 2013/2014
- K Organizer for CHYS Colloquium Series, 2002/2003
- K Member of Graduate Committee of Child and Youth Studies Department, 2002, 2006
- K Co-Chair of Child and Youth Studies Developmental Psychology Search Committee, 2002/2003
- K Chair of Graduate Admissions Committee, Child and Youth Studies, 2001, 2002



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- K Co-organizer of Youth Engagement Committee for Lifespan Centre, 2016 to 2017.
- K Co-applicant of community grant application to MCYS Suicide Prevention/Intervention 2014
- K Member of Niagara Suicide Prevention Coalition, 2006-2013
- K Chair of Research Committee of the Niagara Suicide Prevention Coalition 2009-2011
- K University Co-Director of the SSHRC/YLC-CURA Beyond the activities already outlined in this vitae, I have supervised in my role as University Director (along with the Community Director), collaborations with 5 university faculty and 2 community organizations (e.g., District School Board of Niagara, Niagara Regional Public Health Department, Niagara Catholic District School Board, Niagara Centre for Youth Care, YMCA, etc.), 2 student newsletters, 20 refereed conference presentations, 7 non-refereed conference presentations, 2 conference workshops, 2 invited talks, 2 grants, 2 student theses, 5 student projects (involving 27 students), 10 curriculum links between the YLC-CURA and university departments, 2 school presentations, 6 regional meetings, 2 community organization presentations, 2 community requests for access to the YLC-CURA database, 2 community workshops, 2 program evaluations, 5 student grants, 10 membership meetings, and many media interviews, press releases, and newspaper articles. I was also the Chair of the YLC-CURA Proposal Review Committee, which reviewed over 100 student and faculty proposals to access the YLC-CURA database.
- K Research Partner on Niagara Regional Police Department Youth Division's Attorney General Grant
- K Member of Advisory Council, General Arts and Science Program, Niagara College (2005-2007)
- K Advisory Committee Member for Action Read Community Literacy Centre, Guelph, ON, 1995-1996
- K Research Partner on the CATC Group at the Waterloo County Board of Education
- K Consultant for the Waterloo County Board of Education on destreaming, 1995-1996
- K Workshop Leader for Waterloo County Board of Education, Early Childhood Education Conference; Learning for Life Conference
- K YLC-CURA Newsletters: (quarterly from February 2000 to 2007)
- K Examples of Media Attention for our lab's research: My research has been profiled in (add social media attention; k8# ~0) ~ - ,8" - 8~0B, ' . 8& 0.! 1 ~" . ~2- 8~0' - ~" . 1#". ~ -# ~ 0, . ~" . ~<~2 0\*~ &. ~2/~/>~ . 8& 0. ~ 2- #~! 0\*~ &" &. ~" ,B, ' . 8& K Gamepro.com; k=87 +, ~#>8#2&C\* 8" #~2; ;D ~ C =". 8+ ~#, + "C/ , 8" 2- 8~ C3 ~>° = ~D ~C! ~ <°2 ; 2°" #C .! ~ . 7 ~ =82" ~ C.! 1 ~" . ~2- 8~ C\$ & 7 8" 8" 08+ #~°X )°# ~ & ~ 8" Leaderpost.com; kCanoe.ca, kDeMorgen.be, k 7 ~#. ° ~ . ! 828- . °2 ~ 8. ° 8" 0<°2 \*° 2\*~ &. °2<°2 01+ ~~~~~ % ~ & #0.! ~ . 7 ~ 8&%° 09 ~ &+ 1+ ~~~~~ . ~" 0-°# ~ \*° - °D ~ 0\*° . . °" 0) ~ ~ # />~ 0.! ~ %&°" \$: # ~ , k usconcitizen.com; kGamepolitics.com; kSteampowered.com; kHardforum.com; k Computerworld; kHardop.com; kWan2sawa, k\* 8" #~2; ;D ~ C =". 8+ ~#, + "C/ , 8" 2- 8~ C3 ~>° = ~D ~C! ~ <°2 ; 2°" #C .! ~ . 7 ~ =82" ~ K\$ & 7 8" 8" 08+ #~°X )°# ~ & ~ 8" Leaderpost.com; kCanadaeast.com, and k" the Niagara Region media outlets, etc. I have been interviewed by k#8. 3-# ~ 0E\$IC -°# ~ \*° - °D ~ KCKML Radio, kSt. k Catharines Standard, kBrook External Relations oronto kStar kCBC Radio, kWMAQ-CHIK (NBC), etc.
- K Examples of non-academic presentations: 9 Conference on the Digital Divide; YMCA

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Niagara, National Council on Ethics in Human Research Conference, Western University REB, International Reading Association, Niagara Region Public Health (3x), E.L. Crossley Secondary School OAC Philosophy Class, School Councils, Niagara Secondary School Parent Information Nights, E.L. Crossley Secondary School Staff Meeting, Niagara Elementary School Parent Information Nights (3x), Board of Trustees Meetings (3x), School boards (14x), etc. My students have presented our research to the community, such as at the Injury Prevention Conference (Hamza), Mental Health and Bullying Conference (Hamza), YMCA Toronto (Good, 2x), and Community Research Café in Niagara Falls (Adachi).



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k 2012k k ReviewerforBiologicalPsychologyk

k 2011k k ReviewerfortheJournalPsychophysiologyk

k 2010k k ReviewerforthejournalExperimentalBrainResearchk

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w w AndrewArmstrongk(2019-2020)k

w w SaraStephensonk(2017-2018)kk k

k k CarolynHarek(2017-2018)k

k k KatarinaMcKenziek(2017-2018)k

k k SahithyaBalakumark(2016-2017)k

k k CassandraGordonk(2016-2017)k

k k LaceySherkk(2014-2015)k

k k NataliKubishynk(2014-2015)k

k k AllanCampopianok(2012-2013)k

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k k ValerieRothwellk(2018-present)k

k k WilliamJannsenk(2017-2019)k

w w TabithaMethotk(nowJones)k(2013-2015)k

k k MatthewGreenk(2011-2013)k k w

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**Ph/D/w**

w w JenniferRotersk(2019-present)k

w w SeanRobbk(2015-2020)k k

k k TabithaJonesk(2015-2016)k

w w AngelaDzyundzakk(2009-2013)k

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64. kArmstrong, k@Murphy, k@Molnar, k@Kubishyn, k@BISherk, k@k electrophysiological correlates of perfectionism: error-related negativity and feedback-related negativity and their relationships with self-oriented and socially prescribed perfectionism. kAccepted for presentation at the Society for Psychophysiological Research, Vancouver (virtual), k 2020k
63. kMasaki, k@Hirao, k@Murphy, k@Golkork" # encouragement from your leader enhances error monitoring. kPresented at the Society for Psychophysiological Research, Quebec City, k 2018k
62. kMcKenzie, k@Murphy, k@What's Lost? FRN amplitude changes due to sleepiness and probability of winning in a gambling task. kPresented at the Society for Psychophysiological Research, Quebec City, k 2018k
61. kGordon, k@Murphy, k@Molnar, k@B Tekok-Kilic, k@Pupillary responses to affective stimuli" k& meta-analytic review. kPresented at the Society for Psychophysiological Research, Quebec City, k 2018k
60. kHare, k@Morogieva, k@Nichol, k@Gordon, k@Chiconski, k@Sun, k@Murphy, k@ Tekok-Kilic, k@The relationship between temperament and physiological reactivity to emotional stimuli: k& pupillometry study. kPresented at the Society for Psychophysiological Research, Quebec City, k 2018k
59. Balakumar, S., **Murphy, T.J.**, Segalowitz, S. The effect of sleep deprivation on inter-trial coherence of the P100, ERN and CRN. Presented at the Society for Psychophysiological Research, Vienna, k 2017k
58. Balakumar, S., Murphy, T. I., Segalowitz, S. Keeping it together: The effect of sleep deprivation on inter-trial coherence. Presented at the Canadian Sleep Society Conference Calgary 2017.
57. Hirao, T., **Murphy, T.J.**, Masaki, H. An event-related potential study of implicit learning using the Month Hall dilemma task. kPresented at the Society for Psychophysiological Research, Seattle, k 2015k
56. kCampopiano, A., **Murphy, T.J.** The effect of sleep deprivation on the face-sensitive N170: Can 20 hours of wakefulness interfere with perceptual binding? Computing Ontario Research Day (SHARCnet conference, 2014) (presented as a computational model for a technical conference on EEG analysis)
55. Hirao, T., **Murphy, T.J.**, Masaki, H. Change or stick? Anticipation processes associated with subjective and objective winning probability in a Monty Hall Dilemma task. kInternational Organization of Psychophysiology, Hiroshima Japan, k2014k
54. Campopiano, A., **Murphy, T.J.** The effect of sleep deprivation on the face-sensitive N170: Can 20 hours of wakefulness interfere with perceptual binding? Society for Psychophysiological Research, Atlanta, 2014



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 (905) 688-5550 ext. k+ " k

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**EDUCATION**

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1988-1994 k k Ph.D. Linguistics. University of Massachusetts-Amherst. k

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Summer 1989 k k Linguistic Institute (Linguistic Society of America). k  
 k k k University of Arizona, Tucson, k6, k

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1987-1988 k k Qualifying Year in Linguistics. McGill University. k

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1984-1987 k k B.Sc. Physiology. McGill University. k

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**RESEARCH INTERESTS**

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- K Cognitive neuroscience of language k
- K Individual differences in language processing k
- K Role of emotion in language processing k
- K Noisy channel models of language comprehension k

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**Current collaborators**

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- K Ted Gibson, Dept Brain and Cognitive Sciences, 355, k
- K Louis Schmidt, Dept of Psychology, Neuroscience and Behaviour, McMaster University. k

ACADEMIC APPOINTMENTS

|                     |   |   |                                                                               |
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**PUBLICATIONS**

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**RESEARCH FUNDING AND FE,, OWSHI' Sk**

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2016>k k Social Sciences and Humanities Research Councilk

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Q' ea" elnotekHtkHkGartGYMh"lna4 edkHk#1kd' MloadedIartGYkGk( prGNGek2005korkHljournalk° 8i~ 8~d Languagek(seek thelinkforScience Direct's Top 25 Hottest Articles;[http://top25.science-direct.com/index.php?journal\\_id=009! !"#](http://top25.science-direct.com/index.php?journal_id=009! !)).k nk addition,kitkwas the#2kdownloadedarticlefor thesameperiodfor allkArtslandHumanitieskjournalskpublishedk, Elsevierk(e.g.,kk Cognition, Journal of Memor° and Language, etc.).k

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k k %258H/46k<98H>16;95290k08=03?=3k@9;:<64601290  
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k k \$H<20@2k=882@=0k@9::82@=0k5 9?2 k @4;2B97 @ =156< 0276<1250D  
k  
2016>k k !"#% "#&'&(\$) H\*+\$#,#&(-&(&\$. "/ " !\*"#  
H<506<142:;<=0k% =860B k93<=;k  
k k %258H/9<B120546W9<8B  
k k \$I 988=E9<=50k9F60E2<6@50<<@ 2EE60E  
k k Q,4CC32.00kk  
k  
2007k k " \$)\$ \$ !\*)\$,#! 0!. !"#I\$,#!  
kkk k ! 6=B6<k1 ::9<5?025C ?0B1D ?0B20k>918 616=<@40><=15<?@k?<6  
k k %258H/106?<9:4C1298932@0861523=51908=03?=3k<9@6112R3  
A;9?05 #k Q12,k332.00k  
k  
2001G~k *Social Sciences and Humanities 2 esearch Council*k  
k k StandardResearchGrantk  
k k Title Locatinglogicallysemanticsinkthetemporalldynamicsk  
oflanguagekcomprehensionk  
k k (Co-applicantHithk7 arstenkSteinhauerlandkohnk rurySk  
AmountQ Q124,k2"" .00k  
k  
2006>k k !"#% "#&'&(\$) H\*+\$#,#&(-&(&\$. "/ " !\*"#%k  
k k " 5=0B=4B616=<@4<=0k  
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A;9?05 #k Q145,k627.00k  
k  
2004>2005k " &!.&0!. -&(&\$. "/ ! 3\$4\*\$4&05#) \$) B.\$# 6&7 " !%%\$8!.\$,#I&(&\$. "/  
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k k A;9?05 #k Q7500.00k  
k  
2007k k 6\$,\*.\$% "#&'&(\$) 3'4#&.&.#'4-&(&\$. "/ " !\*"#%  
k k 5"08 I 18 616=<@4:=@25067689::605 k ?0Bk  
A;9?05 #k Q20,k00.00k  
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B216=10k  
k  
1CG>1CC# !)( <!\*. %\$ !,+,\$,#!' )& "/&."/&\*( &,%#)&>%\$&"/&."/&A", - -H915B9@59k=8  
/ 6889K142k  
k  
"?;6< kCEC ! 203?215E@260C1A;6<2@k @498=<142:  
k  
1CEE1CE# H6:=<5;6059>k 203?2152k@2<k 6=k 6889K142kk  
^ 0276<1250D =11=@4?1655,46<15k

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- K @59E2013:k &<, <<%#&#4\*#(,#"(5 , -&(&\$."/ , 7\$.) @A;9?05 #Q1,6E0.k
- K @0612013:kK\*+\$#,#&(-&(&\$."/ !'(#,\*,& A;9?05 #Q2,400.k  
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- K A?3?152012:kB- 6 3- " B.#)4#4 \*) ( @A;9?05 #Q2,000.k
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- K H6@6;E612011>B.!?" @'#1&.(#,#)I\$""&+&', \*) kB@ - . A;9?05 #Q4,200.k  
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- K H6@6;E61200C:H\*+\$#,#&(-&(&\$."/ !'(#,\*,&" !'0&.&"& .\$', 0!. /, 3 -&(&\$."/ / \$A@  
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- K 3E<&.#&"B.? ( C.14.\$+ 18 616=<@411215=10?0B203809K1B6>?0@5D  
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oK " :<203? ?;:6< 12007,k200E1200C12010,k2011,k2012,k2013k  
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**INVITED PRESENTATIONS**  
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>91546?60=1A" 7 k01525?k01NNeurosciencek(5,3\$! \$seminarkseries.k

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I=0=B@

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HK276B2F @ @A?312014Dk /&', (. \*,\*,& #' )#('!\*(& <.!&((#4.1407256B<61605=5290546H6:5k  
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**REFEREED INVITED CONFERENCE PRESENTATIONS: TALKS**

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k

HK276BZF @187 =C2015D@k)#I#)\*\$9#00&.&'&# (&,'&'&#&,&.<.&,\$,#!@107256B<61605=52001546  
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I =0=B@k

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HK276B9F @ @ 194288295 @ =3?Q> 6=?7=297 @9 k =?; 9' @7 =@2005D@/&#',&.0\$"&0 (A',SE0 (&+\$',#"( \$) <(A"/!%#4\*#(,#"\$S' #!&(,#4\$,#!'!0 !<&,\$,!. (!!<&@F:6<k<616056B-154624k; :66520319>1546W61k 9=1k 90>6<60@0k 9<;=8k 203?2152@2,90 k <=16< 0276<129C F=0@9?76k =0=B@

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k

HK276B9F @ @ @ 6E<?=-1CC\*D@ #(!!\*.(& C.!"/((#4.kC(A"/!%#4\*#(,#"(!,.( @k-61605=52901546k H6:=<5;6059>1 203?2152@D276<129Ck 55=Kk 55=Kk =0=B@

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k

HK276B9F @ @ @0?=<@CCD@!<#"\$\$#(\$,## H#)# \$) +\$%%.!. H-61605=52901546k 203?2152k@ "9@26@CA;6<2@91kA03686k A@

k

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**REFEREED CONFERENCE PRESENTATIONS: POSTERS**

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A:4=12-9k 42@=3k! @

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k

**PUBLIC LECTURES/WRITING/OpEd PIECES/ ^EDIA OUTREACH/COVERAGE**

w

2' 2' w

w

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• K k

- K D/&. %!8&!) 5\$#%\$A?3?15d7,2020DS/ 2<156<190T@98?;0k<6>86@520k k<9>611290k8 1?@620546K=J619>2 69<36 89C B=0BI F4 H@455:#8KKK@46389E6=0B;=209;82>82<15 :6<1908<52@86>86@5203;C >6@605?@.6+0BK4=52>@=89K25454206K>:=<5k

• K k

- K !,&.\$,#!'\$% / \$A!0. #.%\$) F!+&' #' "#&'&F!+&' #' "#&'& B.!"?\* . k 4K=1207256593276=1E<265=8k=E9?;C k@=<620d@2601@k=k=C9>201:2<2069>0364K9;60 k 20d@2601@93<=;1146<6=k <9@k 0276<1250@90520k6<1?203k=@=B6;166?B2620k%07 k >268k

2' ~ 9w

k

- K D/&" !'1&.(,\$,#!' "\$'\$)\$ \$206k9201CD@6=85k+0B7 6B2@206@5200 [https://theconversation.com/from-the-penalty-box-to-the-ballot-box-our-brains-are-hired-for-tribalism-GG~"\\*k](https://theconversation.com/from-the-penalty-box-to-the-ballot-box-our-brains-are-hired-for-tribalism-GG~)  
*Tribalism, from the penalty box to the ballot box: I am not a chimp. And neither are you. Let's do better.* <https://www.cbc.ca/player/play/153496~1~7655k>
- K D/&H\$+#%,' <&"\$,!A, " \$,/\$.#&( ,,\$')\$) \$A:<2829201CD@6K1:=:6<k :0Bk26@6
- K [https://www.stcatharinesstandard.ca/opinion-story/\\*!~ 1"!\\*! -tribalism-from-the-penalty-box-to-the-ballot-box/k](https://www.stcatharinesstandard.ca/opinion-story/*!~ 1)

k

- K " B" .)\$#! B',\$.#! D/#(5!.'#4 2056<726K2544915W62d 460k \$206kd0,201CDH=<7kd0k20?56k=<JD <https://www.cbc.ca/player/play/153496~1~7655k>

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- K 4;49D\$%?)#! B,,\$? ?D/&-#"? . #88!( /!7 2056<726K254491582@k 2EE90k \$206k\*9201CDH0k20?56k=<JD <https://www.1310neH.com/audio/the-ricU-gibbons-show/k>

k

- K D/&. %!8&!) 5\$#%\$A:<2825,201CD@ 6556595466B25k<63=<B20@9<<6@5k=0Bd5=52152@1 ?16B2k<6160520398252@=8=8C1d <https://www.theglobeandmail.com/opinion/letters/article-april-25-most-appointees-Here-not-liberal-party-donors-plus-other/k>

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2018w

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- K B.!?" 6&7(1\$' From Germany to Canada: Students connect in Brock lab <https://www.brocku.ca/news/2018/04/25/from-germany-to-canada-students-connect-in-brock-lab/>

- K [https://brocUu.ca/brocU-neH /201"/12/from-germany-to-canada-students-connect-in-brocU-lab/k](https://brocUu.ca/brocU-neH /201)
- K *B.!"? 6&7(1SLinguistics, neuroscience and cognitive psychology come together in Brock lab"*  
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1@499&80H1C@4989966?<91@260@0&K':66@4H=549893C@D
- K [https://brocUu.ca/brocU-neH /201"/04/linguistics-neuroscience-and-cognitive-psychology-come-together-in-brocU-lab/k](https://brocUu.ca/brocU-neH /201)
- K *D/&. %!8d\$') 5\$#%A, +<%#0542190>820106K18655&2056<726K&6B k=1k=060=;:8619>k=0k  
201:2<=5290&K9;=0K49k=B6 125&7 Cl=B72@K=H\$Never fit in. Make yourself visible to you.  
Find other people who see you. And hang on."*
- K [https://www.theglobeandmail.com/neH /national/amplify-Here-stucU-in-our-echo-chambers-Hith-no-Hay-out/article! 1"! 6! 11/k](https://www.theglobeandmail.com/neH /national/amplify-Here-stucU-in-our-echo-chambers-Hith-no-Hay-out/article! 1)

k

**2017w**

k

- K *" B" .)\$#! B',\$.#! D!)\$A18@0?=<02017D@056<726K&254191&A;=0B=H-6>>k-E9?&W9;60M k  
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k

- K *F!+&'=( 5\$."/ !' F\$(/#4,! >6#\$4\$. \$ 3)#,#! \$@0?=<02017D@:66@4B68276<6&K;=<@4  
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**2016w**

k

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k

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**2014w**

k

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k

**2013w**

k

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k  
**PROFESSIONAL EXPERIENCE**

**Teaching**

k  
~<9@k 0276<12kC

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k  
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k k k

k  
7 @ 288 0276<125C

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k k k  
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k

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k

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2020Dk

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A13=~~9H~~=<Bk

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k

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3'/\$'"&(/& 3E<.&((#!'!0 3!'!+!,!. &'(#,#J\$,#!' #' B1\$.#&"!,+J&\$') #'  
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A=89H6=00k

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AE=BA @2015D@ ' &E<%!.S,!.A\*)A !0, /& .!%&0, /& 3'4%#(/%\$'4\*\$4&# %8&.\$, #3#8A\$' <&!<%&  
0!.+ ,/&#.,.)#,#!'\$%0"\*%, \*.\$%I'&.(,#!'\$% "'!(.,\$#,( .kk

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: 9@BA @2014D@ /&C%\$A&. I#)&!4\$+&0!. %&\$. #'43'4%#(/k

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W=039 @2013D@ !..&," #I& &&)8\$"#) , "G\*#(#,#!'!0 3'4%#(/, ., #"%&A" /#&(&, )%\*, 3&\$.&.(.  
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@K=E<695 @2013D@ (\*A !0 '\$, #I&\$') '! 8\$, #I&(<&\$?&.(\*(&!0 "'!%%"! "\$, #!'k

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A8146497 @2013D@ /&.!%&0 !.\$%" !..&," #I& &&)8\$"#' 3. " %\$(./!+(>!+<%#"#, 3E<%#"#,  
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k

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k

@=0k <2E6 H' TI I4HI0kk ' #I&,(#4\$,#!'!0 33. 3\$8 \$') 3-C3\$8 0#%, &.#4  
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k  
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H' TI k/ Clk ' &%&",".</A(#!%!4##S%&,(#4\$,#!'!0 '#(A "/\$"&%  
(&',&'&(\$, /& /&\$) 6!\*' . A901@54612201E>1Ck <9@k 0276<12Bk  
7 ==15<2@4E276<12C

k  
@=0=k <26lk

H' TI k/ Clk ' &%&",".</A(#!%!4##S%&,(#4\$,#!'!0 '#(A "/\$"&%  
(&',&'&(\$, /& < !#, !0 &..!. A901@54612201E>1Ck <9@k 0276<12Bk  
" k7 ==15<2@4E276<12C

k  
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50`8 k/ C0/Clk ' &%&",".</A(#!%!4##S%&,(#4\$,#!'!0 '#) #1#)\*\$%  
)#00&.&'&#( (&+\$, #'<.! "&((#4>D/&.!%&0) #(<!(#,#!'\$%\$00&,"  
A901@546122017>1E k <9@k 0276<12C

k  
A=<;9026k 4=0k

A!" I k/ C0k ' &%&",".</A(#!%!4##S%&,(#4\$,#!'!0 '#(A "/\$"&%  
(&',&'&(& A901@546122017>1E k <9@k 0276<12C

k  
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!45? k/ 01k &',&'&<.! "&((#4 \$) \$00&,"A901@546122017>1E k  
~ <9@k 0276<12C

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)#00&.&'&#( (&',&'&<.! "&((#4>D/&.!%&0) #(<!(#,#!'\$%\$00&,"  
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OTHER PROFESSIONAL ACTIVITIES

Member Editorial Board

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Reviewer

**Funding Agencies:** k5 =5290 k8 @260 @0?0B=5296" A1kA?15<2 k0 @260 @0?0B=52905 =5?<k8  
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**Memberships in research institutes:**

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**Memberships in professional organizations:**

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Cognitive Science Society

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This is a draft version only. Do not submit to any funding organization. Only the final version from the History page can be submitted.

## **Dr. William Michael Hall**

Correspondence language: English

Sex: Male

Date of Birth: 7/04

Canadian Residency Status: Canadian Citizen

Country of Citizenship: Canada

## **Contact Information**

The primary information is denoted by (\*)

### **Address**

Primary Affiliation (\*)

1812 Sir Isaac Brock Way  
St. Catharines Ontario L2S 3A1  
Canada

### **Telephone**

Mobile (\*)                      778-9682079

### **Email**

Work (\*)                         whall@brocku.ca

This is a draft version only. Do not submit to any funding organization. Only the final version from the History page can be submitted.



Protected when completed

## Dr. William Hall

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### Language Skills

| Language | Read | Write | Speak | Understand | Peer Review |
|----------|------|-------|-------|------------|-------------|
| English  | Yes  | Yes   | Yes   | Yes        | Yes         |

### Degrees

- 2012/9 - 2016/8      Doctorate, Doctor of Philosophy in Psychology, Social Psychology, University of British Columbia  
Degree Status: Completed  
Supervisors: Toni Schmader
- 2010/9 - 2012/8      Master's Thesis, Master of Arts in Psychology, Social Psychology, University of British Columbia  
Degree Status: Completed  
Supervisors: Toni Schmader
- 2009/5 - 2005/9      Bachelor's Honours, Bachelor of Arts in Psychology, Psychology, University of Waterloo  
Degree Status: Completed  
Supervisors: Aaron Kay

### Recognitions

- 2017/8 - 2019/8      SSHRC Postdoctoral Fellowship - 90,000  
Social Sciences and Humanities Research Council of Canada (SSHRC)  
Prize / Award
- 2013/9 - 2016/8      Joseph-Armand Bombardier Canada Graduate Scholarships Program Doctoral Scholarships - 105,000  
Social Sciences and Humanities Research Council of Canada (SSHRC)  
Prize / Award
- 2013/9 - 2016/8      University of British Columbia Fellowship - 72,000  
University of British Columbia  
Prize / Award
- 2012/9 - 2013/9      Clara Mayo Fellowship - 1,000  
Social Sciences and Humanities Research Council of Canada (SSHRC)  
Prize / Award
- 2012/9 - 2013/8      University of British Columbia Fellowship - 16,000  
University of British Columbia  
Prize / Award

### User Profile

Fields of Application: Communication and Information Technologies, Organizational Structures, Social Solidarity

Areas of Research: Gender Relationship, Social Contexts, Social Contract and Social Justice, Stereotypes

Research Specialization Keywords: Diversity, Gender, Inclusion, Prejudice, Stereotyping, Workplace culture

Research Disciplines: Psychology

## Employment

|                 |                                                                                                                                                                  |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2019/7          | Assistant Professor<br>Psychology, Brock University<br>Full-time<br>Tenure Status: Tenure Track                                                                  |
| 2017/8 - 2019/7 | Social Sciences and Humanities Research Council (SSHRC) Postdoctoral Fellow<br>Psychology, University of Toronto<br>Full-time<br>Tenure Status: Non Tenure Track |
| 2016/9 - 2017/8 | Postdoctoral Fellow<br>Psychology, University of British Columbia<br>Full-time<br>Tenure Status: Non Tenure Track                                                |
| 2017/1 - 2017/5 | Instructor<br>Sauder Business School, University of British Columbia<br>Part-time<br>Tenure Status: Non Tenure Track                                             |
| 2017/1 - 2017/5 | Teaching Fellow<br>Psychology, University of British Columbia<br>Part-time<br>Tenure Status: Non Tenure Track                                                    |
| 2010/9 - 2013/8 | Teaching Assistant<br>Psychology, University of British Columbia<br>Part-time<br>Tenure Status: Non Tenure Track                                                 |

## Affiliations

The primary affiliation is denoted by (\*)

|                 |                                                                 |
|-----------------|-----------------------------------------------------------------|
| (*) 2017/8      | SSHRC Postdoctoral Fellow, Psychology, University of Toronto    |
| 2016/9 - 2017/8 | Postdoctoral Fellow, Psychology, University of British Columbia |
| 2017/1 - 2017/5 | Instructor, Psychology, University of British Columbia          |
| 2010/9 - 2016/8 | Graduate Student, Psychology, University of British Columbia    |

## Research Funding History

### Awarded [n=1]

|                 |                                             |
|-----------------|---------------------------------------------|
| 2017/3 - 2024/3 | SSHRC Partnership Grant, Grant Co-applicant |
|-----------------|---------------------------------------------|

**Funding Sources:**

Social Sciences and Humanities Research Council of Canada  
(SSHRC)  
Total Funding - 2,500,000

**Courses Taught**

- 2017/01/01 - Instructor, University of British Columbia  
2017/05/01 Course Title: Gender and diversity in leadership  
Course Topic: This course provided an overview of empirical research on gender and diversity in the workplace.  
Course Level: Undergraduate  
Number of Students: 40  
Guest Lecture?: No
- 2017/01/01 - Teaching fellow, University of British Columbia  
2017/01/31 Course Title: Social and Personality Graduate Proseminar  
Course Topic: This course provides an overview of social and personality psychology.  
Course Level: Graduate  
Number of Students: 10  
Guest Lecture?: No
- 2016/11/01 - Instructor, University of British Columbia  
2016/11/01 Course Title: Introduction to Psychology  
Course Topic: Personality Psychology  
Course Level: Undergraduate  
Number of Students: 250  
Guest Lecture?: Yes
- 2016/10/03 - Instructor, University of British Columbia  
2016/10/03 Course Title: Introduction to Psychology  
Course Topic: Emotion  
Course Level: Undergraduate  
Number of Students: 250  
Guest Lecture?: Yes
- 2013/07/08 - Instructor, University of British Columbia  
2013/07/08 Course Title: Introduction to Psychology  
Course Topic: Stereotype threat  
Course Level: Undergraduate  
Number of Students: 300  
Guest Lecture?: Yes

**Student/Postdoctoral Supervision****Bachelor's [n=3]**

- 2014/1 Rylan Simpson (Completed) , University of British Columbia  
Co-Supervisor Student Degree Start Date: 2010/9  
Project Description: I supervised this student in a year long directed studies project in which they completed an empirical research study.

2013/9  
Co-Supervisor Clare van Norden (Completed) , University of British Columbia  
Student Degree Start Date: 2012/9  
Project Description: I supervised this student in a year long directed studies project in which they completed an empirical research study.

2013/9  
Co-Supervisor Angela Mann (Completed) , University of British Columbia  
Student Degree Start Date: 2011/9  
Project Description: I supervised this student in a year long directed studies project in which they completed an empirical research study.

### Master's non-Thesis [n=1]

2018/5 - 2018/8  
Co-Supervisor Apoorva Mittal (In Progress) , University of Toronto - Rotman School of Management  
Student Degree Start Date: 2017/8  
Project Description: I supervised MBA students in a 4 month research project.

## Mentoring Activities

2017/9 Postdoctoral Fellow, University of Toronto  
I took a leadership role in Dr. Page-Gould and Dr. Kang's labs where I mentored several undergraduate and graduate students while they completed research projects.

2010/9 - 2016/8 Graduate student, University of British Columbia  
I took a leadership role in Dr. Schmader's lab where I mentored several undergraduate students while they completed research projects.

## Journal Review Activities

2019/10 Personality and Social Psychology Bulletin  
Number of Works Reviewed / Refereed: 2

2019/3 Social and Personality Psychology Compass  
Number of Works Reviewed / Refereed: 2

2018/6 Frontiers  
Number of Works Reviewed / Refereed: 2

2018/6 British Journal of Social Psychology  
Number of Works Reviewed / Refereed: 1

2016/9 Reviewer, Personality and Social Psychology Bulletin  
Number of Works Reviewed / Refereed: 1

2016/8 Reviewer, Journal of Personality and Social Psychology  
Number of Works Reviewed / Refereed: 4

2016/5 Reviewer, Psychological Science  
Number of Works Reviewed / Refereed: 1

2016/5 Reviewer, Personality and Social Psychology Review  
Number of Works Reviewed / Refereed: 1

2015/3 Reviewer, Journal of Experimental Social Psychology  
Number of Works Reviewed / Refereed: 4

## Community and Volunteer Activities

- 2011/8 Co-founder, Pacific Conference for Prejudice and Culture  
I co-founded and organized the Pacific Conference for Prejudice and Culture (<https://pccpmeeting.wordpress.com/>).
- 2017/9 - 2019/8 Co-founder, Job market resource group  
I helped co-found and organize a bi-weekly meeting for graduate students and postdocs to develop resources for the job market after graduate school.

## Knowledge and Technology Translation

- 2013/1 Writer, Community Engagement  
Group/Organization/Business Served: University of British Columbia  
Target Stakeholder: General Public  
Outcome / Deliverable: Infographic.  
Evidence of Uptake/Impact: This info-graphic has been used by SSHRC to provide information on unconscious bias (see [http://banting.fellowships-bourses.gc.ca/en/equity\\_diversity\\_inclusion-equite\\_diversite\\_inclusion.html](http://banting.fellowships-bourses.gc.ca/en/equity_diversity_inclusion-equite_diversite_inclusion.html)).  
References / Citations / Web Sites: <http://wwest.mech.ubc.ca/diversity/unconscious-bias/>  
Activity Description: I helped write and edit the material that is presented in the infographic.
- 2013/1 Writer, Community Engagement  
Group/Organization/Business Served: University of British Columbia  
Target Stakeholder: General Public  
Outcome / Deliverable: Infographic  
References / Citations / Web Sites: <http://wwest.mech.ubc.ca/diversity/stereotype-threat/>  
Activity Description: I helped write and edit the material that is presented in the infographic.

## Other Memberships

- 2017/7 Member, Academy of Management
- 2010/1 Member, Society for Personality and Social Psychology

## Most Significant Contributions

- 2018/9 Climate control: The relationship between social identity threat and cues to an identity-safe culture.  
This publication established that gender-inclusive policies and practices may not only provide a broad system of norms but also impact people's daily experiences and sense of identity within an organization. These findings provided a contemporary social psychological frame on social identity and the way an organizational culture can inform interpersonal experiences and a person's sense of self. Such evidence has practical implications and is of value to companies when establishing new policies. This paper provides a roadmap for an intervention that could help attract and retain more women in STEM.

- 2015/7      Engineering exchanges: Daily social identity threat predicts burnout among female engineers.  
This paper investigated the experience of social identity threat (gender-based devaluation) in STEM workplaces. The key contribution of this work is demonstrating that, for women, social identity threat can be elicited by subtle cues of non-acceptance during interpersonal interactions with male colleagues. No previous studies had directly shown that the experience of identity threat hinges on intersubjective appraisals of interpersonal relationships with majority group members. These findings show directly that when conversations with men elicit a lack of acceptance, women feel evaluated based on their gender and experience more workplace burnout. This work highlights the importance of organizational cultures with positive interpersonal norms between men and women working in STEM and might apply to a variety of different workplace contexts where women have been traditionally devalued.
- 2020/1      Cracking the culture code: A tri-level model for cultivating inclusion in organizations.  
In this chapter, we outline a framework for understanding inclusive organizational cultures (Schmader, Bergsieker, & Hall, 2019). We argue that inclusion is dynamically constructed from subtle social processes that are being shaped by broader institutional effort for inclusion (e.g., policies, practices, and laws). These factors work to inform marginalized individuals' experience of inclusion. Our framework offers a conceptual approach to understanding inclusion and provides practical insights into when and why organizational approaches to inclusion may fail or succeed.

## Presentations

1. (2018). Institutional and interpersonal predictors of social identity threat. Academy of Management, Chicago, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No, Competitive?: Yes  
Funding Sources: Social Sciences and Humanities Research Council of Canada (SSHRC)
2. (2018). Institutional and interpersonal predictors of social identity threat. Society for Personality and Social Psychology, Atlanta, United States  
Invited?: No, Keynote?: No, Competitive?: Yes  
Funding Sources: Social Sciences and Humanities Research Council of Canada (SSHRC)
3. (2017). Interpersonal and cultural predictors of social identity threat. EASP Small Group Meeting: Gender Roles in the Future? Theoretical Foundations and Future Research Directions, Berlin, Germany  
Main Audience: Researcher  
Invited?: No, Keynote?: No, Competitive?: Yes  
Funding Sources: Social Sciences and Humanities Research Council of Canada (SSHRC)
4. (2017). Engendering success in STEM: The social dynamics of social identity threat. INSEAD Women and Work Conference, Fontainebleau, France  
Invited?: Yes, Keynote?: No, Competitive?: Yes  
Funding Sources: Social Sciences and Humanities Research Council of Canada (SSHRC)
5. (2017). Interpersonal and cultural predictors of social identity threat. European Association of Social Psychology, Granada, Spain  
Main Audience: Researcher  
Invited?: No, Keynote?: No, Competitive?: Yes  
Funding Sources: Social Sciences and Humanities Research Council of Canada (SSHRC)

6. (2016). Climate control: reducing social identity threat and improving cross-sex interactions through workplace policies. Society for Personality and Social Psychology, San Diego, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No, Competitive?: Yes  
Funding Sources: Social Sciences and Humanities Research Council of Canada (SSHRC)
7. (2016). Interpersonal and cultural predictors of identity threat. Pacific Conference on Prejudice and Culture, Bellingham, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No, Competitive?: Yes  
Funding Sources: Social Sciences and Humanities Research Council of Canada (SSHRC)
8. (2015). Reducing social identity threat through workplace policies. Pacific Conference on Prejudice and Culture, Bellingham, United States  
Main Audience: Researcher  
Invited?: No, Keynote?: No, Competitive?: Yes  
Funding Sources: Social Sciences and Humanities Research Council of Canada (SSHRC)
9. (2014). Stereotype threat in workplace conversations. European Association of Social Psychology, Amsterdam, Netherlands  
Main Audience: Researcher  
Invited?: No, Keynote?: No, Competitive?: Yes  
Funding Sources: Social Sciences and Humanities Research Council of Canada (SSHRC)
10. (2014). Stereotype threat in workplace conversations. Society for Personality and Social Psychology, Austin, United States  
Invited?: No, Keynote?: No, Competitive?: Yes  
Funding Sources: Social Sciences and Humanities Research Council of Canada (SSHRC)

## Publications

### Journal Articles

1. Hall, W. M., Schmader, T., Aday, A., & Croft, E. (2019). Decoding the Dynamics of Social Identity Threat in the Workplace: A Within-Person Analysis of Women's and Men's Interactions in STEM. *Social Psychological and Personality Science*.  
First Listed Author  
Published,  
Refereed?: Yes, Open Access?: No  
Number of Contributors: 4  
Contribution Percentage: 81-90  
Description of Contribution Role: Under the supervision of the second author, I designed, ran, analyzed, and wrote up the research in this paper.  
Funding Sources: Social Sciences and Humanities Research Council of Canada (SSHRC)
2. C Logel, W Hall, E Page-Gould, & GL Cohen. (2019). Why is it so Hard to Change? The Role of Self-integrity Threat and Affirmation in Weight Loss. *European Journal of Social Psychology*.  
Published,  
Refereed?: Yes, Open Access?: No  
Contribution Percentage: 41-50

3. Hall, W. M., Schmader, T., Aday, A., Inness, M., & Croft, E. (2018). Climate control: The relationship between social identity threat and cues to an identity-safe culture. *Journal of Personality and Social Psychology*.  
 First Listed Author  
 Published,  
 Refereed?: Yes, Open Access?: No  
 Number of Contributors: 5  
 Contribution Percentage: 81-90  
 Description of Contribution Role: Under the supervision of the second author, I designed, ran, analyzed, and wrote up the empirical studies in this paper.  
 Funding Sources: Social Sciences and Humanities Research Council of Canada (SSHRC)
4. Block, K., Hall, W. M., Schmader, T., Inness, M., & Croft, E. (2018). Should I stay or should I go: Women's implicit associations predict their commitment and fit in STEM. *Social Psychology*.  
 Co-Author  
 Published,  
 Refereed?: Yes, Open Access?: No  
 Number of Contributors: 5  
 Contribution Percentage: 61-70  
 Description of Contribution Role: Under the supervision of the third author, I designed and ran the study described in this paper. I then helped the first author analyze and write up the results.  
 Funding Sources: Social Sciences and Humanities Research Council of Canada (SSHRC)
5. Hall, W. M., Schmader, T., & Croft, E. (2015). Engineering exchanges daily social identity threat predicts burnout among female engineers. *Social Psychological and Personality Science*. : 528–534.  
 First Listed Author  
 Published,  
 Refereed?: Yes, Open Access?: No  
 Number of Contributors: 3  
 Contribution Percentage: 81-90  
 Description of Contribution Role: Under the supervision of the second author, I designed, ran, analyzed, and wrote up the research in this paper.  
 Funding Sources: Social Sciences and Humanities Research Council of Canada (SSHRC)
6. Schmader, T., & Hall, W. M. (2015). Stereotype threat. *Emerging Trends in the Social and Behavioral Sciences: An Interdisciplinary, Searchable, and Linkable Resource*. : 1-14.  
 Co-Author  
 Accepted,  
 Refereed?: Yes, Open Access?: No  
 Number of Contributors: 2  
 Contribution Percentage: 41-50  
 Description of Contribution Role: Under the supervision of the first author, I wrote and edited portions of this paper.
7. Schmader, T., & Hall, W. M. (2014). Stereotype threat in school and at work putting science into practice. *Policy Insights from the Behavioral and Brain Sciences*. : 30–37.  
 Co-Author  
 Published,  
 Refereed?: Yes, Open Access?: No  
 Number of Contributors: 2  
 Contribution Percentage: 41-50  
 Description of Contribution Role: Under the supervision of the first author, I wrote and edited portions of this paper.

## Book Chapters

1. Schmader, T., Bergsieker, H.B., & Hall, W.M. (2020). Cracking the culture code: A tri-level model for cultivating inclusion in organizations. J. Forgas, B. Crano & K. Fiedler. Applications of Social Psychology.: In press.  
In Press, CRC Press,  
Refereed?: No  
Contribution Percentage: 31-40
2. Schmader, T., Hall, W., & Croft, A. (2015). Stereotype threat in intergroup relations. M. Mikulincer, P. R. Shaver, J. F. Dovidio, & J. A. Simpson. APA handbook of personality and social psychology. : 447-471.  
Co-Author  
Published, American Psychological Association,  
Refereed?: No  
Number of Contributors: 3  
Contribution Percentage: 51-60  
Description of Contribution Role: Under the supervision of the first author, I wrote and edited portions of this chapter.  
Funding Sources: Social Sciences and Humanities Research Council of Canada (SSHRC)

## Thesis/Dissertation

1. Interpersonal triggers and cultural moderators of social identity threat. (2016). University of British Columbia. Doctorate.  
Number of Pages: 171 Supervisor: Dr. Toni Schmader  
Contribution Percentage: 91-100  
Description of Contribution Role: Under the supervision of Dr. Toni Schmader, I designed, ran, analyzed, and wrote up the research in my dissertation.  
Funding Sources: Social Sciences and Humanities Research Council of Canada (SSHRC)

## Conference Publications

1. Cyr, E. N., Aday, A. E., Bergsieker, H. B., Schmader, T., & Hall, W. M. (2018). The social "threatwork": A social network analysis of social identity threat among women in STEM. Association for Psychological Science. Association for Psychological Science, (Poster). Association for Psychological Science, Conference Date: 2018/7  
Poster  
Co-Author  
Accepted  
Refereed?: Yes, Invited?: No  
Number of Contributors: 5  
Contribution Percentage: 41-50  
Description of Contribution Role: Under the supervision of the fourth author, I designed the study and collected the data.

2. Hall, W. M., Schmader, T., Aday, A., & Croft, E. (2018). Institutional signals of identity safety. Society for Personality and Social Psychology. Society for Personality and Social Psychology, (Poster). Society for Personality and Social Psychology, Conference Date: 2018/2  
Poster  
First Listed Author  
Accepted  
Refereed?: Yes, Invited?: No  
Number of Contributors: 4  
Contribution Percentage: 81-90  
Description of Contribution Role: Under the supervision of the second author, I designed, ran, analyzed, and wrote up the research in this poster.  
Funding Sources: Social Sciences and Humanities Research Council of Canada (SSHRC)
3. Hall, W. M., Schmader, T., & Croft, E. (2015). Engineering allies: The benefits of social support for women in engineering. Society for Personality and Social Psychology. Society for Personality and Social Psychology, (Poster). Society for Personality and Social Psychology, Conference Date: 2015/1  
Poster  
First Listed Author  
Accepted  
Refereed?: Yes, Invited?: No  
Contribution Percentage: 81-90  
Description of Contribution Role: Under the supervision of the second author, I designed, ran, analyzed, and wrote up the research in this poster.  
Funding Sources: Social Sciences and Humanities Research Council of Canada (SSHRC)



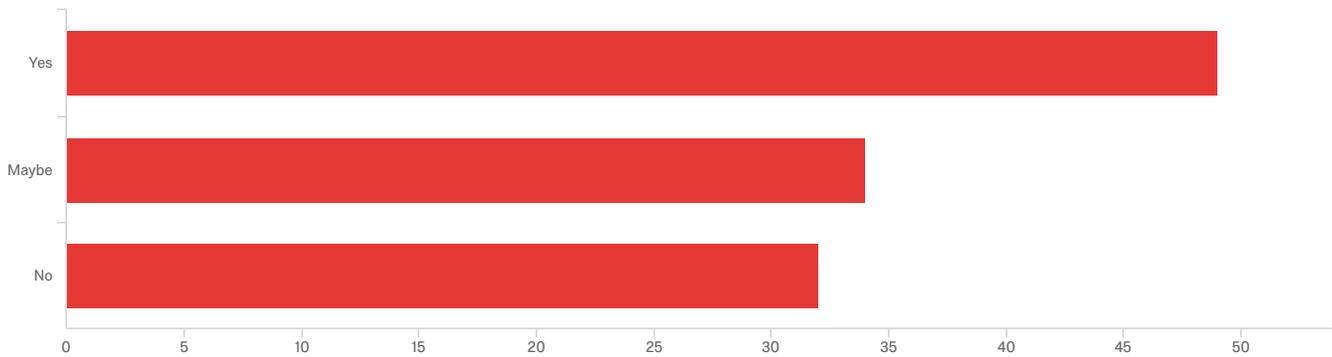


# Default Report

BSc Questionnaire

June 20, 2018 9:12 AM EDT

Q2 - Would you have preferred to be in a B.Sc. program rather than our B.A. program if a B.Sc. had been available?

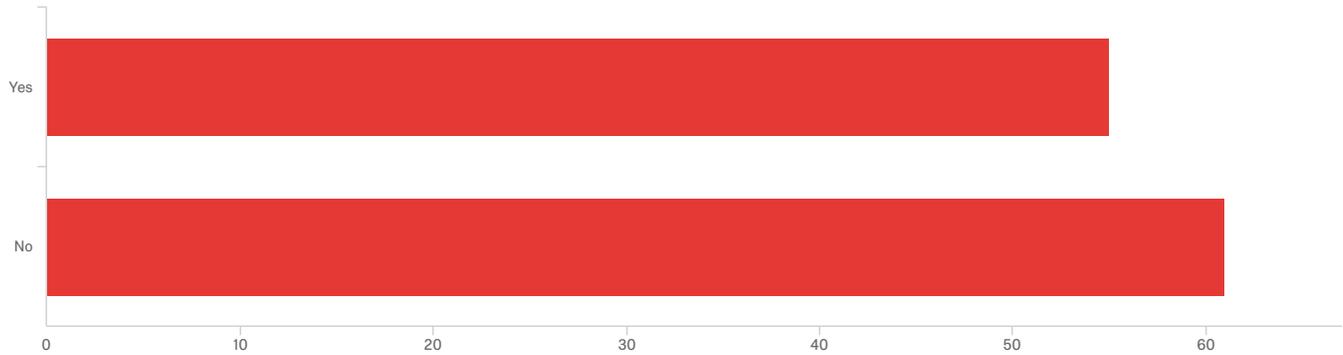


| # | Field | Choice Count |
|---|-------|--------------|
| 1 | Yes   | 42.61% 49    |
| 2 | Maybe | 29.57% 34    |
| 3 | No    | 27.83% 32    |

115

Showing Rows: 1 - 4 Of 4

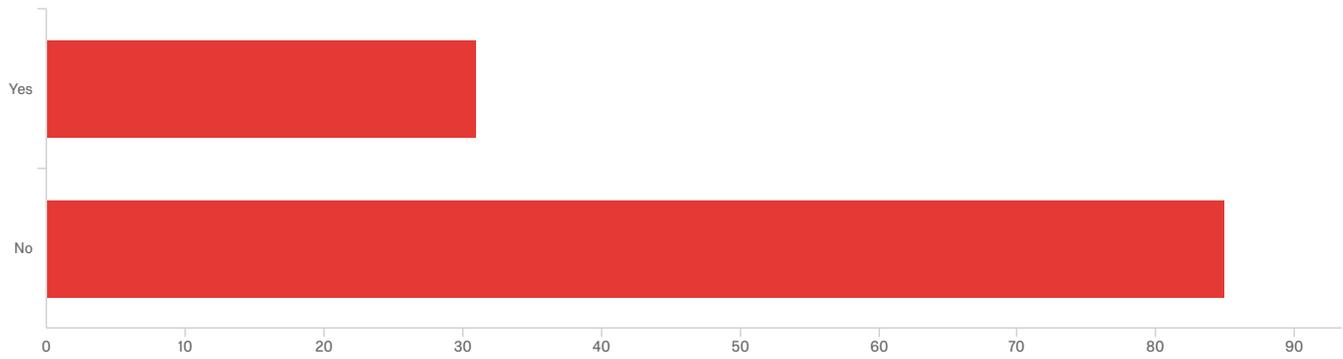
Q3 - To be admitted into the B.Sc. program, successful completion of the following high school courses will be required: Biology (SBI4U) or Chemistry (SCH4U) or Physics (SPH4U) AND Mathematics of Data Management (MDM4U) or Advance Functions (MHF4U) or Calculus and Vectors (MCV4U) Would you have met this requirement?



| # | Field | Choice Count |
|---|-------|--------------|
| 1 | Yes   | 47.41% 55    |
| 2 | No    | 52.59% 61    |
|   |       | 116          |

Showing Rows: 1 - 3 Of 3

## Q5 - Have you taken (or do you plan to take) these courses ?

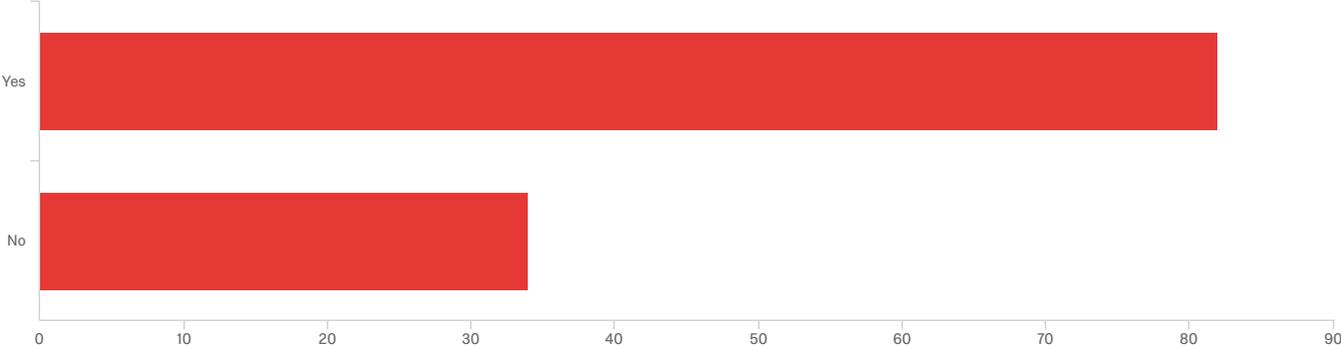


| # | Field | Choice | Count |
|---|-------|--------|-------|
| 1 | Yes   | 26.72% | 31    |
| 2 | No    | 73.28% | 85    |

116

Showing Rows: 1 - 3 Of 3

Q6 - Would you have completed these courses if it resulted in earning a B.Sc. in lieu of a B.A.?

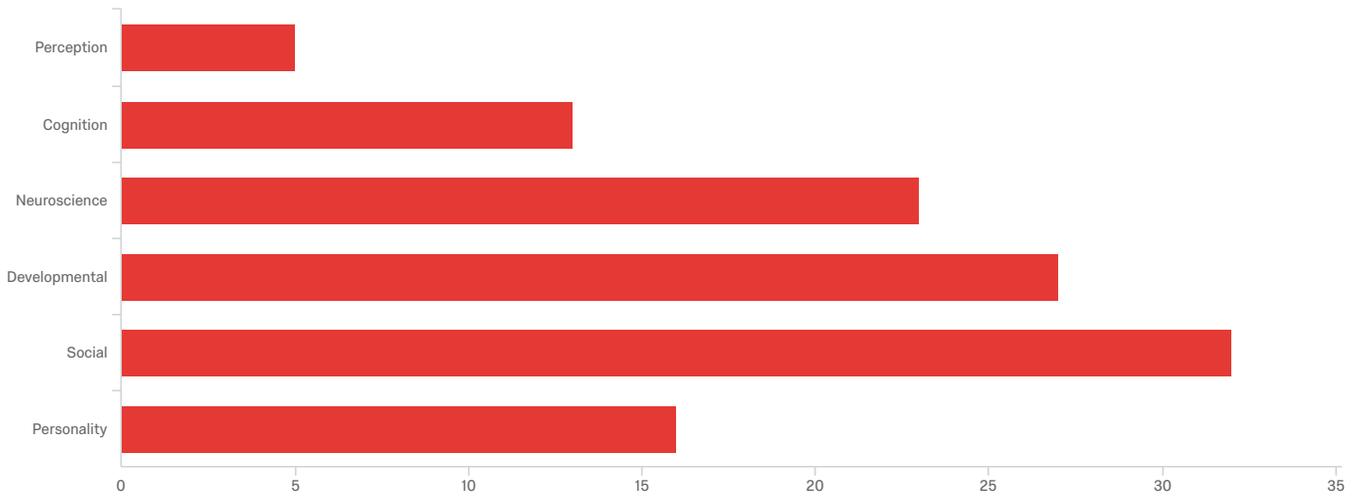


| # | Field | Choice Count |
|---|-------|--------------|
| 1 | Yes   | 70.69% 82    |
| 2 | No    | 29.31% 34    |

116

Showing Rows: 1 - 3 Of 3

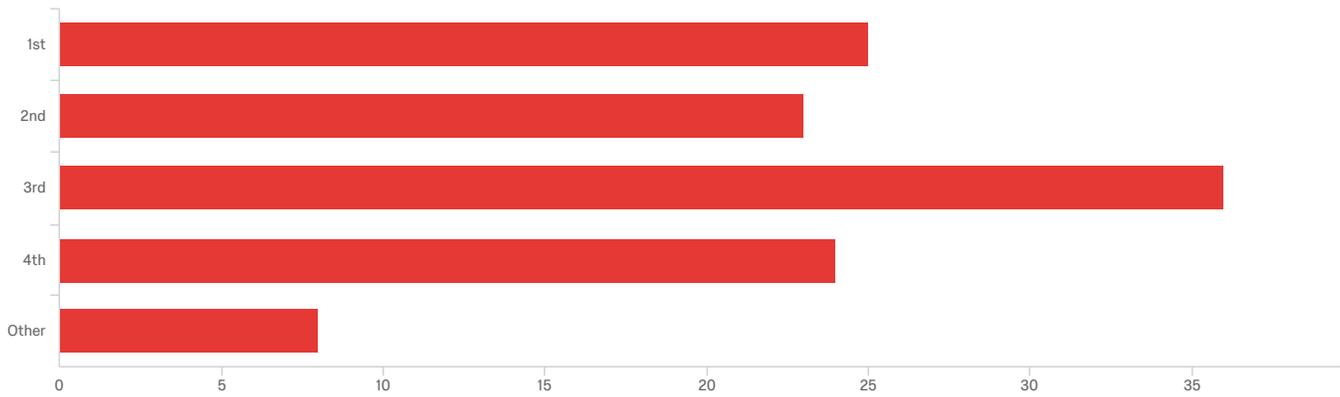
## Q7 - Which area of Psychology interests you the most?



| # | Field         | Choice Count |
|---|---------------|--------------|
| 1 | Perception    | 4.31% 5      |
| 2 | Cognition     | 11.21% 13    |
| 3 | Neuroscience  | 19.83% 23    |
| 4 | Developmental | 23.28% 27    |
| 5 | Social        | 27.59% 32    |
| 6 | Personality   | 13.79% 16    |
|   |               | 116          |

Showing Rows: 1 - 7 Of 7

## Q8 - Year of study completed:



| # | Field | Choice Count |
|---|-------|--------------|
| 1 | 1st   | 21.55% 25    |
| 2 | 2nd   | 19.83% 23    |
| 3 | 3rd   | 31.03% 36    |
| 4 | 4th   | 20.69% 24    |
| 5 | Other | 6.90% 8      |
|   |       | 116          |

Showing Rows: 1 - 6 Of 6

### Other

Other

honours BA completed

5

Pre first year

graduated (convocated June 5/2018)

transfer

half way through 3rd

5

Honours

Showing Records: 1 - 8 Of 8

**End of Report**

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September 17, 2020

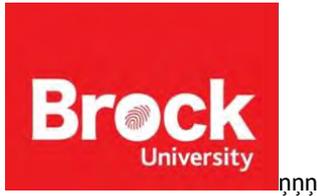
Dear Caitlin,

I am writing to confirm that the Department of Biological Sciences has been consulted about the Psychology Department's *BSc in Psychology* proposal, and that BIOL 1P91 and BIOL 1P92 are requirements of the program. We believe we can accommodate this requirement and are excited to see this new program being offered. We look forward to working with you to provide this opportunity to our students.

Regards,

*Jeff Stuart*

Jeff Stuart,  
Chair, Dept. of Biological Sciences



1812 Sir Isaac Brock Way  
St. Catharines, ON  
L2S 9L7  
Tel: 905-688-1111

Brock University Letter of Support

October 8, 2020

Re: Library support for the Bachelor of Science in Psychology

Dear Dr. Mahy, Associate Professor and Undergraduate Program Director

I thank you for the opportunity to provide input on the proposed Bachelor of Science in Psychology. As you know, the Library is dedicated to supporting teaching, learning and research at the university and awareness of new programs in, for example, virtual learning and continuous professional development resources and services to students, faculty and staff. As the program relies on existing courses already supported by the Library's collection, it is important to ensure that the library continues to support the expected new enrollment of the program. Research support services such as instruction, personal research and creative online learning objects can also benefit equally to the library's liaison librarians in the Department of Psychology.

In closing, the Library is pleased to express support for the Bachelor of Science in Psychology, and we will continue to work with faculty and staff to ensure that resources and services can provide the best support for your students.

Regards,  
**Colleen MacKinnon, MLIS**  
Liaison Librarian

**Andrew Colgoni**,  
Associate University Librarian, Student Success





**From:** Julia Zhu lzhu@brocku.ca  
**Subject:** Support of BSc Psychology co-op program  
**Date:** August 13, 2018 at 10:30 AM  
**To:** Catherine Mondloch cmondloch@brocku.ca  
**Cc:** Cara Krezek ckrezek@brocku.ca



Hi Cathy,

As discussed, we are happy to support the co-op option of the BSc Psychology program mirroring the existing BA Psychology co-op program.

Good luck with the new program!

Kind regards,  
Cara & Julia

Julia Zhu, MA  
Associate Director, Co-op Education  
Co-op, Career and Experiential Education (CCEE)  
Brock University  
[ljzhu@brocku.ca](mailto:ljzhu@brocku.ca)  
905 688 5550 ext. 3356

**MEMORANDUM**

**TO:** Academic Review Committee (ARC)

**FROM:** Ingrid Makus, Dean, Faculty of Social Sciences

**DATE:** May 25, 2018

**RE:** **Statement of Intent for a New Program - B.Sc. in Psychological Science**

This new program is an appropriate and desirable addition to the academic programs of the University. It is in line with the strategic direction of the Faculty.

The provision of additional resources for the program is subject to the budgetary processes and approvals within the Faculty and the University as a whole.

A handwritten signature in black ink, appearing to read "J. Makus".

IM/fn

# Consultation for B.Sc. in Psychology



**Roland Mech**

Tue 7/17, 10:37 AM

Catherine Mondloch; Kimberly Cote

Reply all

Action Items

Catharine,

Please accept this e-mail a evidence of consultation regarding the space needs for the proposed B.Sc. In Psychological Science. My understanding is that the program would require one additional office to accommodate an Advisor. Upon successful approval of the program I will work with the Faculty of Social Sciences Space Coordinator and Department of Psychology to identified an appropriate space.

Regards,

**Roland Mech**, Licensed Technologist OAA, AScT, LEED AP  
Associate Director, Space Management and Planning  
**Brock University** | Facilities Management  
905 688-5550 x5901

...

**Subject:** RE: First year CHEM courses for new BSc in Psychology  
**Date:** Wednesday, June 16, 2021 at 12:52:43 PM Eastern Daylight Time  
**From:** Georgii Nikonov  
**To:** Caitlin Mahy

Hi Caitlin,

Yes, we can accommodate extra 20+ students in these courses. The main limitation for us is the lab capacity but we still have some room to do so.

Good luck to your new program!  
Georgii

---

**From:** Caitlin Mahy <cmahy2@brocku.ca>  
**Sent:** June 16, 2021 11:48 AM  
**To:** Georgii Nikonov <gnikonov@brocku.ca>  
**Subject:** First year CHEM courses for new BSc in Psychology

Hi Georgii,

I hope you are keeping well.

The Psychology department is in the final stages of developing a BSc in Psychology program. Based on comments from external reviewers, we have decided to require our BSc students to take CHEM 1P91 and 1P92 and would like to consult with Chemistry about this. This would mean an additional 20 students per year in these courses. Would your department be able to accommodate that?

I'd be happy to speak with you on Teams or on the phone if you have any questions or concerns.

Thanks very much in advance,  
Caitlin

**Caitlin Mahy, PhD**  
Associate Professor  
Associate Editor, *Cognitive Development*  
Undergraduate Program Director  
Director, Developing Memory and Cognition Laboratory  
Brock University | Department of Psychology  
Niagara Region | 1812 Sir Isaac Brock Way | St. Catharines, ON L2S 3A1  
brocku.ca | T 905 688 5550 x 6151  
[Caitlin.mahy@brocku.ca](mailto:Caitlin.mahy@brocku.ca)  
Office: MC B324

# Final Assessment Report

## Interactive Arts and Science (IASC)

### Undergraduate Program (reviewed 2020-21)

#### A. Summary

1. The Centre's Self Study was considered and approved by the Senate Academic Review Committee on November 18, 2020.
2. The Review Committee consisted of two external reviewers: William Turkel (University of Western Ontario) and Cindy Poremba (OCAD University) and internal reviewer, Nancy Taber (Brock University).
3. The review occurred February 22, 25 and 26, 2021 via video-conference.
4. The Reviewers' Report was received on March 26, 2021.
5. The Senate Undergraduate Program Committee response was received on April 8, 2021.
6. The Program response from the Centre for Digital Humanities was received on April 30, 2021.
7. The Dean of Humanities response was received on May 10, 2021.
8. A revised Program response from the Centre for Digital Humanities was received September 23, 2021.

This review was conducted under the terms and conditions of the IQAP approved by Senate on May 25, 2016.

## Program Outcome Categories:

Based on their knowledge of the discipline, the content of the Self-Study and the interviews conducted during the site visit, the Review Committee gave the programs the following Outcome Categories:

| Program(s)   | Excellent Quality | Good Quality | Good Quality with Concerns | Non-Viable |
|--------------|-------------------|--------------|----------------------------|------------|
| BA (Honours) |                   |              | X                          |            |
| BA (Pass)    |                   |              | x                          |            |

## Executive Summary:

The Reviewers wrote:

IASC is a small but active program--and an actively growing one--with highly dedicated and enthusiastic full- and part-time faculty, staff, and students. Teamwork and collaboration are prized by everyone with whom we spoke. For historical reasons, the program has veered between a broad interdisciplinary vision of interactive digital media (IDM) and a more narrow focus on game design and development. In its most recent incarnation, the GAME [BA Game Design/BSc Game Programming] program has branched off, leaving IASC once again as a broad interdisciplinary IDM program that gives students the flexibility to find a perfect career niche for themselves. It tries to balance training in the theoretical foundations of the humanities, particularly the digital humanities, with the requirement for students to learn and apply a variety of typically unfamiliar technical skills that they need to complete one or more substantial projects. When GAME was created, external reviewers feared that IASC might “become an impoverished little sibling destined to atrophy and disappear.” That certainly has not happened; in fact, the program seems to have expanded quickly and to have significant potential for more growth.

[Concerns:]

But that growth has been accompanied by increasing overload teaching for a small cadre of appointed faculty, increasing dependence on the precarious labour of part-time instructors, and decreasing availability of space for operations. The previous external review noted a lack of gender diversity in the program faculty. Not only has this problem persisted, but the lack of diversity and inclusivity is acute, particularly in an institution that has made commitment to EDI [equity, diversity and inclusion], decolonization, and reconciliation one of its four strategic priorities.

## B. Strengths of the Program

The reviewers noted the following strengths:

The most obvious strength of the IASC program is people. Everyone with whom we spoke was clearly passionate about IASC and its success; their care and hard work was evident everywhere we looked.

Since the democratization of media, digital literacy is one of the most important basic literacies that the university provides and the IASC program plays a key role in that mission. The IASC program provides a broad interactive digital media (IDM) curriculum with a great degree of flexibility to support diverse student interests. There is strength in the core experience, second year courses that focus on concentrations, and a wide range of options (in part delivered by other units). Some learning takes place through externally-led workshops. The focus on scaffolded project management throughout the program helps to create students who collaborate well in teams and are forward looking. The students anticipate the jobs of the future and their voice is prominent in decision making at various levels. For example, CDH [Centre for Digital Humanities] staff told us that they keep track of student questions to anticipate areas of the curriculum that might be developed.

IASC is critical and reflective by design. Students in the program are taught to frame technological expertise as an act of critical thinking and explore the failure cases of tools. Challenges from upper level course projects are first addressed in early years of the program. In the process, digital scholarship expands beyond reading and writing to integrate coding. The student's commit history becomes a reflective prompt for writing. The focus is often on problems they may have to solve one day. The collaborative interface design tool Figma is used to redesign a product or service that the students like, or dislike. They reflect on accessibility and accessible design and this can be used to pivot into disability studies or other humanistic approaches. The model of social entrepreneurship, of making the world a better place, also finds a home here. Alums of the program have a reputation for being well trained with digital tools and savvy about media, and are healthily skeptical about what they are told.

The program has deep roots in the local community and IASC has been built on the quality of professional relationships outside the academy. Students are connected to the digital economy via faculty and alums. Some students are employed by the university and a social media internship is offered by Brock every year. Students volunteer in community events and create exhibits; they are engaged and passionate about these opportunities for experiential learning. There are ties with Innovate Niagara, mash-ups, and alumni returning to teach or provide feedback or job opportunities. A certificate in digital media is on track and will be online in the Fall, allowing people in the community to upgrade skills and knowledge. This microcredential will increase revenue and make university more accessible to non-traditional students.

The strength of linkages among people in the program and between people in the program and people in the community is also evident. We were impressed by the students' ability to cooperate and coordinate with one another in our discussion with them. The students' proximity to staff support as well as their access to the facilities has been good for building a culture of empathy and mutual support. Upper year students mentor the lower year ones. The students are also able to drop into IT / support staff offices, and both students and staff told us that their relationships are fairly close. The staff offer workshops in response to student questions (e.g., getting up to speed on best practices, how to use certain tools), as well as providing technical troubleshooting and teaching students how to solve problems themselves. Faculty and staff also spoke highly of working with one another, describing their relationship in terms such as "generative, collaborative, co-creating." One sessional instructor described his relationship with the program as "all the support without interference," as being trusted to develop suitable courses and listened to when he provided feedback. Sessional instructors have representation on both the highest (governance) and lowest (executive) committees, and are often informally polled about directions the program might take. Digital humanities requires a cross-section of expertise, and much of that is provided in IASC by part-time instructors.

There is student demand for IASC and opportunities to grow. The faculty and staff are few, but highly motivated, and they want to continue to support the program. Program expenses are reasonable. There are equipment costs and special costs associated with running IASC, but increasing enrollments generate revenue. Projects in the program mesh nicely with the capabilities of the Makerspace in the library, and the program has a good relationship with the library which provides resources, meets instructional requests, and supports student research. IASC has an internal collection of games for study, and there has been discussion of creating a special collection for digital media in the library (this was suggested in the last external review). The makerspace and digital scholarship lab represent new expertise for IASC.

## C. Opportunities for Improvement and Enhancement

### Recommendation #1

BIPOC [Black, Indigenous and People of Colour] open-rank or cluster hire

The Unit responded:

While recognizing that resource issues fall outside of ARC's purview, the CDH [Centre for Digital Humanities] wholeheartedly accepts this recommendation. The lack of diversity among full-time faculty is a serious concern and should not be permitted to persist for the reasons outlined by the reviewers. It is imperative that the University commit the necessary resources to ensure that the Centre for Digital Humanities is empowered to correct this problem. We especially appreciate the reviewers' suggestion for an open-rank hire, and possibly a cluster-hire, for the reasons outlined in the recommendation.

The Dean of Humanities responded:

This recommendation falls outside the purview of the current process. That said, The Centre takes seriously the need for increased diversity within its ranks, and the Dean supports their efforts.

### ARC Disposition of the Recommendation

ARC considers the recommendation to be not accepted as hiring initiatives lie outside of its jurisdiction. The Committee recognizes that the Centre and Dean indicate their support of the recommendation and that principles of equity, diversity and inclusion are strongly endorsed by the University through the Brock Institutional Strategic Plan.

### Implementation Plan

Recommendation not accepted.

## Recommendation #2

### Advocate for targeted hires

The Unit responded:

The unit accepts this recommendation. We echo Brock's institutional commitment to "foster a culture of inclusivity, accessibility, reconciliation and decolonization" as one of its core strategic pillars. As noted in our response to Recommendation #1, this will require an investment from the University.

The Dean of Humanities responded:

This recommendation falls outside the purview of the current process. That said, The Centre takes seriously the need for increased diversity within its ranks, and the Dean supports their efforts.

### ARC Disposition of the Recommendation

ARC considers the recommendation to be not accepted as hiring initiatives lie outside of its jurisdiction. The Committee recognizes that the Centre and Dean indicate their support of the recommendation and that principles of equity, diversity and inclusion are strongly endorsed by the University through the Brock Institutional Strategic Plan.

### Implementation Plan

Recommendation not accepted.

### Recommendation #3

#### Troubleshoot EDI [Equity, Diversity and Inclusion] recruiting

The Unit responded:

The unit accepts this recommendation. The program will work with Human Resources, the Human Rights and Equity [HRE] Office, and the office of the Vice-Provost, Indigenous Engagement to ensure that every step of the recruitment process for new CDH faculty members prioritizes the need to diversify the faculty complement. Measures may include equity and unconscious bias training for all members of the hiring committee, and the advertisement of positions which focus on equity and diversity in games/interactive media as research specialties.

The Dean of Humanities responded:

The Dean's Office will support the unit in their consultations with HR, the HRE Office, and with the VP, Indigenous Engagement.

#### ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation.

#### Implementation Plan (1<sup>st</sup> Priority)

|                                 |                                                                   |
|---------------------------------|-------------------------------------------------------------------|
| Responsible for approving:      | Centre                                                            |
| Responsible for resources:      | Centre                                                            |
| Responsible for implementation: | Centre                                                            |
| Timeline:                       | Dean of Humanities to report by the end of academic year 2021-22. |

**Recommendation #4**

**Establish program advisory committee (PAC) with explicit diversity targets**

The Unit responded:

The unit accepts this recommendation. We will work with Human Resources, the Human Rights and Equity Office, the office of the Vice-Provost, Indigenous Engagement, as well as organizations external to Brock (e.g., industry and community organizations) to form a PAC which will seek ways to both improve the IASC’s EDI profile, and to devise strategies for fostering a culture of equity, diversity and inclusion within the program.

The Dean of Humanities responded:

The Dean’s Office will do what it can to support and participate in the unit’s efforts to form a PAC focused on improving IASC’s EDI profile.

**ARC Disposition of the Recommendation**

ARC considers the recommendation to establish mechanisms to work towards diversity targets to be accepted for consideration. The Committee understands that hiring initiatives lie outside of its jurisdiction and expects that the Centre is best-positioned to determine appropriate strategies to move forward on this issue.

|                                                      |                                                                   |
|------------------------------------------------------|-------------------------------------------------------------------|
| <b>Implementation Plan (1<sup>st</sup> Priority)</b> |                                                                   |
| Responsible for approving:                           | Centre                                                            |
| Responsible for resources:                           | Centre                                                            |
| Responsible for implementation:                      | Centre                                                            |
| Timeline:                                            | Dean of Humanities to report by the end of academic year 2021/22. |

Recommendation #5

Introduce a course in EDI for IDM [Interactive Digital Media]

The Unit responded:

The unit accepts this recommendation and will create a dedicated course which focuses on EDI in the context of interactive digital media. In addition to the course, the CDH will endeavor to integrate EDI throughout the IASC program more broadly. To this end, the CDH will form a sub-committee (possibly with members of the PAC noted in Recommendation #4) to conduct a systematic review of how EDI is being addressed across the IASC program. After the review has been conducted, the sub-committee will make a series of recommendations to the CDH Governance Committee.

The Dean of Humanities responded:

The Dean’s Office supports the unit’s efforts to more explicitly embed EDI matters into its curriculum, both through a dedicated course and through other means suggested by a sub-committee dedicated to this discussion.

ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation.

|                                                |                                                                   |
|------------------------------------------------|-------------------------------------------------------------------|
| Implementation Plan (1 <sup>st</sup> Priority) |                                                                   |
| Responsible for approving:                     | Centre                                                            |
| Responsible for resources:                     | Centre                                                            |
| Responsible for implementation:                | Centre                                                            |
| Timeline:                                      | Dean of Humanities to report by the end of academic year 2021/22. |

## Recommendation #6

### Leverage Collaborative Online International Learning (COIL) opportunities

The Unit responded:

The unit accepts this recommendation. We will conduct a scan of similar programs in other countries and explore ways to connect with other institutions that have interactive media programs. Furthermore, we will explore how to leverage existing courses to better align with the spirit of this recommendation. Our workshop course (IASC 2P08) has students attend workshops and events for course credit. We could have an inter-cultural requirement where a certain number of hours must be devoted to attending a workshop or other learning opportunity delivered by someone from another culture or country. We are also exploring cross-listing additional courses with Geography and Tourism Studies, who offer study abroad options.

The Dean of Humanities responded:

The Dean's Office supports the unit's plan to explore assignments or learning opportunities that include intercultural and/or international collaboration.

### ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation.

#### Implementation Plan (1<sup>st</sup> Priority)

|                                 |                                                                   |
|---------------------------------|-------------------------------------------------------------------|
| Responsible for approving:      | Centre                                                            |
| Responsible for resources:      | Centre                                                            |
| Responsible for implementation: | Centre                                                            |
| Timeline:                       | Dean of Humanities to report by the end of academic year 2021/22. |

## Recommendation #7

### Bolster BIPOC networking

The Unit responded:

The unit accepts this recommendation. The CDH has an existing speakers' series which is largely comprised of industry professionals and educators in the interactive digital media domain. We have made it a priority to ensure we have a diverse pool of guest speakers, and we have been largely successful, but we can do more. We will continue to explore ways to bring in a more diverse group of speakers and workshop leaders.

The Dean of Humanities responded:

The Dean's Office supports the unit's commitment to bolster its BIPOC networking via its existing speakers' series.

### ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation.

#### Implementation Plan (1<sup>st</sup> Priority)

|                                 |                                                                   |
|---------------------------------|-------------------------------------------------------------------|
| Responsible for approving:      | Centre                                                            |
| Responsible for resources:      | Centre                                                            |
| Responsible for implementation: | Centre                                                            |
| Timeline:                       | Dean of Humanities to report by the end of academic year 2021/22. |

## Recommendation #8

Continue to disentangle IASC [BA Interactive Arts and Science] identity from GAME [BA Game Design/BSc Game Programming]

### Supporting/Clarifying Text from Reviewer Report:

We recommend that IASC discontinue the practice of automatically offering admission to students who fail to obtain a position in the GAME program, as this does not appear necessary and has negative repercussions on the culture of the IASC program. The IASC handbook does a good job of providing example topics that are not specifically related to game design and development (p.8) and tap into students' other interests and passions. These could be expanded to include other examples like escape rooms and historical reenactment (perhaps in collaboration with Brock's theatre program), the social implications and ethics of technology, interactive sound, interdisciplinary sculpture, etc. These example topics could also be aligned with the written option for a thesis.

### The Unit responded:

There are two parts to this recommendation and so we have divided our response into two parts.

- a) Regarding offers of admission into IASC for applicants not accepted into GAME: We do not accept this recommendation. The matter of offering IASC to unsuccessful applicants of GAME is partly within the purview of the Registrar's Office, who have consulted with us about this practice. While some unsuccessful GAME applicants are initially disappointed by not receiving their first choice placement, many over time come to value the flexibility and breadth of the IASC program. We do not see an issue with this practice in principle and note that this practice is consistent with the goal of attracting potential students to Brock's programs more broadly by encouraging applicants to explore alternatives at Brock.
- b) Moving IASC students away from videogames is current practice to some extent, but we accept this part of the recommendation and will explore additional ways to get students interested in interactive media artifacts that are not videogames.

### The Dean of Humanities responded:

Likewise, this response is divided into two parts:

- a) The Dean's Office agrees with the unit that it should not accept the recommendation to discontinue offering unsuccessful GAME students a spot in the IASC program, as students still are still given a choice whether to accept their offer.
- b) The Dean's Office supports the unit's commitment to make explicit the program's focus on a wide variety of interactive media artifacts.

## ARC Disposition of the Recommendation

ARC considers the recommendation to discontinue offering IASC admission to unsuccessful GAME applicants (Part a) to be not accepted. The Reviewers do not provide a substantive argument for a link between admissions practices and a negative impact on the culture of the IASC program. ARC considers the Unit to be best-positioned to assess admissions requirements for the program, in consultation with GAME, and within the context of university-wide policies and practices of recruitment.

ARC considers the recommendation to provide students with options that are not specifically related to game design and development (Part b) to be accepted and in the process of implementation.

### Recommendation Part a)

|                                                     |
|-----------------------------------------------------|
| Implementation Plan<br>Recommendation not accepted. |
|-----------------------------------------------------|

### Recommendation Part b)

|                                                                             |
|-----------------------------------------------------------------------------|
| Implementation Plan (1 <sup>st</sup> Priority)                              |
| Responsible for approving: Centre                                           |
| Responsible for resources: Centre                                           |
| Responsible for implementation: Centre                                      |
| Timeline: Dean of Humanities to report by the end of academic year 2021/22. |

## Recommendation #9

Consider IASC courses GAME students have to take or want to take

The Unit responded:

The unit does not accept this recommendation as it is already largely implemented. It is current practice that GAME BA students can take a number of IASC courses as electives, mostly in 3<sup>rd</sup> and 4<sup>th</sup> year. These include IASC 3F91 (Innovations in Advanced Digital Media), IASC 3F93 (Project Collaborations Across Diverse Programs), IASC 3P11 (Motion Capture Studio), IASC 3P95 (Internship in Interactive Media), IASC 3P97 (Interactive Media Portfolio), and the directed courses, IASC 3P98, and IASC 3P99, all of which often have students from both programs working together. Additionally, starting in the 2021-2022 academic year, GAME students will be permitted to take IASC 1P30 (Programming for Interactive Media), which is a required course in the IASC program.

The Dean of Humanities responded:

The Dean's Office concurs with the unit that this recommendation need not be accepted because it describes existing programming practice.

### ARC Disposition of the Recommendation

ARC considers the recommendation to be already current practice. No further action is required.

### Implementation Plan

Recommendation not accepted.

## Recommendation #10

### Investigate hybrid delivery models to reduce computer lab dependency

#### The Unit responded:

The unit does not accept this recommendation as it is existing practice. As a result of COVID-19, physical workstations have been available to students via remote access. Online teaching during the pandemic saw an increase in web-based technologies. Free licenses for all software used in the CDH (with the exception of Adobe Creative Cloud) were made available through vendors (and could not be provided by the University). Software and Operating System licensing on purely Virtual Machines, Docker, and “cloud-streaming” have been determined to be cost prohibitive and provide a poor user experience for large software suites (Autodesk, Adobe, Visual Studio). Licensing such as Adobe Named User License Student Packs cannot be solely utilized due to the GAME program sharing resources with the Niagara College Game Development Diploma program and IASC. This would effectively double the cost of ownership and we are reluctant to pass those costs on to the students until a volume license can be reached (as is common practice at other institutions). Additionally, we have explored a laptop program in the past. Not only does it pass a financial burden on to students, there are significant impediments to the student experience (e.g., problems associated with making sure everyone has the same software and version of that software). Finally, the CDH already offers a full suite of F/OSS alternatives in its labs (e.g., GIMP for Photoshop, Blender for Autodesk Maya, etc.).

#### The Dean of Humanities responded:

The Dean’s Office concurs with the unit that this recommendation should not be accepted, first, because the remote access learning has already been made available to students in ways that are not cost-prohibitive to students and, second, because a few of the suggestions made by reviewers (for example, the laptop sharing program, have already been tried and proven ineffective). The Dean’s Office is especially confident about the unit’s ability to offer rigorous and pedagogically effective remote access learning, given their success over the past year.

#### ARC Disposition of the Recommendation

ARC considers the recommendation to be already current practice. No further action is required.

#### Implementation Plan

Recommendation not accepted.

**Recommendation #11**

**Explore (or create) a broader range of opportunities for IASC graduating students**

The Unit responded:

The unit accepts this recommendation. In addition to the academic conferences the reviewers listed, there are also non-gaming focused student showcase events, such as DigiFest. IASC currently draws on an array of industry mentors to provide feedback on student projects, advise on their portfolios, etc., and we will continue to seek ways to expand this practice.

The Dean of Humanities responded:

The Dean's Office supports the unit's commitment to explore a wider range of capstone experiences for students.

**ARC Disposition of the Recommendation**

ARC considers the recommendation to be accepted and in the process of implementation.

**Implementation Plan (2<sup>nd</sup> Priority)**

|                                 |                                                                   |
|---------------------------------|-------------------------------------------------------------------|
| Responsible for approving:      | Centre                                                            |
| Responsible for resources:      | Centre                                                            |
| Responsible for implementation: | Centre                                                            |
| Timeline:                       | Dean of Humanities to report by the end of academic year 2022/23. |

## Recommendation #12

### Refine concentrations

#### The Unit responded:

The unit accepts this recommendation. We will hold a unit retreat and form a subcommittee to explore alternative labels for our concentrations. We will also poll students and industry professionals to get a wide range of perspectives on recognizability and marketability, etc.

#### The Dean of Humanities responded:

The Dean's Office supports the unit's commitment to explore alternative labels for their concentrations.

#### ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation.

#### Implementation Plan (2<sup>nd</sup> Priority)

|                                 |                                                                   |
|---------------------------------|-------------------------------------------------------------------|
| Responsible for approving:      | Centre                                                            |
| Responsible for resources:      | Centre                                                            |
| Responsible for implementation: | Centre                                                            |
| Timeline:                       | Dean of Humanities to report by the end of academic year 2022/23. |

## D. Summary of Recommendations:

### First Priority:

Recommendations 3,4,5,6,7,8b

### Second Priority:

Recommendations 11,12

### Not Accepted:

Recommendations 1,2,8a

### No Action Required (Current Practice):

Recommendations 9,10

# Final Assessment Report

## MA in Studies in Comparative Literatures and Arts

(reviewed 2019-21)

### A. Summary

1. The Self Study for the Program was considered and approved by the Senate Academic Review Committee on February 4, 2020.
2. The Review Committee consisted of two external reviewers: Ian MacRae (Wilfrid Laurier University) and Gary Kelly (University of Alberta), and one internal reviewer, Fiona Blaikie (Brock University).
3. The virtual review occurred on March 1, 2, 4, 2021.
4. The Reviewers' Report was received on April 15, 2021.
5. The Program response was received on May 13, 2021.
6. The Dean of Graduate Studies response was received on May 20, 2021.
7. The Dean of Humanities response was received on May 27, 2021.
8. The Senate Graduate Studies Committee response was received on Sep 22, 2021.

This review was conducted under the terms and conditions of the IQAP approved by Senate on May 25, 2016.

## Program Outcome Categories:

Based on their knowledge of the discipline, the content of the Self-Study and the interviews conducted during the site visit, the Review Committee gave the program the following Outcome Category:

| Program(s)                                        | Excellent Quality | Good Quality | Good Quality with Concerns | Non-Viable |
|---------------------------------------------------|-------------------|--------------|----------------------------|------------|
| MA in Studies in Comparative Literatures and Arts | X                 |              |                            |            |

## Executive Summary:

The Reviewers wrote:

History of the Program: When there was a strong Comparative Literature undergraduate program at Brock, a faculty initiative developed an MA program in Comparative Literature and Arts. This assumed elements of Brock's mission and brand in interdisciplinary studies. There was good grounding in both relevant theory and student engagement with University arts units and endeavours. The program benefitted from a provisional and experimental character and committed leadership, but consequently there were no specialist hires, directorship and teaching were on compensated overload, there was insufficient administrative help from dedicated support staff, the program was institutionally untethered, and focus and direction were set by a few enthusiastic faculty of different academic commitments. The program was successful initially but was in time edged into survival mode, likely because of provincial government funding constrictions, the always fluid and local character of comparative literature and interdisciplinary studies, reliance on overload teaching/directorship, inadequate support staffing, shifting emphases and orientation, disposal of a University arts centre of some value to the program, somewhat uncompetitive funding packages for applicants, slight income-supplementing work opportunities especially for international students, diminution of a potentially valuable recruiting source as the undergraduate Comparative Literature program was homed in Modern Languages and declined, and turnover and/or burnout of instructors and Directors. These circumstances converged with a scheduled upcoming external review and the program was put on hold; the Covid pandemic caused further delay.

Present situation and stated prospects: Initiative in reviving the MA in comparative and interdisciplinary studies has been assumed by members of Modern Languages, supported by the Department Chair; applications for a redesigned MA led by this group are now being considered. They envisage a graduate Comparative Literature program for Modern Languages, centred on the developing field of studies in languages and literatures (including indigenous) deemed declining or threatened, but bridging disciplines and faculties (Business Studies and a new CRC in Native Studies were mentioned). An alternative, less sharply focused vision was discernible in remarks by faculty and administrators outside Modern Languages. These suggested a robust program more closely

allied with the existing interdisciplinary humanities PhD, closer to the English Department, and engaged with Indigenous studies, again emphasizing theory, experiential learning, engagement with institutes and programs in the arts (on and off campus). It was reported at second-hand that administration was enjoining a minimum intake of five domestic and two international students for the revived program. Interestingly, Library representatives stated the wish to expand support for this MA, whatever form it takes. No students were available for interview as the program is in suspension.

Assessors' main observations: Faculty leadership and provision has been admirable and even heroic, but the overload method is unsustainable. The program has had successes and there is widespread openness to re-animating the program in some form, perhaps not yet fully determined. Full funding should continue to be offered to successful applicants. The Directing committee should be inclusive, meet regularly, and have clear lines of accountability and reporting. The program should not become overly dependent on a single person or small group in leadership. There was no indication of design to bolster undergraduate Comparative Literature or World Literature as a recruiting source for this MA; potential for recruiting from existing Brock undergraduate programs was mentioned in general terms. Possible collaborations with Fine Arts and Drama and with the Business School were mentioned, though with little detail. Most thought the program should not be a one-person vision that changes with replacement of that person. There must be adequate provision of support-staff time, and provision of larger study/work/social space for program students is highly desirable. There was broad agreement that on-campus and regional material resources are sufficient and could be augmented, including corporate sponsorship, though little detail was provided. Differences between two emergent visions for the program's future should be managed to avoid compromising collegiality and morale, or the program itself.

## B. Strengths of the Program

The reviewers noted the following strengths:

SCLA [Studies in Comparative Literatures and Arts] is a unique, challenging, innovative and creative program. It is a place in the Faculty of Humanities where risks are taken, and new connections are made, in that each student's work involves an experiment, something new, in extending knowledge beyond traditional and pre-established categories.

In combining studies in Music, the Performing Arts, the Visual Arts, Literature, and critical theory in a single, one-year MA program, it may be unique in the Canadian academy.

The faculty in Studies in Comparative Literature and Arts Masters of Arts is impressive—committed, capable, invested in the program, concerned with its futures. The experience, acumen and institutional memories of these scholars is the program's greatest strength.

Affiliated senior administrators are well-versed in program particulars, outcomes, and histories, having had in many cases direct involvement in conceiving and teaching in SCLA.

There are significant physical resources available at Brock to SCLA faculty and students, including the Marilyn I. Walker Centre for Fine and Performing Arts, the Small Walker Press, the Digital Makers Space.

## C. Opportunities for Improvement and Enhancement

### Recommendation #1

Revive the program as an MA in interdisciplinary and comparative studies.

#### The Program responded:

The current direction of SCLA is not at odds with this recommendation. Comparative literatures and arts are a productive interdisciplinary field. As a follow-up to this recommendation, SCLA will act in partnership with the Research Centre for Interdisciplinary Arts and Creative Culture (homed in the Centre for Studies in Arts and Culture, Marilyn I. Walker School of Fine and Performing Arts) and will actively develop connections (research, creation, outreach) with this Centre in the next five years.

#### The Senate Graduate Studies Committee responded:

The reviewers strongly supported the revival of the program as an MA in interdisciplinary and comparative studies. There would appear to be sufficient interest and expertise in this interdisciplinary approach at Brock, and the reviewers praised the 'heroic' commitment of the faculty involved. Inasmuch as it is in the purview of the Senate Graduate Studies Committee to weigh in on a report that includes recommendations about the modification of an existing program or the establishment of a new program in the absence of documentation about consultation with ARC, and given that it is for the stakeholders and administrators of the program to act on recommendations in accordance with university policies in our unionized workplace, our committee accepts this review.

#### The Dean of Humanities responded:

This recommendation merits consideration, and the Dean strongly encourages the programme to follow up on this. An MA in interdisciplinary studies could have broad scope and appeal across the Humanities.

#### The Dean of Graduate Studies responded:

I strongly support this recommendation however it is imperative that the Unit put together a solid plan for how to move this forward. While partnerships and connections are indeed important for working towards an MA in interdisciplinary and comparative studies, a clear and defined commitment to transform SCLA is needed. This is a critical top priority that is needed to sustain this type of program.

## ARC Disposition of the Recommendation

ARC considers the recommendation to review and make changes to the program in order to revitalize it to be accepted for consideration. Notwithstanding that the reviewers gave the program an outcome category of *Excellent Quality*, the Committee recognizes that the program has been on hiatus for two years and that a transformation is important for its survival, whether as an MA in Interdisciplinary and Comparative Studies or in another form.

|                                                      |                                                                   |
|------------------------------------------------------|-------------------------------------------------------------------|
| <b>Implementation Plan (1<sup>st</sup> Priority)</b> |                                                                   |
| Responsible for approving:                           | Program                                                           |
| Responsible for resources:                           | Program                                                           |
| Responsible for implementation:                      | Program                                                           |
| Timeline:                                            | Dean of Humanities to report by the end of academic year 2021-22. |

## Recommendation #2

Provide flexible and stable leadership and co-ordination with a Director on teaching release, supported by a wide-ranging committee membership of various stakeholders meeting regularly, adequately assisted by dedicated support staff, and clear lines of reporting and accountability.

### The Program responded:

The program has used its two no-intake years to develop stable leadership and clear lines of reporting and accountability. The Director of SCLA reports regularly to the Chair of MLLC and the MLLC committee. A report is due at each MLLC meeting.

SCLA agrees that there is an urgent need for dedicated support staff. A conversation on administrative assistance is currently taking place with the Dean of Humanities.

The directorship comes with a 0.5 teaching release and increased PER funds. The committee is composed of both long-term and new members. The SCLA Handbook provides detailed information on the composition of the committee to ensure the presence of a wide-ranging membership. This wide-ranging membership has never been questioned and is actively pursued.

### The Dean of Humanities responded:

Teaching release for programme directors is guaranteed by the *Collective Agreement between Brock University and the Brock University Faculty Association*.

The Dean supports the recommendation for a committee with wide-ranging membership, as well as the suggestion for frequent meetings.

Resourcing, such as support staff, is beyond the scope of the current exercise.

### The Dean of Graduate Studies responded:

Reporting and accountability fall under the purview of the Dean of Humanities. FGS supports the Dean's efforts and any direction in which they recommend moving.

## ARC Disposition of the Recommendation

ARC considers the recommendation to provide stable governance and clear lines of reporting and accountability to be accepted. The Committee recognizes that broad stakeholder membership and participation in the program is critical for its future viability. However, ARC understands that resources in terms of a director, faculty and staff are outside of its jurisdiction.

|                                                      |                                                                   |
|------------------------------------------------------|-------------------------------------------------------------------|
| <b>Implementation Plan (1<sup>st</sup> Priority)</b> |                                                                   |
| Responsible for approving:                           | Program                                                           |
| Responsible for resources:                           | Program                                                           |
| Responsible for implementation:                      | Program                                                           |
| Timeline:                                            | Dean of Humanities to report by the end of academic year 2021-22. |

### Recommendation #3

Instruction should be on-load as much as possible.

#### The Program responded:

This is, of course desirable, but will not change until new appointments are made. MLLC has regularly allowed faculty members to teach in SCLA on load. As of Spring 2019, an MLLC faculty member initially hired to teach in SCLA is deployed yearly in SCLA for a minimum of 0.5 credit on-load. Furthermore, MLLC arranges for at least one other MLLC member to also teach on load every year in SCLA.

#### The Dean of Humanities responded:

Response to this recommendation depends, to an extent, on the actions taken in response to Recommendations 1 and 2. With a broader membership and participation in the programme, the impact of teaching within the programme can be diffused across different units in the Faculty of Humanities and beyond.

While resourcing is beyond the scope of the current exercise, it should be noted that the stipends provided for this programme and any other interdisciplinary programmes can be used either for faculty members to teach on overload, or to “buy out” teaching in their home units so that teaching in interdisciplinary programmes can indeed be on load.

#### The Dean of Graduate Studies responded:

From what I understand after reading the Reviewers’ report, the idea is that SCLA should consider broadening to an MA in Interdisciplinary and Comparative Studies. This would then increase the potential for additional course offerings and faculty support from beyond MLLC. However, workload and teaching assignments fall outside of FGS.

### ARC Disposition of the Recommendation

ARC considers the recommendation to be not accepted as workload lies outside of its jurisdiction and has implications with respect to Collective Agreements.

**Implementation Plan**  
Not accepted.

#### Recommendation #4

Develop a robust recruiting plan, with local, national, and international scope and records, sustained by dedicated support staff.

#### The Program responded:

This seems key to the program's survival. The University bears this responsibility and needs to develop new and appealing strategies. The Director of SCLA recruits at Brock and beyond, and works closely with the Graduate Office throughout the year. More involvement at the undergraduate level by the Recruitment Office would be welcome. Post-pandemic, there will be potential to further develop recruitment among MLLC students.

#### The Dean of Humanities responded:

The Dean supports the development of a recruitment plan that sees the programme working in partnership with the Faculty of Graduate Studies. For graduate programmes, the work of the participating faculty members and of current and former students constitutes the best advertisement and recruitment tool.

#### The Dean of Graduate Studies responded:

While the University does indeed have a responsibility for the overall brand and marketing of the institution, it falls to the Unit to develop and create appealing programming that attracts students. FGS is dedicated to supporting all graduate programs in the development of marketing and recruitment strategies, but this needs to be driven by the Unit.

I strongly support the recommendation of the Reviewers that, "Securing notice and interest from top prospects requires a well articulated, continuously managed and updated plan led by the director and program committee and sustained year on year by an experienced and committed support staff person. There should be constant expansion of a network based on personal, academic, and professional connections of program students, program alumni/ae, and faculty and others in the University. The program's interdisciplinary character may make it unamenable to traditional typologies of disciplinary study, requiring more energetic recruiting strategies." I further encourage the program to develop a plan.

## ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation. The Committee recognizes that the Program Director and Committee are responsible for developing a broad-based recruiting plan in partnership with the Faculty of Graduate Studies, Recruitment, Marketing and Communications, and other institutional resources.

|                                                      |                                                                   |
|------------------------------------------------------|-------------------------------------------------------------------|
| <b>Implementation Plan (1<sup>st</sup> Priority)</b> |                                                                   |
| Responsible for approving:                           | Program                                                           |
| Responsible for resources:                           | Program                                                           |
| Responsible for implementation:                      | Program                                                           |
| Timeline:                                            | Dean of Humanities to report by the end of academic year 2021-22. |

## Recommendation #5

Enunciate a clear, focused, flexible interdisciplinary and comparatist program mandate, with illustrative examples of possible qualifying undergraduate degrees, programs and projects for potential students, full-and part-time options, recorded and potential career outcomes, funding opportunities, and evolving annotated roster of participating faculty, institutes, units, resources, and sponsors.

### The Program responded:

A mandate addressing the above points already exists, to which the partnership with the Research Centre in Interdisciplinary Arts and Creative Culture will be added. The updated mandate will be posted on the SCLA website.

### The Dean of Humanities responded:

The response to this recommendation depends on the actions taken in response to Recommendations 1 and 2. If the recommendation to revive the programme as an MA in interdisciplinary studies, then this is a good opportunity to develop a programme mandate and provide examples of possible trajectories for entry to and work within the programme. A document that lays out enrolment options and funding opportunities, past and potential career or future educational outcomes, and a roster of participating faculty and their research expertise, could be very useful in the recruitment plan noted in Recommendation 4.

### The Dean of Graduate Studies responded:

Again, it seems that the Unit is missing the point of the reviews and recommendations. With a shift to interdisciplinary program as suggested in Recommendation #1, then an updated program mandate will be critical for attracting top students with appropriate qualifications.

## ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted. The Committee understands the reviewers to be referring to a mandate which will reflect the new priorities of the revitalized program under consideration, per recommendation #1. ARC expects that a mandate which addresses the many criteria listed in the recommendation would be a powerful recruiting tool as well.

### Implementation Plan (1<sup>st</sup> Priority)

|                                 |                                                                   |
|---------------------------------|-------------------------------------------------------------------|
| Responsible for approving:      | Program                                                           |
| Responsible for resources:      | Program                                                           |
| Responsible for implementation: | Program                                                           |
| Timeline:                       | Dean of Humanities to report by the end of academic year 2021-22. |

## Recommendation #6

Establish an active, well curated, and student-centred social media presence.

The Program responded:

This initiative requires further institutional support in the form of administrative help and will be possible once the program operates again after two no-intake years.

The Dean of Humanities responded:

The Dean supports this recommendation.

The Dean of Graduate Studies responded:

I support this recommendation.

## ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted. The Committee expects that the Program will work with existing institutional resources to move forward with this recommendation.

|                                                      |                                                                   |
|------------------------------------------------------|-------------------------------------------------------------------|
| <b>Implementation Plan (2<sup>nd</sup> Priority)</b> |                                                                   |
| Responsible for approving:                           | Program                                                           |
| Responsible for resources:                           | Program                                                           |
| Responsible for implementation:                      | Program                                                           |
| Timeline:                                            | Dean of Humanities to report by the end of academic year 2022-23. |

### Recommendation #7

Establish collaborative and consultative relationships with similar programs and institutions regionally, nationally, and internationally.

The Program responded:

This is a plan SCLA has already committed to as soon as the program operates again.

The Dean of Humanities responded:

The Dean supports this recommendation.

The Dean of Graduate Studies responded:

I support this recommendation.

### ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted.

### Implementation Plan (2<sup>nd</sup> Priority)

|                                 |                                                                   |
|---------------------------------|-------------------------------------------------------------------|
| Responsible for approving:      | Program                                                           |
| Responsible for resources:      | Program                                                           |
| Responsible for implementation: | Program                                                           |
| Timeline:                       | Dean of Humanities to report by the end of academic year 2022-23. |

**Recommendation #8**

Prioritize and enunciate policy of Equity, Diversity, Indigenization, and Decolonization in all aspects of the program.

The Program responded:

SCLA will enunciate such policy in 2021-2022. It will appear in the Handbook as well as on the website. In MLLC, French Studies has requested a tenure-track position in Francophone Indigenous literature. Such recruitment would be an asset in SCLA.

The Dean of Humanities responded:

The Dean supports this recommendation, and encourages the programme to look across the Faculty of Humanities for supports in this endeavour.

The Dean of Graduate Studies responded:

I support this recommendation. The Unit has an opportunity to look beyond MLLC in its effort to devise such a policy.

**ARC Disposition of the Recommendation**

ARC considers the recommendation to be accepted and in the process of implementation.

|                                                      |                                                                   |
|------------------------------------------------------|-------------------------------------------------------------------|
| <b>Implementation Plan (1<sup>st</sup> Priority)</b> |                                                                   |
| Responsible for approving:                           | Program                                                           |
| Responsible for resources:                           | Program                                                           |
| Responsible for implementation:                      | Program                                                           |
| Timeline:                                            | Dean of Humanities to report by the end of academic year 2021-22. |

## Recommendation #9

Implement community service learning, experiential learning, and internship component, with faculty mentorship, for use where appropriate in a student's or a cohort's program.

### The Program responded:

SCLA has provided experiential learning since its inception and will continue to do so. As the Rodman Hall Art Centre no longer exists, some experiential learning activities will need to be adapted. The most professional solution would be for the University to offer solutions of equal quality in the visual arts to compensate for this loss.

Students may also gain experiential learning and perform community service in the Research Centre in Interdisciplinary Arts and Creative Culture by participating in its creative and outreach projects.

### The Dean of Humanities responded:

The Dean supports this recommendation, and encourages the programme to consider a broad range of available opportunities for service and experiential learning.

### The Dean of Graduate Studies responded:

I support this recommendation, but I strongly encourage the Unit to think about how to implement this recommendation using existing resources. A longer term vision around existing University and Community resources will help to strengthen the program and the student experience.

## ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation. The Committee encourages the Program to consider further opportunities to include experiential components in the curriculum, working with existing institutional resources. ARC expects that the Program is best positioned to determine appropriate strategies to move forward on this issue.

### Implementation Plan (2<sup>nd</sup> Priority)

|                                 |                                                                   |
|---------------------------------|-------------------------------------------------------------------|
| Responsible for approving:      | Program                                                           |
| Responsible for resources:      | Program                                                           |
| Responsible for implementation: | Program                                                           |
| Timeline:                       | Dean of Humanities to report by the end of academic year 2022-23. |

## Recommendation #10

Where appropriate, use team-teaching curated and coordinated by a course director.

The Program responded:

From the very beginning until now, SCLA has offered at least one team-taught course a year. This practice will continue. Team-teaching depends on the availability and ongoing commitment of individual faculty members and on the options made available by the University to compensate for contributions.

The Dean of Humanities responded:

The Dean supports this recommendation.

The Dean of Graduate Studies responded:

I support this recommendation.

## ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation.

|                                                      |                                                                   |
|------------------------------------------------------|-------------------------------------------------------------------|
| <b>Implementation Plan (1<sup>st</sup> Priority)</b> |                                                                   |
| Responsible for approving:                           | Program                                                           |
| Responsible for resources:                           | Program                                                           |
| Responsible for implementation:                      | Program                                                           |
| Timeline:                                            | Dean of Humanities to report by the end of academic year 2021-22. |

**Recommendation #11**

Provide opportunities for the program’s cohorts and membership to engage socially with each other, develop an esprit de corps, and organize program-related events.

The Program responded:

Such activities have always existed in SCLA, but of course stopped during the two no-intake years. They are set to resume with the next cohort.

The Dean of Humanities responded:

The Dean supports this recommendation.

The Dean of Graduate Studies responded:

I support this recommendation.

**ARC Disposition of the Recommendation**

ARC considers the recommendation to be accepted and in the process of implementation.

|                                                      |                                                                   |
|------------------------------------------------------|-------------------------------------------------------------------|
| <b>Implementation Plan (1<sup>st</sup> Priority)</b> |                                                                   |
| Responsible for approving:                           | Program                                                           |
| Responsible for resources:                           | Program                                                           |
| Responsible for implementation:                      | Program                                                           |
| Timeline:                                            | Dean of Humanities to report by the end of academic year 2021-22. |

## Recommendation #12

Language requirements should be adapted to the student's program.

### The Program responded:

SCLA has always adapted its language requirement to students' needs and skills. As described in the Handbook, students may either demonstrate the successful completion of a first-year language course at university level or take a reading test. This is done in agreement with language requirements practiced in MLLC. As a follow-up to this recommendation, the SCLA committee has provided clarifications in the Handbook: all languages (not just colonial languages) may fulfill the language requirement. Students whose first language is not English are not required to demonstrate the completion of a language course or take a test.

### The Dean of Humanities responded:

The Dean supports this recommendation, and notes that it does indeed articulate current practice.

### The Dean of Graduate Studies responded:

I support this recommendation and practice.

### ARC Disposition of the Recommendation

ARC considers the recommendation to be current practice.

**Implementation Plan**  
No further action required.

### Recommendation #13

|             |
|-------------|
| Rename SCLA |
|-------------|

The Program responded:

As a follow-up to this recommendation, SCLA has agreed to rename “Studies in Comparative Literatures and Arts” as follows: “Comparative Literatures and Arts.” This change will be formalized for the next GPC.

The Dean of Humanities responded:

Response to this recommendation hinges upon the response to Recommendation 1. Once the conversation around a possible new incarnation of the programme is complete, the name of that programme should be given careful consideration.

The Dean of Graduate Studies responded:

I support this recommendation, and strongly encourage the program to consider a change in name that aligns with Recommendation #1. That is, consider a name change once sufficient revamping/revitalization of the program has taken place.

### ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation. The Committee understands that consideration of a name change is dependent on the implementation of recommendation #1.

|                                                      |                                                                   |
|------------------------------------------------------|-------------------------------------------------------------------|
| <b>Implementation Plan (1<sup>st</sup> Priority)</b> |                                                                   |
| Responsible for approving:                           | Program                                                           |
| Responsible for resources:                           | Program                                                           |
| Responsible for implementation:                      | Program                                                           |
| Timeline:                                            | Dean of Humanities to report by the end of academic year 2021-22. |

## Recommendation #14

|                                 |
|---------------------------------|
| Develop Areas of Specialization |
|---------------------------------|

The Program responded:

This is in principle a good idea. However, its realization depends on staffing, budget, and student recruitment.

The Dean of Humanities responded:

This, too, depends in part on the response to Recommendation 1, and recommendation 2 is relevant here, too. The attraction of additional programme and committee members from the Faculty of Humanities and beyond could bring about natural “clusters” of faculty research interests that could guide the development of areas of specialization.

The Dean of Graduate Studies responded:

Again, this recommendation is dependent on expanding the breadth of the program (see Recommendation #1). I think this is an opportunity to explore how to increase offerings by incorporating more faculty members across the Faculty of Humanities.

### ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation. The Committee understands that the development of areas of specialization is dependent on the implementation of recommendation #1.

|                                                      |                                                                   |
|------------------------------------------------------|-------------------------------------------------------------------|
| <b>Implementation Plan (1<sup>st</sup> Priority)</b> |                                                                   |
| Responsible for approving:                           | Program                                                           |
| Responsible for resources:                           | Program                                                           |
| Responsible for implementation:                      | Program                                                           |
| Timeline:                                            | Dean of Humanities to report by the end of academic year 2021-22. |

## Recommendation #15

### Administrative Affiliation and a Diploma in SCLA

The Program responded:

SCLA’s administrative affiliation is unambiguously in MLLC. The current Chair of MLLC is a member of the SCLA committee. To anchor the current situation, the SCLA handbook has added that the Chair of MLLC be a member of the Program Committee.

SCLA will work toward the creation of a diploma for graduate students who are not enrolled in SCLA.

The Dean of Humanities responded:

The Reviewers’ recommendation that SCLA pursue “administrative and pedagogical affiliation with and feed into the Interdisciplinary PhD program in Humanities” is worth consideration, as there seems to be a natural fit between the two programmes (especially in light of possible responses to Recommendation 1).

A graduate diploma that could be offered to students in other graduate programmes, to provide breadth to their experience, is also worthy of consideration.

The Dean of Graduate Studies responded:

This is an interesting recommendation. Some more clear affiliation (and mandate) would help to align with and feed students into the PhD.

The creation of a diploma is also an excellent suggestion to expand offerings to students outside of the SCLA program.

### ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation. The Committee understands the recommendation to be referring to administrative and pedagogical affiliation with the PhD in Interdisciplinary Humanities and the option for a Diploma for students in other graduate programs.

|                                                      |                                                                   |
|------------------------------------------------------|-------------------------------------------------------------------|
| <b>Implementation Plan (2<sup>nd</sup> Priority)</b> |                                                                   |
| Responsible for approving:                           | Program                                                           |
| Responsible for resources:                           | Program                                                           |
| Responsible for implementation:                      | Program                                                           |
| Timeline:                                            | Dean of Humanities to report by the end of academic year 2022-23. |

## Recommendation #16

|                    |
|--------------------|
| Curriculum Renewal |
|--------------------|

### The Program responded:

This is an ongoing process that SCLA has pursued during its two no-intake years, and one that will continue.

### The Dean of Humanities responded:

This is another recommendation the response to which could hinge on the response to Recommendation 1, and, to a lesser extent, 14. As the programme considers what it wants to look like in the future, a revision and renewal of the curriculum would be appropriate. The Reviewers provided some examples of possible directions to consider, such as more cross listing with other graduate programmes, and adding a coursework only stream. I support consideration of this recommendation.

### The Dean of Graduate Studies responded:

This recommendation should be more clearly addressed by the Unit. The recommendation includes the possibility of a course-based stream as well as cross-listing of courses from other Faculty of Humanities programs. These are actionable recommendations.

## ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted. The Committee expects that curriculum review and renewal will be a central consideration during the revitalization process of the program. ARC considers the recommendation to be dependent on the implementation of recommendation #1.

|                                                      |                                                                   |
|------------------------------------------------------|-------------------------------------------------------------------|
| <b>Implementation Plan (1<sup>st</sup> Priority)</b> |                                                                   |
| Responsible for approving:                           | Program                                                           |
| Responsible for resources:                           | Program                                                           |
| Responsible for implementation:                      | Program                                                           |
| Timeline:                                            | Dean of Humanities to report by the end of academic year 2021-22. |

### Recommendation #17

Make 5P01 a 'credit / non-credit' course

The Program responded:

This option already exists in the SCLA Handbook and will be reaffirmed in the Fall when SCLA 5P01 is offered again to make sure that students enrolled in the course are aware of this option.

The Dean of Humanities responded:

This recommendation seems to reflect current practice.

The Dean of Graduate Studies responded:

The content of courses falls outside of FGS' purview.

### ARC Disposition of the Recommendation

ARC considers the recommendation to be current practice.

Implementation Plan  
No action required.

## Recommendation #18

Consider a retreat

### The Program responded:

The current SCLA committee is a strong team with a common goal and works in a collegial, effective manner. There is no need of a mediator as there are no conflicts.

### The Dean of Humanities responded:

The Dean supports the recommendation that the programme committee and participating faculty hold a retreat, when public health considerations make this possible. Having a space and a period of time to consider the big questions of the programme can be beneficial. Sometimes having a facilitator present to help guide discussions and visioning exercises can be helpful, and if the programme chose to pursue this the Dean would try to find some financial support.

### The Dean of Graduate Studies responded:

While this falls outside of FGS' purview, I do not see why consideration for a retreat to discuss various aspects of the program recommendations would be rejected by the Unit. I support this recommendation.

## ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted. The Committee expects that gathering the stakeholders of the program together for a retreat would be beneficial to the future of the program.

|                                                      |                                                                   |
|------------------------------------------------------|-------------------------------------------------------------------|
| <b>Implementation Plan (1<sup>st</sup> Priority)</b> |                                                                   |
| Responsible for approving:                           | Program                                                           |
| Responsible for resources:                           | Program                                                           |
| Responsible for implementation:                      | Program                                                           |
| Timeline:                                            | Dean of Humanities to report by the end of academic year 2021-22. |

## D. Summary of Recommendations:

### First Priority:

Recommendations 1,2,4,5,8,10,11,13,14,16,18

### Second Priority:

Recommendations 6,7,9,15

### Not Accepted:

Recommendation 3

### No Action Required (Current Practice):

Recommendations 12, 17



## Request for Program Discontinuation

| Proponent's Contact Information |                                                                                                             |
|---------------------------------|-------------------------------------------------------------------------------------------------------------|
| Program to be Discontinued:     | BSc Computing and Solid State Device Technology<br>BSc Computing and Solid State Device Technology<br>Co-op |
| Date effective:                 | September 1, 2021                                                                                           |
| Academic Unit:                  | Physics                                                                                                     |
| Submitted by:                   | Thad Harroun                                                                                                |
| Email:                          | <a href="mailto:tharroun@brocku.ca">tharroun@brocku.ca</a>                                                  |
| Date Submitted:                 | August 13, 2021                                                                                             |

The Request for Program Discontinuation shall include:

| Rationale for the Proposed Discontinuation                                                                                                                                                                                                                                                                                             |               |                          |                          |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------------|--------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Provide a clear rationale for the request, documenting the results of program committee discussions.                                                                                                                                                                                                                                   |               |                          |                          |   |   |   |   |   |   |   |   |   |   |   |   |
| The Department, in consultation with all its members, propose to close these two programs due to perpetual low enrolment (<2 per year since 2012) This low enrolment persists despite typically higher application and admission numbers.                                                                                              |               |                          |                          |   |   |   |   |   |   |   |   |   |   |   |   |
| Details of Resource Implications                                                                                                                                                                                                                                                                                                       |               |                          |                          |   |   |   |   |   |   |   |   |   |   |   |   |
| Describe how resources of the program (human, physical and budgetary) will be redistributed.                                                                                                                                                                                                                                           |               |                          |                          |   |   |   |   |   |   |   |   |   |   |   |   |
| The programs rely on existing courses of the normal programs of PHYS, MATH, COSC and CHEM, as well as Co-op services. Thus, there is no impact to resources.                                                                                                                                                                           |               |                          |                          |   |   |   |   |   |   |   |   |   |   |   |   |
| Termination Plan and Timing of Discontinuation                                                                                                                                                                                                                                                                                         |               |                          |                          |   |   |   |   |   |   |   |   |   |   |   |   |
| A phased closure plan and timeline for the program discontinuation, taking into account the requirements of those students currently enrolled in the program to allow them to meet requirements for graduation.                                                                                                                        |               |                          |                          |   |   |   |   |   |   |   |   |   |   |   |   |
| We recommend cessation of new admissions beginning with the 2022-2023 academic year, and a 4.5 year phase out of the degree for currently enrolled students.                                                                                                                                                                           |               |                          |                          |   |   |   |   |   |   |   |   |   |   |   |   |
| As of the Fall term, 2021-22, there are 8 students total enrolled in CAST and CAST Co-op majors. (The typical Y1 enrolment may seem high, however we anticipate that, as in past years, several of the Y1 students will revise their major to either Physics or Computer Science.)                                                     |               |                          |                          |   |   |   |   |   |   |   |   |   |   |   |   |
| <table border="1"> <thead> <tr> <th>Year of Study</th> <th>Total Co-op</th> <th>Total CAST (incl. Co-op)</th> </tr> </thead> <tbody> <tr> <td>4</td> <td>1</td> <td>2</td> </tr> <tr> <td>3</td> <td>0</td> <td>0</td> </tr> <tr> <td>2</td> <td>0</td> <td>2</td> </tr> <tr> <td>1</td> <td>4</td> <td>4</td> </tr> </tbody> </table> | Year of Study | Total Co-op              | Total CAST (incl. Co-op) | 4 | 1 | 2 | 3 | 0 | 0 | 2 | 0 | 2 | 1 | 4 | 4 |
| Year of Study                                                                                                                                                                                                                                                                                                                          | Total Co-op   | Total CAST (incl. Co-op) |                          |   |   |   |   |   |   |   |   |   |   |   |   |
| 4                                                                                                                                                                                                                                                                                                                                      | 1             | 2                        |                          |   |   |   |   |   |   |   |   |   |   |   |   |
| 3                                                                                                                                                                                                                                                                                                                                      | 0             | 0                        |                          |   |   |   |   |   |   |   |   |   |   |   |   |
| 2                                                                                                                                                                                                                                                                                                                                      | 0             | 2                        |                          |   |   |   |   |   |   |   |   |   |   |   |   |
| 1                                                                                                                                                                                                                                                                                                                                      | 4             | 4                        |                          |   |   |   |   |   |   |   |   |   |   |   |   |
| All students currently in the program will be able to complete their degree without issue, as all courses and Co-op services required will still be available for the next 4.5 years                                                                                                                                                   |               |                          |                          |   |   |   |   |   |   |   |   |   |   |   |   |
| The removal of the program from OUAC and the Calendar can proceed with the 2022-2023 Calendar revisions.                                                                                                                                                                                                                               |               |                          |                          |   |   |   |   |   |   |   |   |   |   |   |   |

**Evidence and Documentation of Consultation**

Include the results of any consultation with other units (academic or administrative) that will be impacted by the program discontinuation.

Myself and previous Department Chair Kirill Samokhin have discussed the program's termination with the Provost, the Dean of FMS, and Vice-Provost & Associate Vice-President, Academic, and Director of Co-op, Career, and Experiential Education. We also consulted with Brian Ross, Chair of COSC, who polled that department and found no objection. Julia Zhu of Co-op will assist in communicating to students that Co-op will continue to support students as long as they are in the degree program.

**Decanal Comments**

Include certification that the proposed discontinuation is appropriate and in line with the strategic direction of the Faculty. For undergraduate programs, the relevant Dean(s) shall be the Dean(s) of the Faculty within which the program resides. For graduate programs, the relevant Deans shall be the Dean of Graduate Studies and the Dean(s) of the relevant Faculty or Faculties.

I support the department decision.



August 19, 2021

To: Christine Phillips  
Manager, Quality Assurance

From: Ejaz Ahmed  
Dean, Faculty of Math & Science

A handwritten signature in black ink, appearing to read "Ejaz Ahmed", positioned to the right of the "From:" text.

**Re: Program Discontinuation**

Please see this letter as my approval for the Physics Department's decision to discontinue the following 2 programs in the Faculty of Math & Science.

Computing & Solid State Device Technology  
Computing & Solid State Device Technology Coop

I have also indicated my approval on the Request for Program Discontinuation form.

## Statement of Intent for a New Program

| Proponent’s Contact Information           |                                         |
|-------------------------------------------|-----------------------------------------|
| New Program Name (degree and discipline): | MA in Media, Communication, Culture     |
| Academic Unit Proposing the Program:      | Communication, Popular Culture and Film |
| Proposed Start Date:                      | September 2022                          |
| Submitted by:                             | Marian Bredin                           |
| Email:                                    | mbredin@brocku.ca                       |
| Date of Submission:                       | May 20 2021                             |

The Statement of Intent will reference the evaluation criteria for new programs (IQAP Section 3.5) as appropriate and shall include:

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Description of the Proposed Program</b><br/>Provide a description of the program, clearly stating the purpose, structure and pedagogical rationale, including an explanation of the proposed degree nomenclature.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p><b>Context and overview</b><br/>In the digital era, the role of media and communication in shaping human societies triggers frequent public debate, raises difficult policy challenges, and generates pressing research questions. The proposed MA in Media, Communication, Culture engages students in the interdisciplinary study of media texts and practices, while developing their skills in critical analysis of modes of human and mediated communication. This new MA program focuses upon the study of contemporary forms of media and communication through curriculum designed to explore industry structures and evolving technologies, cultural texts and contexts, media forms, social practices, and identities. Building upon the interdisciplinary origins and present organization of the Department of Communication, Popular Culture and Film, the program will train graduate students in research methodologies drawn from both Social Sciences and Humanities disciplines. With its combined emphasis on media, communication and culture, the program will also attract students interested in creative projects, experiential learning options and career paths in these focus areas. The MA in Media, Communication, Culture addresses the societal need for understanding links between powerful media structures and complex communication processes with this dual focus on the cultural aspects of media and the social organization of communication.</p> <p>Communication Studies and Media Studies have emerged as flourishing, rapidly evolving, and quickly growing international and interdisciplinary scholarly fields over the past 50 years (Simonson &amp; Park, 2016. <i>On the History of Communication Study</i>). The proposed MA in Media, Communication, Culture takes CPCF in new directions with a graduate program that builds on current research expertise of recently hired faculty, while leveraging the department’s successes in its undergraduate degrees in Business Communication, Media Communication, Film Studies, and Popular Culture.</p> <p><b>Purpose, Objectives and Outcomes</b><br/>The MA in Media, Communication, Culture seeks to prepare students to live and work as scholars, citizens, creators, and consumers in a world increasingly defined by the texts, practices, techniques and economies of media and communication. Our goal is to engage students in the interdisciplinary examination of the multifaceted contexts of media and</p> |

communication through critical analysis of cultural texts, social practices and identities, media technologies and industries. As a primary outcome of the program, students will learn to articulate research problems, formulate specific research questions, and design independent research projects that explore the intersections of media and communication in human societies. Secondly, students will understand the complexities of contemporary communication and media through practical and real-world experience of media production, communication design or creative activity.

To achieve these objectives, the proposed MA will offer a fully integrated graduate educational experience including: a) seminar courses surveying central ideas, theories, problems and emerging research in the field; knowledge and application of current research methods and approaches in the study of communication and media; b) mentorship as students pursue independent research and writing through the required Major Research Paper; and c) experiential learning opportunities and mentorship for students wishing to develop communication competencies, media production skills or creative design skills in partnership with local businesses or community organizations.

### **Admissions Criteria**

Successful applicants should have a minimum 75 average in a BA Honours program in Communication Studies, Media Studies, Cultural Studies, or Film Studies, or upper-year course credits concentrating on these fields within a BA Honours degree in another Social Sciences or Humanities discipline. Applicants should submit an academic CV, a one-page statement of interest, undergraduate transcripts, and two letters of reference. For students who must provide proof of English Language Proficiency the minimum TOEFL score of 600 (TWE 5.5) or equivalent is required.

### **Program Structure**

The proposed MA in Media, Communication, Culture will accept qualified students into the program, where they will be required to complete a Major Research Paper (MRP) for 1 credit and 3 full-course credits, comprised of 1.5 core and required credits and 1.5 elective credits.

### **Program Timelines**

The MA in Media, Communication, Culture will be a 12-month (3 term) program. Students will complete core required and elective courses in the first two terms. MRP research and writing will take place in all three terms of the program. Full-time students will be required to submit completed research papers by the end of their third term in the program.

### **Program Content**

#### ***Course work***

All students in the program will take two common required courses: Theories and Approaches in Media, Communication and Culture (.5 credit), and Interdisciplinary Seminar in Media, Communication and Culture (.5 credit). The Interdisciplinary Seminar will draw upon a team-teaching model and feature guest lectures and discussion with media and communication scholars within and beyond Brock. The Interdisciplinary Seminar will also include a focus on high impact educational practices such as student participation in faculty research, writing-intensive assessments, and collaborative assignments and projects to encourage the graduate student cohort to form an active, engaged learning community within the program. Students will also take a required course in Research Design and Methodologies (.5 credit).

Students will register in the required MRP credit and will develop an individual learning contract to be submitted and approved by the Graduate Program Director at the end of the first term. The MRP research and writing will be carried out under the mentorship of a

CPCF faculty member. In the MRP credit, students may choose to carry out a project that expands upon the traditional academic research paper with independent study involving service learning, research-creation, community engagement, event planning or other types of self-directed learning activities.

Students will choose their remaining 1.5 elective credits from a range of variable topic courses offered by the program in the second term. One of the elective credits will be an 80-hour service learning or unpaid work placement carried out under the guidance of the CPCF Experiential Learning Coordinator in partnership with local businesses and community organizations in the Niagara region. As the program evolves, the experiential learning placement course (ELP) will also rely on the resources and expertise of staff in Brock's Co-op, Career and Experiential Education office. Credit for this elective course will require a full written report reflecting upon aspects of the work experience in relation to the academic objectives of the program. The ELP placements and partnerships will be developed over the long term with emphasis on building appropriate soft skills and tapping into enhanced potential of contributions from graduate students.

Additional elective credits in the MA in Media, Communication, Culture will contribute to an innovative and creative curriculum that reflects the current state of interdisciplinary knowledge in Media Studies, Communication Studies, and Cultural Studies. The faculty complement in CPCF brings a wide array of scholarly accomplishment and research expertise to the design and delivery of graduate-level courses.

The following three thematic areas of emphasis and associated learning outcomes have been identified as the building blocks of the curriculum in the proposed MA program.

### 1. Industries and technologies:

Students will:

- understand the history, structure, economic impact and political influence of media and communication industries.
- analyze the evolution and organization of specific media technologies such as photography, radio, film, television, digital networks, and transmedia platforms.
- grasp the significance and impact of digital technologies within such topics as digital subjectivities, media ecologies, knowledge media design, convergence, and participatory culture.

### 2. Texts and forms:

Students will:

- critically analyze cultural texts and media forms, applying methods of textual analysis across such domains as popular narrative and genre, music, sports, news, documentary, drama, speculative fiction, ecocinema and environmental communication, as well as comics, games, reality TV, and food media, among others.
- understand the range and variety of forms of mediated persuasion and promotional practices, including advertising, public relations, branding, and algorithmic culture.
- identify and analyze key elements of visual communication including the study of symbols, theories of the visible, and visual rhetoric.

### 3. Identities and practices:

Students will:

- grasp key elements in the study of cultural identity, including such aspects as racialization, ethnicity, Indigeneity, globalization, diaspora, sexuality, gender studies, family structure, youth cultures, disability studies and aging.

- identify and analyze cultural practices, including aspects of local heritage, public memory, and consumption practices.
- understand the significance of space, place and locality within media and culture.

#### Modes of delivery

Courses will be delivered as weekly or bi-weekly in-person seminars on the Brock campus, except for the MRP credit and the ELP course which are unscheduled. These credits will be designed as independent student study under faculty and staff supervision. Each student enrolled in the program will have a faculty supervisor or mentor and at minimum one secondary faculty mentor to support them in their learning. Some seminars may be delivered on-line or in blended formats as appropriate to meet student demand.

#### Governance

The program will be governed by the Graduate Program Committee (GPC) as a standing committee of the Department of Communication, Popular Culture and Film and administered by the Graduate Program Director (GPD) reporting to the Chair of CPCF. Students will be expected to adhere to the policies set out in the Brock Graduate Calendar, as well as to program-specific policies and procedures to be established in the MA in Media, Communication, Culture Program Student Handbook.

#### Student Funding

All students will receive guaranteed levels of funding for three terms through Graduate Fellowships, as outlined by the Faculty of Graduate Studies. Students may also be eligible for additional support in their first two terms through Graduate Teaching Assistantships in CPCF undergraduate courses. Some students may also be awarded Research Assistantships on specific faculty research projects with internal or external funding for student support.

Explain how the proposed program fits with the University's strategic plan.

The proposed MA in Media, Communication, Culture aligns with the goals, mission, and values of Brock University, as outlined in the Brock University Institutional Strategic Plan 2018-2025 and the Strategic Mandate Agreement 2017-20. The proposed MA is consistent with and advances all four of Brock's strategic priorities. First, the program is designed to offer a transformational and accessible academic experience, the first priority outlined in the plan. This MA program is inclusive of faculty expertise across all three CPCF programs, delivering a first-rate program that meets the interests and needs of students and enhancing their ability to meet their potential at Brock and beyond. Second, the proposed program will help Brock to build upon its research capacity across the university and internationally. As an interdisciplinary graduate degree program, the proposed MA can draw upon the existing expertise of CPCF as well as scholars from a range of disciplines and departments across Brock. The proposed program will prioritize and foster a culture of research and creative excellence by encouraging collaborative research projects and experiential learning that address some of the fundamental aspects of twenty-first century life, learning and culture: business communication strategies and practices, the study of media industries, and the study of media literacies writ large. Programs in media studies, communication studies, and cultural studies constitute a relevant, thriving, crucial field of study across postsecondary institutions in North America and Europe, advancing and providing vital twenty-first century competencies.

The proposed MA will enhance the life and vitality of our local region, the third platform of Brock's strategic plan. Community development goals will be supported by student research and project-based learning, fostered by ongoing regional research and scholarship conducted by many of our faculty, but also through the experiential learning component of the proposed program. The proposed graduate level experiential learning elective credit

will place our students within various business and community organizations across the region and continue to expand upon our contribution to economic and social development through these partnerships. This experiential component of the proposed MA builds upon our existing and hugely successful fourth year capstone course in CPCF, which will enable a seamless addition to our graduate course offerings.

Finally, the proposed MA in Media, Communication, Culture will foster a culture of inclusivity, accessibility, reconciliation, and decolonization, the fourth strategic priority in the Plan, by delivering a program that focuses on the study of media and communication as mechanisms for social justice and social change as well as economic, sociocultural, and personal change. The proposed program also aligns well with the current Strategic Mandate Agreement between Brock University and the Province of Ontario (2017). In the current Strategic Mandate Agreement, Brock University states a commitment to offering a broad array of curricular and co-curricular experiential learning opportunities. This proposed program aligns with the goals, mission, and values of Brock University to integrate experiential learning directly through community internships, as well as through innovative and relevant curricula and pedagogy that will foster a positive and accessible learning environment. Our proposed MA will do this by putting students first, striving for diversity, inclusion, decolonization, and reconciliation, thereby fostering students who will be well-equipped to take the critical thinking and professional skills they develop at Brock out into wider circuits of work, life and engaged citizenship that they will inhabit throughout their lives.

#### Details of Resource Implications

Provide details of the existing and new resources (human, physical and budgetary) required to mount the program.

#### Existing Resources

The proposed MA in Media, Communication, Culture will be housed in the Department of Communication, Popular Culture and Film and will draw upon existing human resources in CPCF. The seventeen faculty members appointed to the department bring substantial research expertise directly relevant to graduate studies in media and communication. All current faculty members in CPCF have previous experience teaching and supervising graduate students at Brock and elsewhere. This group of core faculty will contribute to scheduled teaching of graduate seminars, and non-scheduled teaching in the form of research supervision and support of experiential learning opportunities in the program. The proposed program will, where suitable, cross-list relevant MA courses in other Brock graduate programs that address the proposed learning outcomes of the MA in Media, Communication, Culture. As the curriculum for the proposed MA is further developed, elective courses may be designed with the option to admit highly qualified Honours students as a means of creating teaching synergies and efficiencies within CPCF.

The proposed MA will also draw upon administrative resources within CPCF. The staff who acted in support roles for the recently discontinued MA in Popular Culture, including the CPCF Administrative Assistant and the Academic Advisor/Experiential Learning Co-ordinator, will be able to transition to administrative duties in the proposed MA. One faculty member will be appointed to the role of Graduate Program Director in the proposed program, as was the case with the MA in Popular Culture, with the associated reduction in teaching load and additional PER amount, as per the Brock-BUFA Collective Agreement.

Existing physical resources that may be re-directed to the new MA program include office space in CPCF dedicated to the use of the Popular Culture MA students and graduate teaching assistants, along with office and study space allocated to graduate students in other areas of the university. Existing office space for graduate students and graduate TA's in CPCF is multi-purpose and shared with other faculty and non-student TA's. The proposed

program will also need dedicated space for graduate-level projects, team-based activities, and collaboration. Additional space needs for the proposed program can be met by making minor renovations to an existing office in CPCF formerly used for AV support and AV equipment storage. This office can be redeployed to create a small-group learning, meeting, and collaboration space primarily for use in the proposed MA program. The office requires installation of small secure storage units, configurable seating, whiteboard, projection screen and a workstation with appropriate software for the type of digital media projects that MA students will undertake. The designation of dedicated working and learning space for students is essential to the successful creation of a positive graduate student culture.

The proposed program will draw upon already well-developed undergraduate, graduate and research library resources in Communication, Film, Media Studies and Cultural Studies. MA students will make use of the various digital repositories, journal indexes, aggregators, and databases available through the university. Students will have access to information technologies and computing facilities available to Brock's graduate student community, including relevant services and collaborative learning opportunities offered through the new digital Makerspace.

Student financial support in the proposed program will also be drawn from existing budgetary resources with the department and the Faculty of Social Sciences. Graduate students in the proposed program will have hiring preference as Graduate Teaching Assistants in CPCF undergraduate courses. Every year the department offers first and second-year courses with multiple seminars where incoming MA students can be guaranteed a teaching assistant position as part of their admission to the program.

#### New Resources

The launch of the proposed program also depends on new human and financial resources. With respect to human resources, additional administrative staff time will be required for program support. CPCF is currently operating with only a part-time Administrative Assistant position. This limited staff support will clearly no longer be tenable with the addition of a new and growing MA program in the department. At least one-third of a redefined full-time Administrative Assistant position in CPCF must be allocated to support the proposed MA in Media, Communication, Culture. The Administrative Assistant will work closely with the Graduate Program Director and with the Experiential Learning Coordinator to assure the smooth functioning of program promotion, recruitment, admissions, registration, scheduling, TA assignments, curriculum development, student placements and other day-to-day processes of the graduate program within the university. The Admin Assistant will also be the front line of contact for MA students and will be required to provide the resources and information they need to succeed in the program.

The Experiential Learning Coordinator in CPCF is responsible for managing community partnerships, placements, and course coordination for 40 or more fourth-year students each year, along with student advising responsibilities for first-year students. Experiential Learning Coordinator support for graduate students choosing the ELP elective credit will need to be added to the duties defined for this position. The greater complexity and time demand anticipated for graduate student internships and placements suggests that the balance between the coordinator and advising duties assigned to this position may need to be redistributed.

A third element of staff support needed to mount the program includes the creation of a new position for Digital Media Coordinator within CPCF. This position was requested by the department in late 2019 and approved. A dedicated Digital Media Coordinator is essential to support development of specialized skills in digital and social media content production, communication design, media industry data analysis, and other areas where applied and technical skills are increasingly integrated within existing CPCF courses. At the graduate

level, the key thematic focus on industries and technologies in the proposed MA in Media, Communication, Culture makes the need to fill this position even more pressing. The Digital Media Coordinator will support faculty members teaching graduate courses and creating innovative project-based assessments that rely on practical training in the use of digital media applications and technologies.

The proposed program requires the following new budgetary resources:

- ***Start-up budget:*** Financial resources are required to launch the program. This includes renovation costs, furniture and workstation for the redeployed graduate student space, creation of promotional video and print material, and costs of initial advertising and marketing for the new program.
- ***Ongoing operating budget:*** Operating costs for the proposed program will be integrated into the CPCF budget and are not anticipated to be significantly higher than those allocated to the former MA Popular Culture. A small initial budget increase will be required by CPCF to cover the costs of graduate program events, conference travel support for students, and software licencing costs related to the digital media curriculum in the proposed program.
- ***Student financial support:*** Faculty of Graduate Studies supports graduate students in research-based programs with fellowships for the defined length of their program. These fellowships will be required for students admitted to the proposed MA in Media, Communication, Culture.

#### Evidence of Consultation with Affected Academic Units

Include the results of any consultation with other units that will be impacted by the proposed program.

Include evidence indicating the extent to which any participating Department(s)/Centre(s) is prepared to contribute to the proposed program.

The proposed program will be housed in CPCF. The scheduled and non-scheduled teaching loads associated with the program will be met by the seventeen full-time tenured or probationary faculty members currently appointed to CPCF. As part of a review of graduate curriculum in spring and summer 2020, all faculty in the department were consulted about the evolution of graduate studies in CPCF through individual faculty interviews and an on-line survey. Members of CPCF are fully prepared to contribute to teaching and mentorship of students admitted to the proposed program.

**Evidence of Consultation Regarding Space Needs for the Proposed Program**  
Include the results of any consultation with the Advisory Committee on Space regarding the space needs for the proposed program.

The space needs of the proposed program will be addressed through redeployment of existing office and meeting space in CPCF.

**Evidence of Student Demand, including projected enrollments.**

In recent years, CPCF has consistently been home to between 650 and 700 undergraduate majors across its various programs in Media Communication, Business Communication, Popular Culture, and Film. Many graduating students from the department pursue graduate work in the fields of Media Studies, Communication Studies, and Film Studies. An MA program homed in CPFC, and one clearly aligned with the strengths of the department and its faculty, would surely retain many of these students looking to pursue graduate studies in these fields. In a 2020 survey of 52 current 3rd and 4th year undergraduate CPCF students, 29% of respondents indicated that they intend to pursue an MA degree upon graduation, or in the future; and 50% indicated that they are considering it. Students surveyed strongly indicated that if such a program existed at Brock, an MA program oriented specifically around the fields of communication and media studies would be their preferred option.

The 2019 Canadian Graduate and Professional Student Survey, a recent report prepared by the Canadian Association for Graduate Studies, notes a nearly 50% increase in graduate students in the Social Sciences in Canada over the past 10 years.<sup>1</sup> The Niagara Region is seeing rapid population growth, as a surging housing market in the GTA displaces families priced out of the city. Though similarly oriented graduate programs exist throughout the province, and country, the MA in Media, Communication, Culture at Brock in the Niagara Region would be well positioned to meet both local demand for such a graduate program, and to capitalize on the growing demand for such a program across the country, and internationally.

The projected enrolment in the proposed program will be 10-15 students annually.

1. "Canadian Graduate and Professional Student Survey," Canadian Association for Graduate Studies, 2019. <https://secureservercdn.net/45.40.150.136/bba.0c2.myftpupload.com/wp-content/uploads/2019/12/Graduates-Studied-EN.pdf>

**Evidence of Societal Need**

The crisis posed by the COVID-19 pandemic has only accelerated -- and brought into sharper focus -- tendencies that have in fact long been in place. Central among these is an affirmation of the centrality of technologies of communication to our economy, and to our lives. Economies are changing, the media are changing, and the ways in which we communicate are changing. While many of us take these technologies and practices for granted, now, more than ever, society requires those trained in understanding how these media and communication systems function. An MA degree in Media, Communication, Culture at Brock University will prepare students to meet the demands of the new digital society, and to become better citizens of the new mediated world.

Though certain traditional media industries in Canada have seen steady declines, as they have elsewhere, the digital media economy is a source of growth. Film and television production in Ontario, for instance, increased by 14.5% in 2019 from the previous year, contributed \$2.16 billion to the Ontario economy, and saw employment in those sectors

increase by 20%.<sup>1</sup> Likewise, screen-based media production spending in Canada hit an all-time high in 2019, with \$9.32 billion, accounted for 180,000 full-time equivalent jobs, and generated roughly \$12.8 billion for the Canadian economy.<sup>2</sup> In the advertising sector, proliferation of digital media across platforms has led to steady growth in Canada in recent years. While this growth has been stunted somewhat by COVID-19, projections for the future suggest a return to that pre-pandemic growth, and an accompanying healthy job market in the field of advertising and promotions.<sup>3</sup> Despite economy-wide regressions caused by the global pandemic, the media sector in Canada is clearly one of growth. In addition to rigorous theoretical and practical training in the fields of media and communication, this proposed MA degree would provide opportunities for real world job placements and internships, building upon CPCF and Brock's well-established work/study infrastructure. The program's combined research and practical focus will prepare students equally for careers in the media, or for potential further graduate studies in the field.

1. "Film and Television Industry Facts," ACTRA, <https://www.actratoronto.com/advocacy/industry-facts/>
2. "Economic Report on the Screen-Based Media Production Industry in Canada," Motion Picture Association, Canada, April 2, 2020 [https://www.mpa-canada.org/research\\_docs/profile-2019-economic-report-on-the-screen-based-media-production-industry-in-canada/](https://www.mpa-canada.org/research_docs/profile-2019-economic-report-on-the-screen-based-media-production-industry-in-canada/)
3. "Advertising Agencies in Canada," <https://www.ibisworld.com/canada/market-research-reports/advertising-agencies-industry/>; "Job Prospects: Advertising and Promotions Specialist near Toronto," <https://www.jobbank.gc.ca/marketreport/outlook-occupation/24813/22437>

#### Duplicative Similarities

Provide evidence that any duplicative similarities to existing programs, internally, provincially or nationally, are justifiable for reasons of public funding.

There are no other graduate programs at Brock University that duplicate the proposed MA program and its focus on interdisciplinary studies in media and communication. While there are some course offerings in other programs in the Faculty of Social Sciences that may examine aspects of media or communication in society, such as in the MAs in Social Justice and Equity, Critical Sociology, or Child and Youth Studies, these courses are offered by faculty whose primary training is in fields other than Communication or Media Studies and whose theoretical and methodological approaches are drawn from their primary disciplines. In some instances, communication or media courses in other Brock MA programs have been taught by affiliated faculty who are appointed to CPCF. In cases where students are carrying out communication or media focused research in these other programs, their projects may in fact have been better suited to the interdisciplinary approach at the core of the proposed MA in Media, Communication, Culture.

As part of its graduate curriculum review, the department undertook a survey of existing MA programs offered at other Ontario universities. It is worth noting that there is no other existing MA in 'Media, Communication, Culture' at the provincial or national level. Elsewhere in Canada, the University of Calgary offers a thesis-based MA in Communication and Media that is a two-year full-time research program. Our review of comparable programs was undertaken with the assumption that there is a strong and growing student demand for MA programs in media and communication within Ontario. Duplicative similarities to existing MA programs in other provinces are justifiable for reasons of public funding, since we believe that most prospective MA students considering Brock will be looking at other programs within Ontario.

Of the 19 MA programs identified at the provincial level that include some focus on communication, media, cultural studies, or film, nine are designed with a fairly narrow specialization within a specific field such as popular music, journalism, film studies,

documentary film, or film production. These specialist or applied programs are offered within fine arts programs, or in schools of journalism, film or cinema studies and would not be duplicated by the proposed MA. There are four Ontario MA programs in English or Cultural Studies with some focus on media studies offered at Queen's, Trent, and two at Wilfrid Laurier. While these programs are interdisciplinary, their offerings do not include courses in communication. They tend to focus primarily on cultural theory and textual analysis and would not be duplicated by the proposed MA.

There are six other MA programs in Ontario that include some similarities with the proposed MA in Media, Communication, Culture in CPCF. These programs are at Carleton (MA Communications), McMaster (MA Communication & New Media); Ottawa (MA Communication); Western (MA Media Studies); Wilfrid Laurier (MA Communication Studies); and the York-Ryerson Joint Graduate Program (MA Communication and Culture). Among these, five programs offer either MRP or Thesis streams, while McMaster offers MRP or Digital Media Project options. All but two are one-year programs; Carleton offers a two-year degree, the York-Ryerson MA is five terms. Few of these programs offer an experiential learning internship or placement option integrated into course work such as is planned in the proposed MA. Wilfrid Laurier and University of Ottawa have co-op available, but these programs require a full work term to be set aside for the co-op option.

In reviewing the thematic emphases and faculty complement of these six programs identified as similar to the proposed Brock MA in Media, Communication, Culture, some key differences must be noted. Carleton's program is offered within the Faculty of Public Affairs, its curriculum concentrates on political economy of communication, communication and cultural policy, and the history of communication and media systems. CPCF's proposed MA will offer individual courses with emphasis on media policy or communication studies but will not duplicate the broad public affairs and policy emphasis at Carleton. The McMaster MA in Communication and New Media is housed in the Faculty of Humanities. It includes interdisciplinary perspectives in media studies, with some specialized focus on performance studies, audio and video art, audience studies, and computer-mediated methodologies, but it does not have as strong a teaching and research emphasis in communication or film as does CPCF. The proposed MA program at Brock will integrate digital media tools into its curriculum and offer critical perspectives on audiences and emerging forms of social media in networked societies but does not plan to offer courses that focus on performance studies or that explore the creative and experimental uses of digital media within the arts. The University of Ottawa MA in Communication is offered in a bilingual program; its key foci are media studies and organizational communication. Several faculty teaching in the Ottawa MA program specialize in organizational communication and the program is well known for teaching and research in this field. Although our proposed MA may offer occasional elective courses on this topic, it will not be a key focus. Wilfrid Laurier's MA in Communication offers two areas of emphasis: visual communication and culture, and media, technology, and culture. The Laurier Communication program is most similar to the proposed program in its areas of emphasis and program structure, but despite the focus on visual communication, Laurier does not integrate the study of film as a key visual medium into its Communication program. The proposed program will rely on the research expertise of CPCF faculty in Film Studies to offer courses on film as both visual language and media industry within our emphasis on media studies.

The sixth comparable program is the MA in Communication and Culture offered through the York-Ryerson Joint Graduate Program. This is a large MA program, located in a major urban centre, attracting domestic and international students. There are almost 150 faculty at both institutions identified as affiliated with the Joint MA and PhD programs and the website lists 35 current students at the MA level. York's offerings in the joint graduate program are housed in the Department of Communication Studies within the Faculty of Liberal Arts and Professional Studies. Ryerson's contribution is drawn from across the

university, with faculty members from the creative arts and applied education, along with industry connection to film, photography, multimedia, information technologies, radio, television, and new media. Our proposed MA in Media, Communication, Culture will offer a qualitatively different graduate educational experience with its location at a single, smaller, student-centred comprehensive university like Brock, embedded in the Niagara community and with multiple experiential learning opportunities.

The proposed MA in Media, Communication, Culture will deliver distinctive graduate curriculum in media studies and communication studies that will not duplicate these existing MA programs. The proposed MA is designed to reflect the teaching strengths and research expertise of CPCF faculty while taking advantage of Brock's growing reputation in creating experiential learning opportunities at an institution firmly anchored in the Niagara community.

#### Decanal Comments

Include certification from the relevant Dean(s) that the new degree/major is an appropriate and desirable addition to the academic programs of the University and is in line with the strategic direction of the Faculty. As well a clear commitment that the new program will be appropriately resourced. For undergraduate programs, the relevant Dean(s) shall be the Dean(s) of the Faculty within which the program resides. For graduate programs, the appropriate Deans shall be both the Dean of Graduate Studies and the Dean(s) of the relevant Faculty or Faculties.

Please see decanal letters of support as attached.

**MEMORANDUM**

brocku.ca

**FROM:** Ingrid Makus, Dean, Faculty of Social Sciences

**TO:** Brian Power, Vice-Provost and Associate Vice-President, and members of the Academic Review Committee (ARC)

**cc:** Marian Bredin, Director, MA in Popular Culture  
Dawn Zinga, Associate Dean, Graduate Studies & Research

**DATE:** May 18, 2021

**RE:** **MA in Media, Communication, Culture**

I am in full support of the above named new program as a positive addition to the Faculty of Social Sciences. It contributes to Faculty and University-wide priorities of offering programming that offers a transformative experience for students, including experiential learning opportunities at the graduate level.

A handwritten signature in black ink that reads "J. Makus".

IM/fn



# Memo

Niagara Region  
1812 Sir Isaac Brock Way  
St. Catharines, ON  
L2S 3A1 Canada  
brocku.ca

To: Brian Power, Vice-Provost and Associate Vice-President, Academic, and members of Academic Review Committee (ARC)

Copies: Marian Bredin, GPD; Peter Lester, Christie Milliken

From: Suzanne Curtin, Vice-Provost & Dean Graduate Studies

Date: May 13, 2021

Subject: SOI MA in Media, Communication, and Culture

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In my role as Vice-Provost and Dean of Graduate Studies, I am writing in support of the Statement of Intent for a new MA in Media, Communication, and Culture to be housed in the Department of Communication, Popular Culture and Film moving forward to full submission. The proposed program aligns with Brock's Strategic Plan and those priorities contained within it. In particular, this program aligns with the priority to "Offer a transformational and accessible academic and university experience," and the goal to, "Deliver high-quality programs that meet the interests and needs of students, and support them to achieve their potential in life."

The resources required to support this program are under the purview of the Faculty Dean and the Provost. However, FGS is committed to providing fellowships to the graduate students enrolled in this program for the duration of the program, as is the case for all research-based programs. FGS also has the capacity to support the admissions procedures, record-keeping and administrative requirements, and other graduate events that will assist this program.



TO: Chabriol Colebatch, Secretary to the University and General Counsel Brock University

FROM: Professor Drew Dane  
Chair, Senate Undergraduate Program Committee

DATE: October 15, 2021

REPORT TO SENATE 693, October 27, 2021

CONSENT ITEMS - FOR APPROVAL

MOVED (DANE/ )

THAT the Senate approve the creation of the *Education - Bachelor of Early Childhood Education* calendar chapter as outlined in **Appendix 1**.

**Submission Rationale:** Currently, prospective, returning, and new BECE students are challenged by the existing Educational Studies calendar chapter to both locate and identify the BECE program information as well as identify the courses required within the myriad of information affiliated with the combination of programs and course listings. See **Appendix 1**.

CONSENT ITEMS - FOR INFORMATION:

1. At the September 20, 2021 UPC meeting Professor Lynn Wells, as Provost & Vice-President Academic, brought to UPC proposed Faculty Handbook language revisions related to the Program Viability process (FHB 3.C.15), which would see new involvement of the Undergraduate Program Committee.

The current process and sources of data were clarified for the committee. The reporting structure was also noted. The Committee also discussed the evaluation criteria and how cyclical reviews relate to this process. A subsequent review of the process in greater detail and development of documentation will be provided for review at a future meeting.

2. At the October 4th, 2021 meeting a memo was provided by the Office of the Registrar as a response to the request from UPC to provide confirmation that there were no ITS/Registrar concerns on operationalizing the approved cross listing procedure. The cross listing procedure will be applied beginning in the 2022-2023 Undergraduate calendar.

# Calendar Revision Submission

## Form B - Program Changes

**Form B** to be completed when there is a revision to Officers of Instruction, General Information, Program Notes, and/or Program Requirements.

Upload a Word document that includes:

1. A detailed **Proposal** and **Explanation** of the proposed revision to the Program. Provide details if this program impacts other Departments or Admissions requirements.
2. If this is a Major Modification, upload verification of approval through ARC and Senate.
3. Provide the proposed revisions to the calendar by copying the existing web calendar content and **highlight** new additions and ~~strikethrough~~ deletions.

**Program name:** Bachelor of Early Childhood Education Honours (BECE)

### **Brief description of proposed revision(s):**

Decouple the BECE program information from the single Educational Studies UG Calendar entry. Specifically, to create a separate chapter for the BECE degree program in the Brock UG Calendar.

### **Consultation and Approvals**

Dr. Debra Harwood

Departmental Designate for Questions

dharwood@brocku.ca

Brock E-Mail

Dr. David Hutchison

Chair (Print Name)

Dr. David Hutchison



Chair (Signature)

included in attachments

Date

Dr. Michael Owen

Dean or Designate(Print Name)

Dr. Michael Owen

Dean or Designate (Signature)

included in attachments

Date

### **Verification of Consultation**

Does this proposed revision to the calendar impact another Faculty/ Department/ Centre?

No

Yes. Please complete the [Verification of Consultation form](#) and upload with submission.

## Request for a Bachelor of Early Childhood Education (Honours) Chapter in the Undergraduate Calendar

### Rationale

Currently the Department of Educational Studies has governance over all programs in the Faculty of Education.

There are distinct chapters in the Brock Undergraduate Calendar For the following Department of Educational Studies programs:

- Education - Aboriginal Adult Education
- Education - Adult Education
- Education-Bachelor of Education-Primary/Junior (Aboriginal)
- Education-Continuing Teacher Education
- Education - Teacher Education
- Education-Concurrent BA(Honours)/BEd Intermediate/Senior
- Education-Concurrent BA Child and Youth Studies (Honours)/BEd Primary/Junior
- Education-Concurrent BA(Honours)/BEd Junior/Intermediate
- Education-Concurrent BSc Integrated Studies (Honours)/BEd Junior/Intermediate
- Education-Concurrent BPhEd(Honours)/BEd Intermediate/Senior
- Education-Concurrent BPhEd(Honours)/BEd Junior/Intermediate
- Education-Concurrent BSc (Honours)/BEd Intermediate/Senior

However, the Educational Studies Chapter contains all the information, along with the EDUC courses affiliated with:

- minor in Educational Studies
- micro and certificate programs in Educational Studies
- concurrent students undergraduate required and elective courses
- proposed BA in Educational Studies required and elective courses
- Bachelor of Early Childhood Education (Honours) required and elective courses
- Master's Preparation Certificate in Education courses

Currently, prospective, returning, and new BECE students are challenged by the existing Educational Studies calendar chapter to both locate and identify the BECE program information as well as identify the courses required within the myriad of information affiliated with the combination of programs and course listings.

As with each Department of Educational Studies degree program identified in the first list above, a distinct BECE chapter will enable clarity in the listing of required and elective courses for students enrolled in the BECE degree program and identify the notes specific to the BECE degree program. Hence, the request to decouple the Bachelor of Early Childhood Education (Honours) degree program from the Department of Educational Studies Chapter would ensure clarity of

- the notes specific to the BECE degree program
- the BECE degree program requirements
- the transfer credits being applied specifically for admission to the BECE program

## **Verification of Consultation Form for Changes affecting other Faculties/Departments/Centres**

This form verifies that we are aware and have engaged in consultation regarding the proposed changes in this submission that affect our respective programs (e.g. additions, deletions, revisions to courses or course components, revision to program requirements that impact a program in another Department/Centre).

Relevant/appropriate evidence regarding this consultation (e.g., confirmation e-mail, memo, letters) is attached.

Reason for consultation (identify addition/deletion/revision as appropriate):

Decouple the BECE program information from the single Educational Studies UG calendar entry

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- All parties agree to the proposed changes and have updated our UPC submissions to reflect the changes.
- Consultation has occurred but changes have not been agreed to by all parties.

### **I. For changes that cross Departments/Centres within the *same* Faculty:**



Debra Harwood, BECE Program Director

Chair/Director (submitting Dept/Centre)



Chair Department of Educational Studies, David Hutchison

Chair/Director (affected Dept/Centre) Chair/Director (affected Dept/Centre)  
*(if multiple Dept/Centres affected, please include all signatures on this form)*

Chair Department of Child & Youth Studies, Heather Chalmers

Chair/Director (affected Dept/Centre) Chair/Director (affected Dept/Centre)

### **II. For changes that cross Faculties:**

Dean FOE, Michael Owen

Dean (submitting Faculty)

Dean Social Sciences, Ingrid Makus

Dean (affected Faculty)

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**From:** Donato Tarulli <[dtarulli@brocku.ca](mailto:dtarulli@brocku.ca)>

**Date:** Wednesday, September 29, 2021 at 1:05 PM

**To:** Debra Harwood <[dharwood@brocku.ca](mailto:dharwood@brocku.ca)>, Heather Chalmers <[hchalmers@brocku.ca](mailto:hchalmers@brocku.ca)>

**Subject:** Re: BECE UPC submission

Dear Debra,

Upon further consultation with our Departmental Undergraduate Program Committee, I can confirm that we are not opposed to the creation of the BECE code and the creation of a distinct calendar entry. Our concerns were--as you indicated in your message--related to the required credits in the restrictions associated with the cross-listed course, 3P50.

Best regards,

Danny



Report to Senate #693

TO: Chabriol Colebatch, Secretary to the University and General Counsel  
Brock University

FROM: Professor Francine McCarthy  
Chair, Senate Graduate Studies Committee

DATE: October 27, 2021

REPORT TO SENATE 693, October 27, 2021

CONSENT ITEMS - FOR APPROVAL

1. Deletion of MA Popular Culture

MOVED (McCarthy/ )

THAT the proposed Calendar Revision deleting the MA in Popular Culture from the 2021-22 Graduate Academic Calendar be approved.

Rationale: A Request for Program Discontinuation was submitted to and approved by the Academic Review Committee in January 2021.

APPENDICES

Appendix 1 - Calendar Revision deleting MA in Popular Culture

# Calendar Revision Submissions

Department/Centre

Program(s)

## Part A - Program Additions/Terminations

### 1. Proposal(s) and Effective Date(s)

Please note: The Calendar year runs from May 1 to April 30 and begins with the Spring/Summer sessions.

All new programs being introduced or the termination of programs will be effective beginning Spring Session.

List all new/terminated major/minor/concentration/certificate programs, to be implemented/terminated. Please state the proposal(s) in the form of a motion or series of motions. e.g., "Major in XXXX, be introduced"; "Major in XXXX be terminated"

MA in Popular Culture to be terminated effective September 2021

### 2. Explanation for Proposed Addition(s)/Deletion(s)

Provide the academic/program reasons for, and implications of, the proposal(s). These should correspond to the proposals in #1 above.

NOTE: If major changes to a program are proposed, the old program must be phased out, as the new program is phased in.

- Request for Program Discontinuation was submitted to and approved by Academic Review Committee in January 2021.
- Delete MA Popular Culture calendar entry in its entirety

### 3. Required Documentation/Information

If a new program (degree/major) or stream is being proposed, the following documentation must be submitted:

1. Program Structure: A detailed description of the proposed degree/major and the proposed Calendar Entry (as per B.3 below).
2. Appropriate Nomenclature: Is the name of the degree and/or major appropriate? Are there similar degrees/majors offered at other universities?
3. Financial Viability: The Costing of New or Significantly Revised Programs form must be completed and included as part of the submission.
4. Student Demand: Evidence that there is a demand for the new degree/program on the part of potential students (please note that Section C of the Costing form asks for enrolment projections).
5. Societal Need: Evidence that there is a need for graduates of the proposed degree/major on the part of society (e.g., letters from potential employers or governmental agencies).
6. Academic Integration: An evaluation of the probability that graduates of the proposed program will be strategically advantaged to pursue successful subsequent (second, third or professional cycle etc.,) programs, whether at Brock or other institutions of higher learning and/or research - both in our region and nationally/internationally.
7. Duplication: If the proposed degree/major has duplicative similarities to existing programs in Ontario or Canada, reasons for such duplication.
8. Library Resources: Certification from the Library that adequate Library resources are available to offer the program (please note that Section A of the Costing form asks for information about the potential cost of additional Library resources).
9. Information Technology: If significant IT resources will be required to offer the new degree/major, certification from the Chief Information Officer that adequate resources will be available is required (please note that Section D of the Costing form asks for information about IT resources).
10. Decanal/Co-operating Department(s)/Centre(s): The Dean of the appropriate Faculty must certify that the new degree/major is an appropriate and desirable addition to the academic program of the Faculty and any co-operating department(s)/centre(s) must certify that they are prepared to participate in the offering of the new degree/major.

NOTE: If a new minor or certificate program is being proposed, and it does not involve the addition of any courses to the course bank, only item 1. (from the above list) is required.

## Part B - Program Changes

### 1. Proposal(s) and Effective Date(s)

Please note: The Calendar year runs from May 1 to April 30 and begins with the Spring/Summer sessions.

All programs being changed will be effective beginning Spring Session.  
List all proposals, to be implemented, numerically in the following order:

### 2. Explanation of Proposed Change(s)

Provide the academic/program reasons for, and implications of, the proposal(s). These should correspond to the proposals in #1 above.

### 3. Program Changes - Proposed Calendar Copy

Please ensure that all course titles adhere to a maximum 45 characters and all course descriptions adhere to a maximum of 60 words and include all prerequisites, restrictions, course notes, exclusions, course format, and contact hours. Department/Centre/Program information and course information (revised from current calendar) should be inserted here.

If changes in other programs will have an effect on your program(s), please incorporate those changes into your calendar copy below.

## Part C - Course Additions/Deletions/Revisions

### 1. Additions to the Course Bank

(To be completed for all new courses, including courses newly cross-listed; one complete submission for each course.) Please ensure that all questions are answered below. Please indicate responses to questions with an "x" (to ensure proper downloading).

Course abbreviation, number and title (no description required):

1. Is this course cross-listed? Y\_\_ N\_\_  
If yes, which department will be financially responsible as the Home department/centre?  
\_\_\_\_\_
2. If there are additional expenses to be borne by the student, e.g. field trip, please indicate here.
3. Does this addition affect program requirements in your department? Y\_\_ N\_\_  
If yes, please include details in Part B, section 2.
4. Does this addition affect program requirements in other departments? Y\_\_ N\_\_  
If yes, please ensure that consultation has occurred with all departments/centers affected by additions or deletions of courses, to programs. Signature of a representative from each department/centre affected by this change must accompany the hard-copy submission, to verify consultation.
5. Does this addition have any impact on future admission requirements to Brock?  
Y \_\_\_\_ N \_\_\_\_
6. Will this course be delivered on-line? Is this a new modality (ie formerly delivered face to face)  
Y \_\_\_\_ N \_\_\_\_
7. Does this course result from the splitting of course(s) currently or formerly in the course bank?  
Y\_\_ N\_\_ (If yes, please identify.)
8. Does this course result from the joining of two or more courses? Y\_\_ N\_\_  
(If yes, please identify.)
9. Does this course result from the renumbering of another (current or previously offered) course? Y\_\_ N\_\_  
(If yes, please identify.)

## **2. Course Deletions**

Please identify all courses and programs affected by the deletion of course(s) (e.g., prerequisites, program requirements, etc.). Please ensure that consultation has occurred with all departments/centers affected by additions or deletions of courses, to programs. Signatures of a representative from each department/centers affected by this deletion must accompany the hard-copy submission, to verify consultation.

## **3. Course Revisions**

Please list (number and title only) all currently existing courses you propose to revise (i.e., change to number, title, or description).

## Part D - Consultation and Approvals

### Academic Consultation and Results

Please identify consultations with all departments/centers (Faculty as appropriate) affected by these changes and the results of those discussions. Attach copy of all correspondence, verifying agreement of all parties, to the proposed changes.

### IT/ET Consultation

Please submit a hard copy of the IT/ET support form for each on-line course added to the course bank (with the exception of cross-listed courses which already exist in another department/centre). Click [here](#) for the IT/ET Support form.

### Library Consultation

Please submit a hard copy of the Library Support form for each course added to the course bank (with the exception of cross-listed courses which already exist in another department/centre). Click [here](#) for the Library Support form.

### Approvals

Please ensure that a printed copy of this submission is sent to your Dean for collection on October 31.

Approved by

\_\_\_\_\_  
GPD

\_\_\_\_\_  
Date

\_\_\_\_\_  
Dean

\_\_\_\_\_  
Date

# Calendar Revision Submission

## Form A – Program Additions/Terminations

Prior to **Form A** being submitted, Departments and Centres must first seek ARC and Senate approval when introducing or terminating majors, concurrent programs, joint programs, dual credential programs, or conjoint programs.

**Form A** is to be completed when there is an addition or termination of one of the following:  
Major\*, Concurrent program\*, Combined/Joint programs\*, Dual credential programs\*,  
Conjoint programs\*, Articulation Agreement/Pathway\*, Minor, Concentration, Certificate, Micro-Certificate, Stream, or Context Credit (*Dean Approval required*)

\*Program Additions/Terminations and Major Modifications may require review by the Academic Review Committee (ARC). Please visit the Office of the Provost and Vice-President Academic Quality Assurance page for more information (<https://brocku.ca/vp-academic/quality-assurance/>).

If a new program is being proposed, please contact [UGCalendar@brocku.ca](mailto:UGCalendar@brocku.ca) for consultation prior to submitting the forms.

**Department/Centre:**

**Action**

**Type**

**Program/Course Name:**

The Calendar year runs from May 1 to April 30 and begins with the Spring/Summer sessions. All programs being introduced or terminated will be effective beginning Spring Session.

**1. Provide a Proposal(s) (e.g. Major in Forensic Psychology be introduced; Context Credit XXXX 1F00 be terminated).**

**Note:** If major changes to a program are proposed, the old program must be phased out, as the new program is phased in.

**2. Explanation(s) for the requested Addition/Termination. Explanations should provide the academic/program reason for, and implications of, the Proposal(s).**

The Calendar year runs from May 1 to April 30 and begins with the Spring/Summer sessions. All programs being introduced or terminated will be effective beginning Spring Session.

2. Please provide the Program Structure (a detailed description of the proposed Calendar Entry):

The Calendar year runs from May 1 to April 30 and begins with the Spring/Summer sessions. All programs being introduced or terminated will be effective beginning Spring Session.

# Approvals

Departmental Designate for Questions

Ext

Brock E-Mail Address

Chair (Print Name)

Chair (Signature)

Date

Dean or Designate (Print Name)

Dean or Designate (Signature)

Date

## Verification of Consultation

Does this proposed revision to the calendar impact another faculty/department/centre?

No

**Yes. Please complete the Verification of Consultation form and upload with submission.**

The Calendar year runs from May 1 to April 30 and begins with the Spring/Summer sessions. All programs being introduced or terminated will be effective beginning Spring Session.

## Request for Program Discontinuation

| Proponent's Contact Information |                                                       |
|---------------------------------|-------------------------------------------------------|
| Program to be Discontinued:     | MA in Popular Culture                                 |
| Date effective:                 | September 2021                                        |
| Academic Unit:                  | Department of Communication, Popular Culture and Film |
| Submitted by:                   | Marian Bredin, Interim GPD                            |
| Email:                          | mbredin@brocku.ca                                     |
| Date Submitted:                 | November 6, 2020                                      |

The Request for Program Discontinuation shall include:

| Rationale for the Proposed Discontinuation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Provide a clear rationale for the request, documenting the results of program committee discussions.</p> <p>As the outcome of a significant curriculum review and initial work on a Request for Major Program Modifications in the 2019-2020 academic year, the Program Committee for the MA in Popular Culture have regretfully decided that the program should be discontinued. The following key factors provide some context and the rationale for proposed discontinuation.</p> <p><b>1. Recruitment challenges leading to a two-year program hiatus (2019-21).</b><br/>           The last full cohort of students was admitted to the MA PCUL in Fall 2018. The program was not successful in recruiting enough students to meet minimum enrolment targets in 2019. The Dean of Social Sciences agreed that the MA could take a one-year hiatus to undertake a full curriculum review. The review was intended to address recruitment challenges, to redesign the program to better reflect faculty complement and appeal to changing student interests. Initial discussions with the Dean in summer 2019 made it clear that with a major review and request for program modification under way, it would be impossible to admit students either to the existing Popular Culture program, or to a modified program, until the internal review process was complete. The Dean agreed that the hiatus could be extended for one more year and thus no students were admitted for 2020-21. The immediate goal of the curriculum review process was to submit a Request for Major Modifications that would enable the program to make curriculum changes and relaunch the program with a recruitment drive for fall 2021.</p> <p><b>2. Curriculum review (Fall/Winter 2019-20)</b><br/>           In fall of 2019, under the guidance of the MA Program Committee, an Ad hoc Graduate Program Curriculum Committee was created with the objective of submitting a Request for Major Modifications to the Senate Academic Review Committee (ARC). The Curriculum Committee moved quickly to do the necessary background research, including:</p> <ul style="list-style-type: none"> <li>• analysis of strengths, weaknesses, opportunities, and threats to the current MA program</li> <li>• review of competing programs in cultural studies, media studies, communication and film in Southern Ontario and Quebec</li> <li>• surveys of current third and fourth-year students in CPCF to measure their knowledge of and interest in MA programs</li> <li>• interviews with MA PCUL core faculty to assess their areas of research expertise, teaching and supervision interests, and their views on potential changes to the program</li> </ul> <p>Three key issues emerged from the Curriculum Committee's research:</p> <ol style="list-style-type: none"> <li>1. Since its most recent cyclical review in 2013, the core faculty in the MA Popular Culture have changed significantly due to retirements or departures of founding faculty members. Recent</li> </ol> |

faculty hires who have joined the MA carry out research that does not fit primarily within the field of popular culture. This has led to some discrepancies between the program as advertised and as it has been delivered in practice, creating a sometimes diluted and fractured academic identity for Popular Culture.

2. Popular Culture as a field of study has become more widely incorporated into disciplines across the Humanities and Social Sciences, while at the same time being less frequently identified as a specific area of interest by qualified undergraduates seeking MA programs. Recruitment challenges arise partly because students can pursue popular culture research in a variety of disciplines and do not always see the value of an interdisciplinary focus on the study of popular culture.
3. The MA in Popular Culture has been challenged by the regional growth of competing graduate programs in fields of media studies, cultural studies, communication, film, and popular culture. Several of these competing programs are at universities with more resources, central urban locations, and stronger reputations for graduate studies than Brock's. The MA Popular Culture struggled to situate itself within these competing programs as having something unique and valuable to offer prospective students.

To overcome recruitment challenges in this competitive context, the MA curriculum review identified the need to integrate our faculty's new and innovative research in culture, media, film and communication into MA teaching and supervision, while also addressing students' desire for more practical graduate training that incorporates experiential learning options. This integration required the addition of new research fields as well as new degree paths - including internships or experiential learning - to build a program that could occupy a niche amongst the competition.

### 3. Rejection of Request for Major Program Modifications (Spring 2020)

While the curriculum review was under way, the Program Committee drafted a preliminary list of elements likely to be included in a Request for Major Modifications. This preliminary list included a program name change, additional experiential learning options, changes to program streams, and introduction of new areas of focus such as digital media and creative industries. Vice-Provost and Associate Vice-President, Brian Power, and former Provost and Vice-President Academic, Greg Finn, reviewed the list of potential changes and informed the Program Committee that the cumulative number of changes was too great for a major modification. The Committee was advised that the best path forward was to wind down the Popular Culture MA and propose a new program. The former Provost expressed the view that the Request for Major Modification was not only likely to be rejected by ARC, but that it would also encounter obstacles to approval required from the Ontario Universities Quality Council. In mid-June Interim GPD, Marian Bredin, met with Dean Ingrid Makus, and Associate Dean, Graduate Studies and Research Dawn Zinga, to discuss next steps. The Dean and Associate Dean acknowledged that the MA in Popular Culture had reached an impasse, since much-needed curriculum revisions would not be acceptable as major modifications, while recruitment difficulties made the continuation of the existing program impossible. In consultation with the Deans, the Program Committee determined that the next step should be a request for Program Discontinuation, in parallel with the development of a Statement of Intent for a new MA program in CPCF.

#### Details of Resource Implications

Describe how resources of the program (human, physical and budgetary) will be redistributed.

Resources of the MA program overlap almost entirely with resources already allocated to core activities in CPCF. No significant redistribution of resources will be required due to program discontinuation. All current core faculty in the MA Popular Culture are also appointed either to CPCF or to other units in the Social Sciences and Humanities. Graduate teaching and GPD duties were normally undertaken by BUFA members on load or on overload with course release stipends drawing from CPCF budgetary resources. Graduate Teaching Assistantships for the MA Program were funded through existing TA positions in CPCF undergraduate courses and these positions will now be filled by non-students or graduate students in other programs as appropriate. The MA Program was supported by one of the undergraduate Academic Advisers with 5 hours per week administrative assistance. The single office that was allocated to MA Popular Culture graduate students is also the designated CPCF meeting room and a multi-use space for the

department. Computers, printers, and office equipment in this space will continue to be used by CPCF TA's, faculty, and undergraduate students.

#### Termination Plan and Timing of Discontinuation

A phased closure plan and timeline for the program discontinuation, taking into account the requirements of those students currently enrolled in the program to allow them to meet requirements for graduation.

Because the MA Popular Culture has been on hiatus for two years there are no students currently enrolled in the program, and none with remaining course requirements. The program can be discontinued effective Fall 2021.

#### Evidence and Documentation of Consultation

Include the results of any consultation with other units (academic or administrative) that will be impacted by the program discontinuation.

- Consultation with core faculty in the MA Popular Culture; the Interim GPD circulated a full report on the curriculum review and rejection of the Request for Major Modifications for comment and debate. Faculty who responded acknowledged the rationale for program discontinuation - July 2020
- MA Popular Culture Program Committee, approved recommendation to seek program discontinuation - October 6, 2020
- Department of Communication, Popular Culture and Film, approved motion to discontinue MA in Popular Culture - October 8, 2020

#### Decanal Comments

Include certification that the proposed discontinuation is appropriate and in line with the strategic direction of the Faculty. For undergraduate programs, the relevant Dean(s) shall be the Dean(s) of the Faculty within which the program resides. For graduate programs, the relevant Deans shall be the Dean of Graduate Studies and the Dean(s) of the relevant Faculty or Faculties.

Please see attached letters of support, Dr. Ingrid Makus, Dean, Faculty of Social Sciences; Dr. Suzanne Curtin, Dean, Faculty of Graduate Studies.



Faculty of Social Sciences  
Office of the Dean

Niagara Region  
1812 Sir Isaac Brock Way  
St. Catharines, ON  
L2S 3A1 Canada  
T 905 688 5550 x3425  
F 905 641 5076

MEMORANDUM

brocku.ca

FROM: Ingrid Makus, Dean, Faculty of Social Sciences

TO: Brian Power, Vice-Provost and Associate Vice-President, Academic,  
and members of Academic Review Committee (ARC)

cc: Marian Bredin, Director, MA in Popular Culture  
Sarah Matheson, Chair, Communication, Popular Culture & Film  
Dawn Zinga, Associate Dean, Graduate Studies & Research

DATE: October 30, 2020

RE: Discontinuation of the MA in Popular Culture

I am in support of the discontinuation of the MA in Popular Culture. It is an appropriate step for the reasons outlined in the document and is compatible with the strategic priorities of the Faculty of Social Sciences.

I look forward to working with relevant units on a statement of intent for a new MA program.

A handwritten signature in black ink that reads "J. Mahan". The signature is written in a cursive, flowing style.

IM/fn

TO: Dr. Brian Power  
Vice-Provost & Associate Vice-President, Academic, Office of the  
Provost and Vice-President, Academic

FROM: Dr. Suzanne Curtin  
Dean, Faculty of Graduate Studies

DATE: November 2, 2020

RE: Request for Discontinuation of the MA Program in Popular Culture

In my role as Dean of the Faculty of Graduate Studies, I have reviewed and am in support of the request to discontinue the MA Program in Popular Culture in the Faculty of Social Sciences. After a no-intake year in 2019-2020 and again in 2020-2021 as well as an unsuccessful request for a major modification, the decision to discontinue the program is appropriate.

Sincerely yours,



Dr. Suzanne Curtin  
Dean, Faculty of Graduate Studies



To: Chabriol Colebatch, University Secretary &  
General Legal Counsel

From: Professor David Hutchison  
Chair, Senate Planning, Priorities and  
Budget Advisory Committee

DATE: October 19, 2021

Report to Senate 693, October 27, 2021

#### Consent items - Information

##### 1. Academic Plan Update

The Committee received an update on the University's plans to develop a Academic Plan. The project will be managed by Associate Professor Madelyn Law, Associate Vice-Provost, Teaching & Learning, and Nicholas Dion, Chief of Staff, working in close collaboration with the Provost.

Examples of Academic Plans from other Ontario universities were shared, as was a draft timeline for developing the Academic Plan. (These resources can viewed in the October 6, 2021 PP&BAC meeting agenda.) PP&BAC will be consulted at key stages as part of the process.

One of the first steps of the project is for the University to develop an initial survey "to garner engagement and perspectives on what should be included in the Academic Plan."

Feedback was provided related to the need to carefully scope the focus of the Academic Plan and clearly distinguish it from the University's Institutional Strategic Plan. It was suggested that the Academic Plan could be a subset of the Institutional Strategic Plan. It was also recommended that more time be devoted to the "Final Revisions with PPBAC" stage (in the provided timeline), perhaps over a six or eight week period, so that PP&BAC can best represent the final draft of the Academic Plan at Senate.

## 2. Five-Year Long-Term Capital Plan Outlook

The Committee received [this report](#) on the Five-Year Long-Term Capital Plan for information. It was affirmed that PP&BAC's role is to review the financial aspects of capital projects. The Chair of PP&BAC will be meeting with IT&I (where he is Vice-Chair) to discuss the possibility of holding a joint committee meeting to discuss the Capital Plan.

## 3. Budget Information

The Committee received a [presentation](#) with information on:

- 2022-23 Preliminary Student Awards Budget
- 2022-23 Preliminary Tuition Rates
- 2022-23 Draft Budget Planning Guidance

It was noted that budgetary pressures on the Students Award Budget has increased as student entrance averages have risen (during the pandemic). More data and analysis related to the Students Award Budget will be provided at an upcoming PP&BAC meeting. Members of PP&BAC identified undergraduate scholarships as priority areas for funding.

With respect to the draft Budget Planning Guidance, it was emphasized that the numbers in the presentation are a draft for discussion and pre-planning purposes only.

## Report to the Planning, Priorities and Budget Advisory Committee

### INFORMATION ITEM

TOPIC: Five-Year Long-Term Capital Plan Outlook - FY 2022/23 to FY 2026/27

October 6, 2021

Ken Chan, Vice-President, Administration

Scott Johnstone, Associate Vice-President, Infrastructure and Operations

Edward Wall, Associate Vice-President, Ancillary Services

Josh Tonnos, Chief Financial Officer & Associate Vice-President, Financial Services

David Cullum, Associate Vice-President, Information Technology Services

#### EXECUTIVE SUMMARY

##### 1. Purpose of the Report

- The purpose of this report is to provide Committee members with an overview of the Five-Year Long-Term Capital Plan (LTCP) for the period FY 2022/23 to FY 2026/27.
- These projects all facilitate the University's mission of leadership, innovation and excellence in learning, teaching, research, scholarship and creativity across disciplines.

##### 2. Key Background

- The LTCP is a rolling five-year planning tool utilized to address capital requirements. It is a road map that addresses the minimum anticipated needs for this period and highlights the continuing pressures to address deferred maintenance funding.
- The Fiscal Framework provides for Capital Budget guidance; however, at this time the Fiscal Framework is being updated for 2022-23 to revisit these priorities in conjunction with the Institutional Strategic Plan priorities. Recommended updates to the capital funding strategy will be provided at the cycle 2 meeting.
- Capital Projects identified for FY 2022/2023 will be further prioritized and formally presented to the Board in cycle 2.
- Based on the May 2021 Report, provided to the committee in cycle 5 on June 23, 2021, the current identified Deferred Maintenance is \$330,020,597. The LTCP does not provide for the elimination of DM, and projects are prioritized based on the Brock University Values and Fiscal Framework. In addition to the Fiscal Framework's capital funding strategy, debt financed projects such as Decew Residence Renewal and the completion of the Zone expansion have contributed significantly towards reducing deferred maintenance.
- The proposed LTCP has been developed in consultation with the Brock community and is intended to address:
  - Online course delivery enhancements and learning management system replacement
  - Major capital projects identified through consultation with the Brock community.
  - Deferred maintenance which is compiled through the annual VFA audit.

- Classroom modernization needs.
- Legislated projects for the Accessibility for Ontarians with Disabilities Act.
- Parking lot maintenance and renewal.
- Space management through effective and efficient use of space and space re-allocation moves.

### 3. Next Steps

- FM, ITS, Ancillary Services and Financial Services will continue to meet with key stakeholders and groups to ensure widespread Brock community input, enabling the finalization of the FY 2022/23 plan. *To be presented to the Board of Trustees in Cycle 2.*

### 4. Background Materials

Appendix 1 - Proposed Five-Year LTCP for FY 2022/23 to FY 2026/27 (3 pages)

| <b>LONG TERM CAPITAL PLANNING (LTCP) - FIVE YEAR PLAN</b>          |                    |                    |                    |                    |                    |
|--------------------------------------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|                                                                    | <b>2022/2023</b>   | <b>2023/2024</b>   | <b>2024/2025</b>   | <b>2025/26</b>     | <b>2026/2027</b>   |
| <b>Major Capital Projects</b>                                      |                    |                    |                    |                    |                    |
| Schmon Tower Renewal                                               | -                  | -                  | 1,000,000          | 2,000,000          | 5,000,000          |
| Sankey Chambers Expansion and Podium Stairs DM Replacement         | -                  | -                  | 1,500,000          | -                  | -                  |
| <b>Total Major Capital Projects</b>                                | <b>\$0</b>         | <b>\$0</b>         | <b>\$2,500,000</b> | <b>\$2,000,000</b> | <b>\$5,000,000</b> |
| <b>University Deferred Maintenance</b>                             |                    |                    |                    |                    |                    |
| HVAC Upgrades and Replacement                                      | 800,000            | 3,600,000          | 3,100,000          | 7,100,000          | 3,100,000          |
| Roof Replacement                                                   | 750,000            | 750,000            | 725,000            | -                  | 600,000            |
| District Energy Water Supply Replacement                           | 2,325,000          | 1,155,000          | 1,035,000          | 540,000            | -                  |
| Elevator Modernization Program                                     | 450,000            | 850,000            | 250,000            | 150,000            | 250,000            |
| Potable Water Main Replacement                                     | -                  | 155,000            | 270,000            | -                  | -                  |
| Washroom Upgrades - Mackenzie Chown                                | 75,000             | 75,000             | 75,000             | 75,000             | 75,000             |
| MacKenzie Chown Complex Abatement                                  | -                  | 500,000            | -                  | -                  | -                  |
| Flooring Renewal                                                   | 60,000             | 60,000             | 60,000             | 60,000             | 60,000             |
| Interior & Exterior Door Replacements                              | 60,000             | 60,000             | 60,000             | 60,000             | 60,000             |
| Painting of Public Spaces                                          | 50,000             | 50,000             | 50,000             | 50,000             | 50,000             |
| Energy Efficiency Upgrades                                         | 150,000            | 150,000            | 150,000            | 150,000            | 150,000            |
| Annual High Voltage Maintenance                                    | 100,000            | 100,000            | 100,000            | 100,000            | 100,000            |
| Annual BAS Controls Modernization                                  | 100,000            | 100,000            | 100,000            | 100,000            | 100,000            |
| Annual Furniture Replacement (exam desks, chair, classrooms, etc.) | 50,000             | 50,000             | 50,000             | 50,000             | 50,000             |
| Motor Control Centre Upgrade                                       | -                  | 110,000            | -                  | 150,000            | -                  |
| Animal Care Consolidation in Cairns                                | -                  | -                  | 300,000            | -                  | -                  |
| Fire Hydrant Lines Replacement                                     | 150,000            | -                  | -                  | -                  | -                  |
| <b>Total University Deferred Maintenance</b>                       | <b>\$5,120,000</b> | <b>\$7,765,000</b> | <b>\$6,325,000</b> | <b>\$8,585,000</b> | <b>\$4,595,000</b> |
| <b>Campus Site Upgrades</b>                                        |                    |                    |                    |                    |                    |
| Road Repairs                                                       | 200,000            | 830,000            | 1,275,000          | -                  | 750,000            |
| Replacement South Campus Works Yard                                | 475,000            | 750,000            | -                  | -                  | -                  |
| Campus Landscape Enhancement                                       | 50,000             | 50,000             | 50,000             | 50,000             | 50,000             |
| External Signage and Wayfinding                                    | 200,000            | -                  | -                  | 250,000            | -                  |
| Jubilee Court Landscaping and Podium Stairs                        | -                  | 350,000            | -                  | -                  | -                  |
| Complete Village Watermain Loop                                    | -                  | -                  | 200,000            | -                  | -                  |
| Centralized Chemical Storage                                       | 200,000            | -                  | -                  | -                  | -                  |
| Athletics Upgrades                                                 | 100,000            | 100,000            | 100,000            | 100,000            | 100,000            |
| <b>Total Campus Site Upgrades</b>                                  | <b>\$1,225,000</b> | <b>\$2,080,000</b> | <b>\$1,625,000</b> | <b>\$400,000</b>   | <b>\$900,000</b>   |
| <b>Academic Teaching Renovations and Renewal</b>                   |                    |                    |                    |                    |                    |
| Classroom Modernization & Renewal                                  | 1,000,000          | 1,000,000          | 1,000,000          | 1,000,000          | 1,000,000          |
| <b>Total Academic Teaching Renovations and Renewal</b>             | <b>\$1,000,000</b> | <b>\$1,000,000</b> | <b>\$1,000,000</b> | <b>\$1,000,000</b> | <b>\$1,000,000</b> |
| <b>AODA Accessible Built Environment</b>                           |                    |                    |                    |                    |                    |
| Exterior Paths                                                     | 50,000             | 50,000             | -                  | -                  | -                  |
| Universal Washroom Upgrades                                        | 70,000             | 70,000             | 70,000             | 70,000             | 70,000             |
| AODA Improvements                                                  | 40,000             | 40,000             | 40,000             | 40,000             | 40,000             |
| <b>Total AODA</b>                                                  | <b>\$160,000</b>   | <b>\$160,000</b>   | <b>\$110,000</b>   | <b>\$110,000</b>   | <b>\$110,000</b>   |
| <b>Audits and Studies</b>                                          |                    |                    |                    |                    |                    |
| Annual Facility Condition Audit (VFA)                              | 75,000             | 75,000             | 75,000             | 75,000             | 75,000             |

| <b>LONG TERM CAPITAL PLANNING (LTCP) - FIVE YEAR PLAN</b> |                    |                    |                    |                    |                    |
|-----------------------------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|                                                           | <b>2022/2023</b>   | <b>2023/2024</b>   | <b>2024/2025</b>   | <b>2025/26</b>     | <b>2026/2027</b>   |
| Utilities Master Plan                                     | -                  | 400,000            | -                  | -                  | -                  |
| Lands Use Master Plan                                     | 400,000            | -                  | -                  | -                  | -                  |
| Arc Flash Study                                           | -                  | -                  | 100,000            | -                  | -                  |
| <b>Total Audits and Studies</b>                           | <b>\$475,000</b>   | <b>\$475,000</b>   | <b>\$175,000</b>   | <b>\$75,000</b>    | <b>\$75,000</b>    |
| <b>Vehicles and Wheeled Equipment</b>                     |                    |                    |                    |                    |                    |
| Brock University Fleet Replacement                        | 221,000            | 150,000            | 183,000            | 152,000            | 150,000            |
| <b>Total Vehicles</b>                                     | <b>\$221,000</b>   | <b>\$150,000</b>   | <b>\$183,000</b>   | <b>\$152,000</b>   | <b>\$150,000</b>   |
| <b>Ancillary Services - Parking</b>                       |                    |                    |                    |                    |                    |
| Parking Lot Annual Repairs and Upgrades                   | 400,000            | 310,000            | 420,250            | 430,756            | 441,525            |
| Parking Lot Renewal                                       | -                  | -                  | -                  | 1,483,442          | 1,800,000          |
| Parking Technology Upgrades                               | -                  | 100,000            | -                  | -                  | -                  |
| <b>Total Ancillary Parking</b>                            | <b>\$400,000</b>   | <b>\$410,000</b>   | <b>\$420,250</b>   | <b>\$1,914,198</b> | <b>\$2,241,525</b> |
| <b>Ancillary Services - Residence</b>                     |                    |                    |                    |                    |                    |
| Residence Infrastructure Renewal                          | 500,000            | 1,000,000          | 1,000,000          | 1,000,000          | 1,000,000          |
| Residence 8 Infrastructure Reserve                        | 152,440            | 157,013            | 161,724            | 166,575            | 171,573            |
| Village Residences - Exterior and Interior Renewal        | 1,000,000          | 1,000,000          | 1,000,000          | -                  | -                  |
| Residence Elevator Upgrades                               | -                  | -                  | 300,000            | -                  | -                  |
| Residence - Roof Upgrades                                 | -                  | 600,000            | 600,000            | 600,000            | 500,000            |
| Residence - HVAC Upgrades                                 | 500,000            | 350,000            | -                  | -                  | -                  |
| Dining Hall Needs                                         | 500,000            | 250,000            | 250,000            | 250,000            | 250,000            |
| Residence Furniture Replacement                           | 250,000            | 250,000            | 250,000            | 250,000            | 250,000            |
| <b>Total Ancillary Residence</b>                          | <b>\$2,902,440</b> | <b>\$3,607,013</b> | <b>\$3,561,724</b> | <b>\$2,266,575</b> | <b>\$2,171,573</b> |
| <b>ITS New or Flexible</b>                                |                    |                    |                    |                    |                    |
| PCI Compliance                                            | 299,700            | 299,700            | 299,700            | 299,700            | 200,000            |
| Network Switches-Admin-Deferred Maintenance               | 203,000            | 141,500            | 259,600            | 114,850            | 286,900            |
| Network Switches - Administrative-Growth                  | 20,000             | 20,000             | 20,000             | 20,000             | 20,000             |
| Network Switches - Residences-Deferred Maintenance        | 35,000             | 92,000             | 22,000             | 150,000            | -                  |
| Network Switches - Residences-Growth                      | 15,000             | 15,000             | 15,000             | 15,000             | -                  |
| Network Appliances-Admin-Deferred Maintenance             | -                  | 50,000             | 160,000            | -                  | 30,000             |
| Network Appliances-Residence-Deferred Maintenance         | -                  | 50,000             | 170,000            | -                  | 60,000             |
| Network Internet-Administrative-Growth                    | -                  | -                  | -                  | -                  | -                  |
| Network Internet-Residences-Growth                        | -                  | -                  | -                  | -                  | -                  |
| Wireless-Administrative-Growth                            | 72,000             | 50,000             | 50,000             | 50,000             | 50,000             |
| Wireless-Administrative-Deferred Maintenance              | 100,000            | -                  | 157,500            | 460,680            | 90,000             |
| Wireless-Residence-Deferred Maintenance                   | 180,000            | -                  | 157,500            | 67,500             | 90,000             |
| A.V. -Deferred Maintenance                                | 44,000             | 46,000             | 48,000             | 50,000             | 52,000             |
| A.V. (including Video Conferencing)-Growth                | 44,000             | 46,000             | 48,000             | 50,000             | 52,000             |
| UPS-Admin-Deferred Maintenance                            | 60,000             | 60,000             | 60,000             | 60,000             | 40,000             |
| UPS-Residence-Deferred Maintenance                        | 25,000             | 25,000             | 25,000             | 27,000             | 25,000             |
| CCTV-Admin-Deferred Maintenance                           | 40,000             | 40,000             | 40,000             | 40,000             | 50,000             |
| CCTV-Residence-Deferred Maintenance                       | 10,000             | 10,000             | 10,000             | 10,000             | 25,000             |
| Enterprise Card Access & Video Mgmt. System               | 287,000            | 250,000            | 25,000             | 25,000             | 25,000             |
| Proxy Card-Deferred Maintenance                           | 30,000             | 30,000             | 30,000             | 30,000             | 30,000             |
| Servers-Deferred Maintenance                              | 140,000            | 120,000            | -                  | 100,000            | 500,000            |

| <b>LONG TERM CAPITAL PLANNING (LTCP) - FIVE YEAR PLAN</b> |                     |                     |                     |                     |                     |
|-----------------------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                                                           | <b>2022/2023</b>    | <b>2023/2024</b>    | <b>2024/2025</b>    | <b>2025/26</b>      | <b>2026/2027</b>    |
| Server Room UPS Replacement & UPS Administrative          | 80,000              | -                   | -                   | -                   | -                   |
| Disk Storage-Deferred Maintenance                         | -                   | -                   | -                   | 160,000             | -                   |
| Data Back Up-Deferred Maintenance                         | 75,000              | -                   | 60,000              | 140,000             | -                   |
| Azure Infrastructure                                      | 25,000              | -                   | -                   | -                   | -                   |
| Service Vehicle Replacement                               | -                   | -                   | -                   | -                   | -                   |
| Cabling Infrastructure                                    | 50,000              | 50,000              | 50,000              | 50,000              | 50,000              |
| Alarms/Security/IP Clocks-Deferred Maintenance            | 25,000              | 25,000              | 25,000              | 25,000              | 25,000              |
| Computer Purchase & redeployment-Deferred Maintenance     | 600,000             | 600,000             | 600,000             | 600,000             | 600,000             |
| Telephone System-Replacement                              | 250,000             | 250,000             | 250,000             | 250,000             | 250,000             |
| Datacentre Renovation                                     | 550,000             | 550,000             | -                   | -                   | -                   |
| <b>Total ITS New or Flexible</b>                          | <b>\$3,259,700</b>  | <b>\$2,820,200</b>  | <b>\$2,582,300</b>  | <b>\$2,794,730</b>  | <b>\$2,550,900</b>  |
| <b>ITS Core Activities</b>                                |                     |                     |                     |                     |                     |
| Core Subscription Fees                                    | 1,187,831           | 1,247,222           | 1,309,583           | 1,375,062           | 1,443,816           |
| Core Strategic Student Solutions                          | 572,000             | 478,342             | 485,509             | 492,819             | 517,460             |
| Learning Management System                                | 750,000             | 580,000             | 580,000             | 580,000             | 580,000             |
| <b>Total ITS Core Activities</b>                          | <b>\$2,509,831</b>  | <b>\$2,305,564</b>  | <b>\$2,375,092</b>  | <b>\$2,447,881</b>  | <b>\$2,541,276</b>  |
| <b>Total Projects - Campus</b>                            | <b>\$8,201,000</b>  | <b>\$11,630,000</b> | <b>\$11,918,000</b> | <b>\$12,322,000</b> | <b>\$11,830,000</b> |
| <b>Total Projects - Ancillary Services</b>                | <b>\$3,302,440</b>  | <b>\$4,017,013</b>  | <b>\$3,981,974</b>  | <b>\$4,180,774</b>  | <b>\$4,413,098</b>  |
| <b>Total Projects - ITS</b>                               | <b>\$5,769,531</b>  | <b>\$5,125,764</b>  | <b>\$4,957,392</b>  | <b>\$5,242,611</b>  | <b>\$5,092,176</b>  |
| <b>Grand Total - ALL PROJECTS</b>                         | <b>\$17,272,971</b> | <b>\$20,772,777</b> | <b>\$20,857,366</b> | <b>\$21,745,385</b> | <b>\$21,335,274</b> |
| <b>Revenue - Fiscal Framework Guidance *</b>              |                     |                     |                     |                     |                     |
| New or "flexible" capital                                 | \$4,792,000         | \$4,792,000         | \$4,792,000         | \$4,792,000         | \$4,792,000         |
| Core Capital (deferred maintenance)                       | \$6,000,000         | \$6,000,000         | \$6,000,000         | \$6,000,000         | \$6,000,000         |
| Base Ancillary Contribution                               | \$3,246,000         | \$3,246,000         | \$3,246,000         | \$3,246,000         | \$3,246,000         |
| Additional Ancillary Contribution                         | \$776,950           | \$796,374           | \$816,283           | \$836,690           | \$857,607           |
| <b>Subtotal</b>                                           | <b>\$14,814,950</b> | <b>\$14,834,374</b> | <b>\$14,854,283</b> | <b>\$14,874,690</b> | <b>\$14,895,607</b> |
| Other - unidentified (variance)                           | \$2,458,021         | \$5,938,403         | \$6,003,083         | \$6,870,694         | \$6,439,666         |
| <b>Grand Total</b>                                        | <b>\$17,272,971</b> | <b>\$20,772,777</b> | <b>\$20,857,366</b> | <b>\$21,745,385</b> | <b>\$21,335,274</b> |

# Planning, Priorities and Budget Advisory Committee

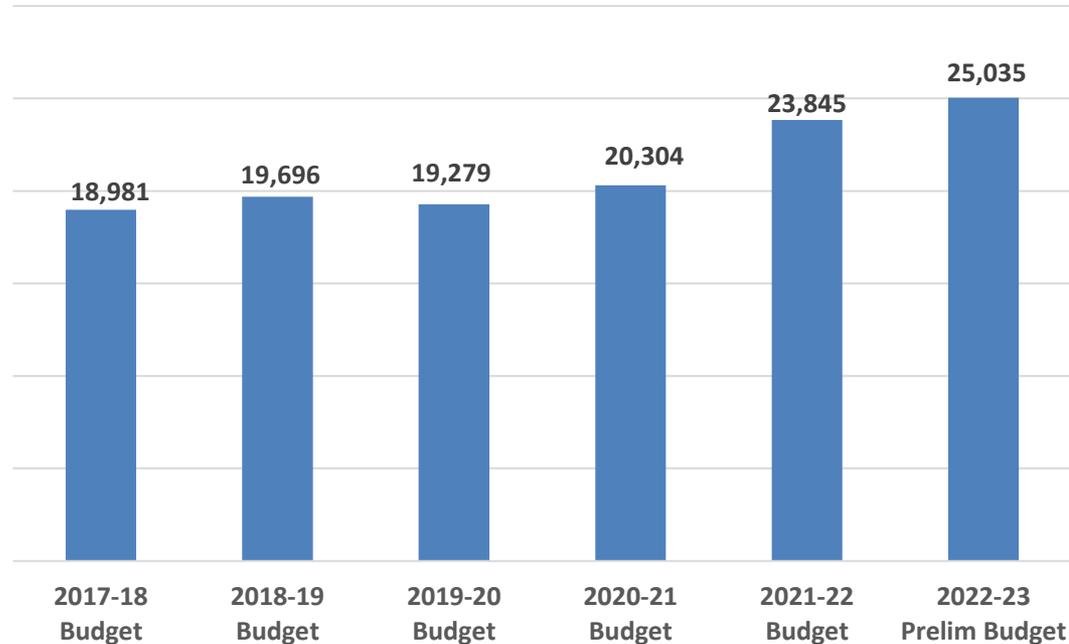
October 6, 2021

# Agenda

- 2022-23 Preliminary Student Awards Budget
- 2022-23 Preliminary Tuition Rates
- 2022-23 Draft Budget Planning Guidance
- 2022-23 Budget Dates
- Next Steps

# 2022-23 Preliminary Scholarships Budget

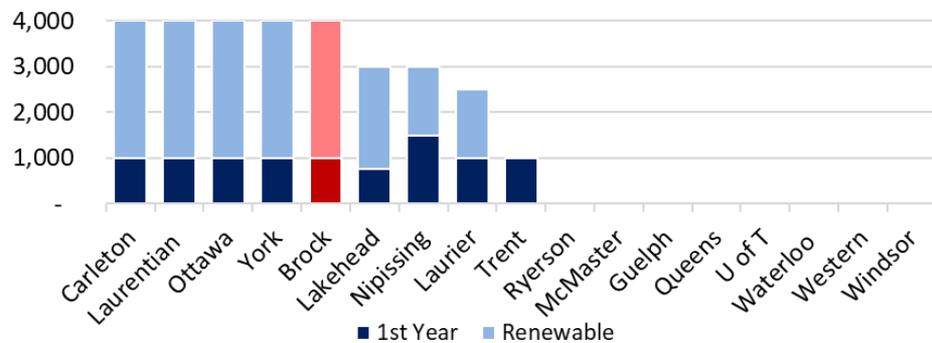
|                                                                                    | Undergrad     | Graduate      | Total         |
|------------------------------------------------------------------------------------|---------------|---------------|---------------|
| <b>2021-22 Budget</b>                                                              | <b>14,028</b> | <b>9,817</b>  | <b>23,845</b> |
| 2% increase (on central amounts)                                                   | 279           | 188           | 467           |
| Enrolment adjustment (based on preliminary enrolment forecast) – subject to change | (13)          | 736           | 723           |
| <b>Preliminary 2022-23 Budget</b>                                                  | <b>14,294</b> | <b>10,741</b> | <b>25,035</b> |



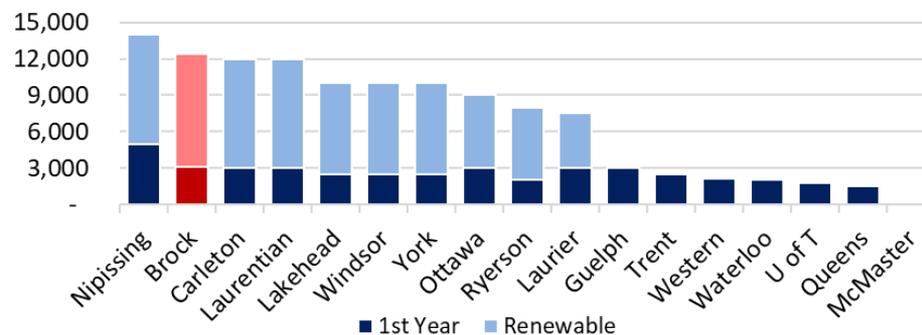
# 2021-22 Entrance Scholarship Grid Comparison - Total Value Offered

Source: University web sites (Fall 2021)

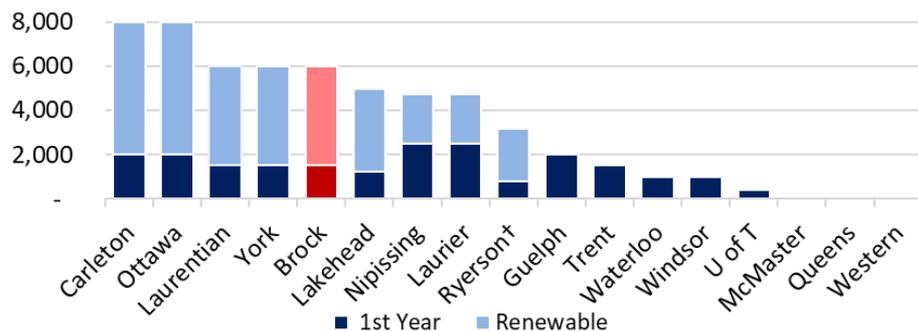
### Total Entrance Scholarships at 80%



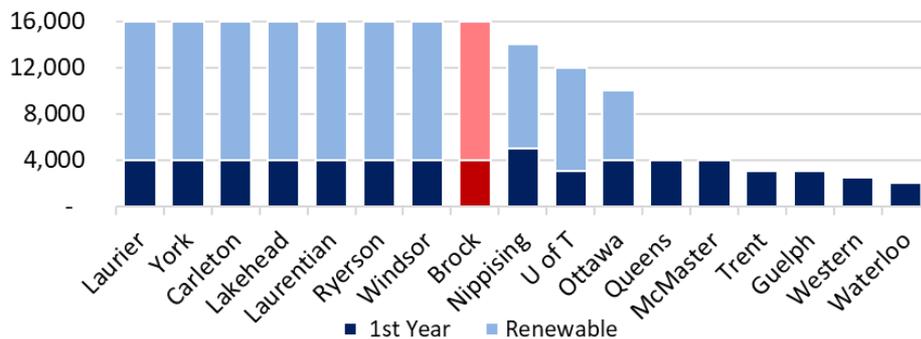
### Total Entrance Scholarships at 90%



### Total Entrance Scholarships at 85%



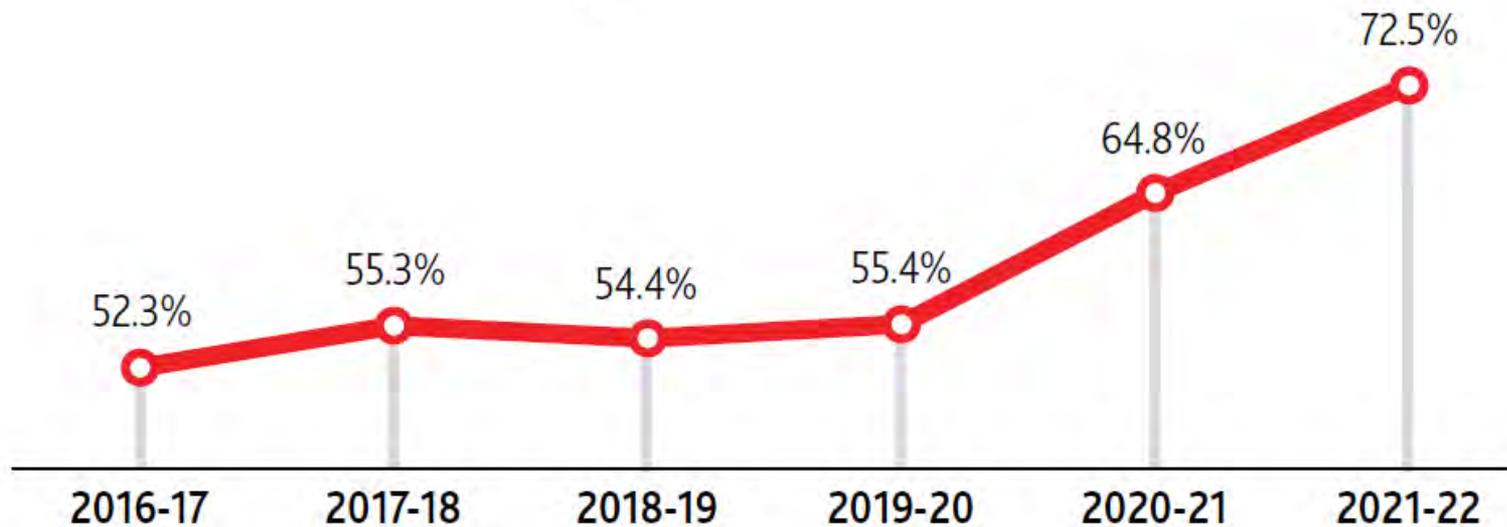
### Total Entrance Scholarships at 95%



Note: decreasing each tier scholarship amount by \$500 will result in savings of approximately \$1.3 million in 2022-23.

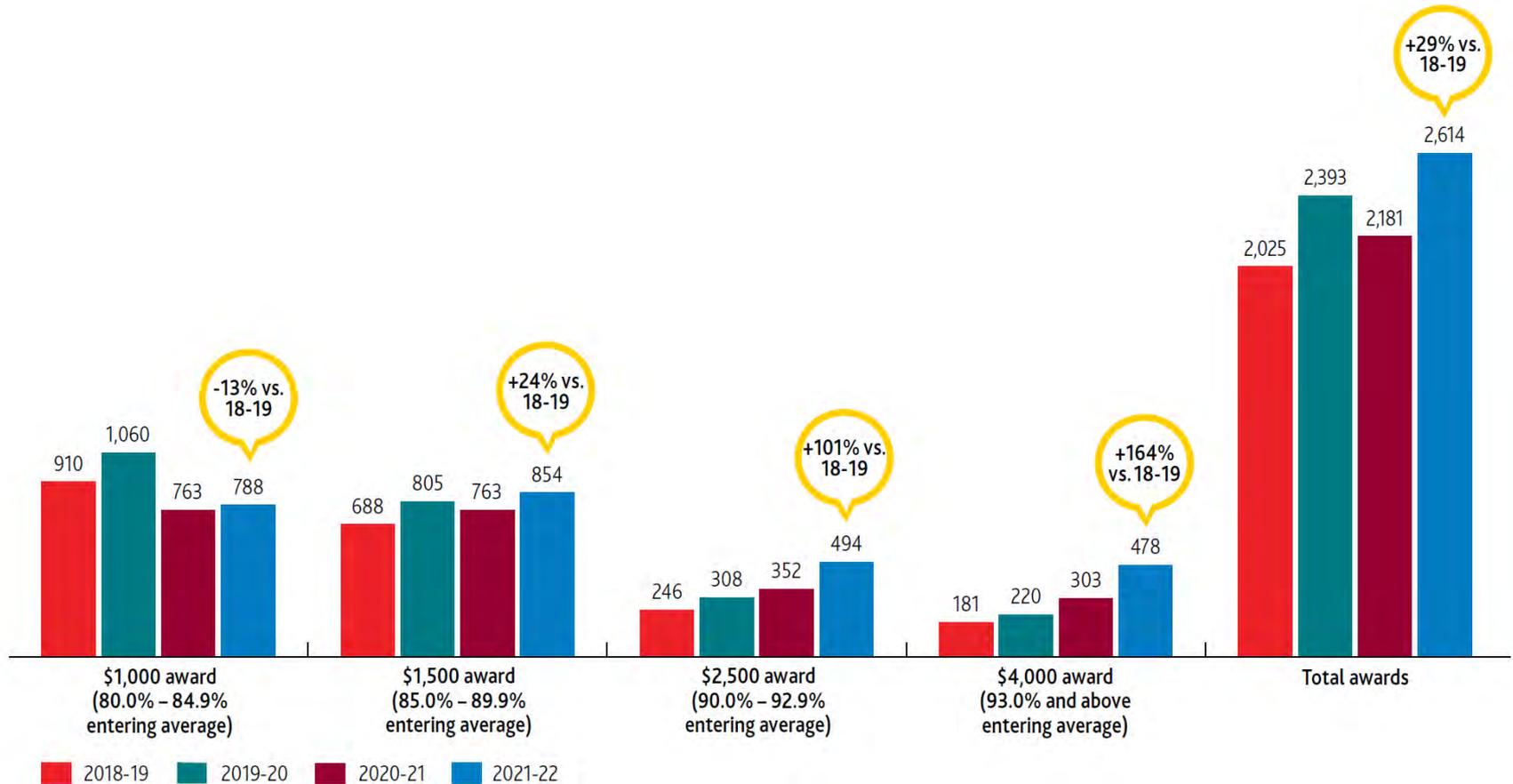


# Proportion of undergraduate first year students qualified for entrance awards



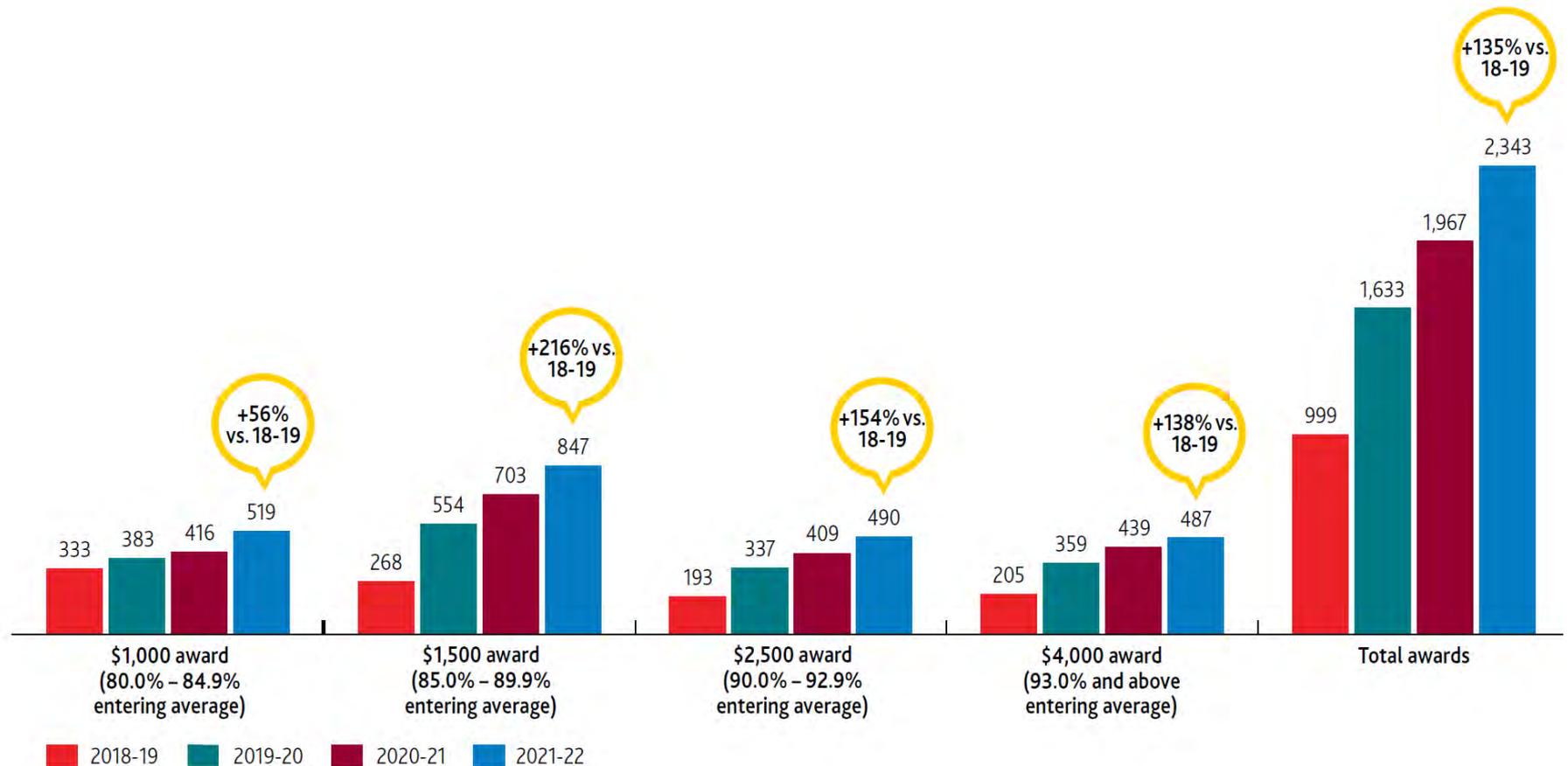
Source: Admissions BI dashboard (as at Aug. 12, 2021).

# Number of undergraduate entrance awards by award amount



Source: Summary student account transaction report

# Number of undergraduate renewals by award amount



Source: Summary student account transaction report.

# 2022-23 International, ISP & Self-Funded tuition rates

## Proposed International rate increases

### International

| Tuition Type                      | Rate increase | Proposed 2022-23 |                     | Impact of additional 1% increase |
|-----------------------------------|---------------|------------------|---------------------|----------------------------------|
|                                   |               | Rate increase    | \$ Impact ^ (000's) |                                  |
| Undergraduate                     | 5.00%         | 5.00%            | \$2,747             | \$549                            |
| Graduate (research programs)      | 0.00%         | 0.00%            | -                   | -                                |
| Graduate (professional programs)* | 5.00%         | 5.00%            | \$69                | \$14                             |

\* Includes: Masters in Business Administration, Masters in Accounting, Masters in Education (Non-Research Stream), Masters in Applied Disabilities, Masters in Professional Kinesiology, Masters in Public Health and Masters of Applied Gerontology.

### ISPs

| Academic Program                                        | Proposed 2022-23 |                      |                     | Impact of additional 1% increase |
|---------------------------------------------------------|------------------|----------------------|---------------------|----------------------------------|
|                                                         | Rate increase    | Tuition rate         | \$ Impact ^ (000's) |                                  |
| Masters of Science in Materials Physics                 | 5.00%            | \$35,735             | \$9                 | \$2                              |
| Masters of Education                                    |                  | No intake in 2022-23 |                     |                                  |
| Masters Preparation Certificate in Education            | 5.00%            | \$17,806             | \$24                | \$5                              |
| Masters of Accountancy                                  | 5.00%            | \$46,305             | \$55                | \$11                             |
| Masters of Business Administration                      | 5.00%            | \$68,355             | \$442               | \$88                             |
| Professional Masters Preparation Certificate (Business) | 5.00%            | \$20,672             | \$16                | \$3                              |
| <b>Total</b>                                            |                  |                      | <b>\$545</b>        | <b>\$109</b>                     |

^ vs. the 2021-22 T1 Forecast

# Next Steps

- Discussions on potential changes to the entrance awards and graduate student funding:
  - Renewal criteria
  - Entrance award tier values
  - International funding
- International Tuition rates - Fiscal Framework 5%. Recommendation/feedback requested from Faculties back to Finance by Oct 20, 2021
  - Except for research based Masters and PhD 0% increase
  - Will be considering cohort pricing for UG International with potential for higher cohort increases to offset revenue loss from freezing cohort rate

# 2022-23

# Draft Budget Planning Guidance

# Financial Forecast assumption for initial budget guidance

|                                                                    |                 |
|--------------------------------------------------------------------|-----------------|
| <b>2021-22 Budget (\$000s)</b>                                     | <b>(3,479)</b>  |
| Tuition Increase – Rate (non ISP)                                  | 2,880           |
| Tuition Increase – Enrolment (non ISP)                             | 346             |
| Tuition decrease – ISP Rate & Enrolment                            | (290)           |
| Increase in Net Ancillary contribution                             | 550             |
| Increase in Nursing Grant                                          | 830             |
| Removal of contingency fund revenue                                | (1,214)         |
| <b>Net contribution – change in revenue</b>                        | <b>(377)</b>    |
| Known Salary & Benefit* Increases                                  | (5,768)         |
| Library Acquisitions increase – 2% per FF                          | (104)           |
| Scholarships increase – 2% incr. plus change in enrolment – per FF | (1,189)         |
| Removal of funding debt repayment reserve                          | 1,500           |
| Increase in strategic funds to 1% of revenue (per FF)              | (1,834)         |
| Additional positions                                               | (2,530)         |
| Other known fixed operating costs                                  | (257)           |
| <b>Net Saving Target – 4.6% cut</b>                                | <b>(10,559)</b> |

# Domestic Enrolment - Headcount

|                                    | 2020-21 Actuals | 2021-22 T1 Forecast | 2022-23 Forecast | vs. 2021-22 T1 Forecast | %            |
|------------------------------------|-----------------|---------------------|------------------|-------------------------|--------------|
| <b>Undergraduate - Domestic</b>    |                 |                     |                  |                         |              |
| Faculty of Applied Health Sciences | 3,915           | 3,965               | 3,919            | (46)                    | -1.2%        |
| Faculty of Education               | 1,637           | 1,663               | 1,674            | 11                      | 0.6%         |
| Faculty of Humanities              | 1,741           | 1,769               | 1,735            | (34)                    | -2.0%        |
| Faculty of Math and Science        | 1,866           | 1,816               | 1,710            | (106)                   | -5.7%        |
| Faculty of Social Sciences         | 4,465           | 4,273               | 4,297            | 24                      | 0.5%         |
| Goodman School of Business         | 2,184           | 2,157               | 2,074            | (83)                    | -3.8%        |
| No Faculty                         | 97              | 100                 | 100              | -                       | 0.0%         |
| <b>Undergraduate - Domestic</b>    | <b>15,905</b>   | <b>15,743</b>       | <b>15,509</b>    | <b>(234)</b>            | <b>-1.5%</b> |
| <b>Graduate Domestic</b>           |                 |                     |                  |                         |              |
| Faculty of Applied Health Sciences | 322             | 275                 | 265              | (10)                    | -3.2%        |
| Faculty of Education               | 201             | 231                 | 244              | 13                      | 6.3%         |
| Faculty of Humanities              | 57              | 57                  | 63               | 6                       | 10.0%        |
| Faculty of Math and Science        | 103             | 87                  | 82               | (5)                     | -4.9%        |
| Faculty of Social Sciences         | 441             | 417                 | 491              | 74                      | 16.9%        |
| Goodman School of Business         | 168             | 220                 | 240              | 20                      | 12.1%        |
| <b>Graduate Domestic</b>           | <b>1,292</b>    | <b>1,287</b>        | <b>1,385</b>     | <b>98</b>               | <b>7.6%</b>  |
| <b>Total Domestic</b>              | <b>17,197</b>   | <b>17,030</b>       | <b>16,893</b>    | <b>(137)</b>            | <b>-0.8%</b> |

# International Enrolment - Headcount

|                                    | 2020-21 Actuals | 2021-22 T1 Forecast | 2022-23 Forecast | vs. 2021-22 T1 Forecast | %            |
|------------------------------------|-----------------|---------------------|------------------|-------------------------|--------------|
| <b><u>Undergraduate- VISA</u></b>  |                 |                     |                  |                         |              |
| Faculty of Applied Health Sciences | 159             | 190                 | 191              | 1                       | 0.6%         |
| Faculty of Education               | 35              | 19                  | 19               | -                       | 0.0%         |
| Faculty of Humanities              | 78              | 81                  | 83               | 2                       | 3.1%         |
| Faculty of Math and Science        | 414             | 415                 | 421              | 6                       | 1.4%         |
| Faculty of Social Sciences         | 593             | 581                 | 627              | 46                      | 7.8%         |
| Goodman School of Business         | 586             | 572                 | 559              | (13)                    | -2.1%        |
| No Faculty                         | 2               | -                   | -                | -                       | 0.0%         |
| <b>Undergraduate- VISA</b>         | <b>1,867</b>    | <b>1,858</b>        | <b>1,901</b>     | <b>43</b>               | <b>2.3%</b>  |
| <b><u>Graduate - VISA</u></b>      |                 |                     |                  |                         |              |
| Faculty of Applied Health Sciences | 16              | 13                  | 12               | (1)                     | -7.6%        |
| Faculty of Education               | 47              | 61                  | 52               | (9)                     | -19.2%       |
| Faculty of Humanities              | 9               | 13                  | 22               | 9                       | 99.9%        |
| Faculty of Math and Science        | 66              | 81                  | 127              | 45                      | 68.5%        |
| Faculty of Social Sciences         | 44              | 52                  | 54               | 2                       | 4.2%         |
| Goodman School of Business         | 477             | 394                 | 509              | 115                     | 24.2%        |
| <b>Graduate - VISA</b>             | <b>659</b>      | <b>614</b>          | <b>775</b>       | <b>161</b>              | <b>24.5%</b> |
| <b>Total VISA</b>                  | <b>2,526</b>    | <b>2,472</b>        | <b>2,677</b>     | <b>204</b>              | <b>8.1%</b>  |
| <b>Total</b>                       | <b>19,723</b>   | <b>19,502</b>       | <b>19,570</b>    | <b>68</b>               | <b>0.3%</b>  |

# ISP Enrolment - Headcount

| <u>ISPs and Other Self-funded programs</u> |                                                                | 2020-21<br>Actuals | 2021-22 T1<br>Forecast | 2022-23<br>Forecast | vs. 2021-22<br>T1 Forecast | %           |
|--------------------------------------------|----------------------------------------------------------------|--------------------|------------------------|---------------------|----------------------------|-------------|
| GSB                                        | Professional Masters Preparation Certificate (Business) (PMPC) | 30                 | 16                     | 35                  | 19                         | 63.3%       |
| GSB                                        | International Masters Business Administration (IMBA)           | 339                | 281                    | 355                 | 74                         | 21.8%       |
| GSB                                        | International Master of Accountancy (MPAcc)                    | 51                 | 50                     | 106                 | 56                         | 109.8%      |
| Education                                  | Masters Preparation Certificate in Education (MPCE)            | 30                 | 15                     | 15                  | -                          | 0.0%        |
| Education                                  | International Masters of Education (MEd)                       | 31                 | 35                     | 20                  | (15)                       | -48.8%      |
| M&S                                        | International Master of Science in Materials Science           | 6                  | 14                     | 14                  | -                          | 0.0%        |
| Education                                  | Continuing Teacher Education - Additional Qualification(AQ)    | 303                | 302                    | 273                 | (29)                       | -9.6%       |
| Education                                  | Adult Education                                                | 181                | 204                    | 187                 | (17)                       | -9.4%       |
| <b>Total ISP &amp; Self-funded</b>         |                                                                | <b>971</b>         | <b>917</b>             | <b>1,005</b>        | <b>88</b>                  | <b>9.0%</b> |

Note: ISP enrolments were included in figures presented in slide 13.

# Guidance

- During the next few weeks there will be discussions regarding allocations across units
- All units were encouraged to review their 2021-22 budget and identify material budget pressures moving into 2022-23, including new/reinstated position requests
- These pressures were requested to be provided to Finance to be reviewed with Executive Leadership to help determine how costs could be included in guidance
- The following slides show the standard allocation of savings targets- equally across all units
- **This is draft only for discussion and pre-planning**

# DRAFT - 2022-23 Guidance by Leader

| (\$000's)                              | 2021-22 Budget |       | Strategic investments & salary rate and global tuition impact* | Savings Targets |        | 2022-23 Guidance |       | Difference vs. 2021-22 Budget | Difference vs. 2020-21 Actual |
|----------------------------------------|----------------|-------|----------------------------------------------------------------|-----------------|--------|------------------|-------|-------------------------------|-------------------------------|
|                                        | \$             | %     |                                                                | \$              | %      | \$               | %     |                               |                               |
| President's Office                     | 696            | 0.3%  | -                                                              | (32)            | -4.6%  | 664              | 0.2%  | (32)                          | (62)                          |
| Other Units reporting to the President | 1,246          | 0.5%  | 1                                                              | (57)            | -4.6%  | 1,190            | 0.4%  | (56)                          | (171)                         |
| VP Academic – Faculties and Library    | 171,173        | 62.4% | 3,915                                                          | (7,651)         | -4.5%  | 167,437          | 61.0% | (3,736)                       | 17,130                        |
| VP Academic - Other                    | 19,666         | 7.2%  | 79                                                             | (907)           | -4.6%  | 18,838           | 6.9%  | (828)                         | 2,590                         |
| VP Administration – Ancillary          | (3,953)        | -1.4% | (550)                                                          |                 | -32.0% | (4,503)          | -1.6% | (550)                         | (15,081)                      |
| VP Administration – Non-Ancillary      | 38,175         | 13.9% | 23                                                             | (1,760)         | -4.6%  | 36,438           | 13.3% | (1,737)                       | 544                           |
| Total VP Research                      | 3,283          | 1.2%  | 4                                                              | (151)           | -4.6%  | 3,136            | 1.1%  | (147)                         | (1,190)                       |
| Total Global                           | (226,807)      |       | 3,608                                                          |                 |        | (223,199)        |       | 3,608                         | (3,750)                       |
| <b>Total University</b>                | <b>3,479</b>   |       | <b>7,080</b>                                                   | <b>(10,559)</b> |        | <b>0</b>         |       | <b>(3,479)</b>                | <b>9</b>                      |

\* Salary and wage increases that are anticipated but not yet awarded or negotiated are estimated in Global guidance and are allocated out to units when known and provided to Financial Services

# Next Steps

- Additional material budget pressures within units were requested to be provided by Oct 20, 2021

# 2022-23 Budget planning timeline

|                           |                                                                                                                                     |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Week of Nov 1st or before | <ul style="list-style-type: none"><li>Budget workbooks available in Adaptive along with finalized 2022-23 budget guidance</li></ul> |
| Nov 3, 2021               | <ul style="list-style-type: none"><li>PPBAC Meeting – Capital and Related Projects budget, 2022-23 budget guidance update</li></ul> |
| Dec 1, 2021               | <ul style="list-style-type: none"><li>PPBAC Meeting – Budget update</li></ul>                                                       |
| Dec 13, 2021              | <ul style="list-style-type: none"><li>Non-Faculty/Library Budget due to Finance</li></ul>                                           |
| Jan 7, 2022               | <ul style="list-style-type: none"><li>PPBAC Meeting – Budget update</li></ul>                                                       |
| Jan 10, 2022              | <ul style="list-style-type: none"><li>Completed Academic Budget workbooks back to Finance</li></ul>                                 |
| Jan 17, 2022              | <ul style="list-style-type: none"><li>Completed Trimester 2 workbooks back to Finance</li></ul>                                     |
| Feb 4, 2022               | <ul style="list-style-type: none"><li>PPBAC meeting – Budget update</li></ul>                                                       |
| March 25, 2022            | <ul style="list-style-type: none"><li>PPBAC meeting – Budget presented for comments, T2 2021-22 Update</li></ul>                    |
| March 30, 2022            | <ul style="list-style-type: none"><li>PPBAC meeting – Motion for Senate</li></ul>                                                   |
| April 21, 2022            | <ul style="list-style-type: none"><li>Senate vote on the budget</li></ul>                                                           |
| May 6, 2022               | <ul style="list-style-type: none"><li>Present final budget to the Board for approval</li></ul>                                      |

# Questions ?



**TO:** Chabriol Colebatch  
University Secretary & General Legal Counsel

**FROM:** Christene Carpenter-Cleland  
Chair, Teaching and Learning Policy Committee

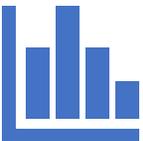
**DATE:** October 19, 2021

**REPORT TO SENATE 693 October 27, 2021**

**CONSENT ITEM - INFORMATION**

1. Update from the Centre for Pedagogical Information (CPI) – Student Course Experience

The Committee received an update on the state of Brock's Student Course Experience Survey and the role of CPI. Teaching and Learning Policy Committee provided feedback to CPI on ways to enhance response rates, and that survey data may need to be accessible beyond four years for promotion purposes. Currently the data is downloadable for annual reports. Consultation will take place with CPI and BUFA.



# Student Course Experience Surveys (SCESs) at Brock

Teaching and Learning Policy  
Committee

October 2021

Marc Breschuk and Mike Brousseau  
Centre for Pedagogical Innovation



# The state of Brock's SCES

*A confidential, sustainable method of student feedback collection*

A software titled Blue, created by Explorance of Montreal, QC, is utilized

SCES is entering its sixth academic year of usage at Brock (original implementation Fall 2016)

The system continues to respect process and results ownership as described by Collective Agreement, specifically

- BUFA members possess sole access to results (unless specified by unit in process consistent with CA)
- Departments determine which evaluative instrument(s) should be used for participating courses that they offer

Print-based solutions remain an option to units that prefer them

The forced pivot to online learning dramatically increased participation with the SCES

- MoA between BUFA and Brock in Winter of 2020
- Another similar MoA in Spring of 2020
- Changes to the language of the recent BUFA Collective Agreement to specify the use of online-format methods within online courses



# SCES participation by the numbers [1]

**82% of courses surveyed with SCES during 2020 academic year**

An increase of +41% against 2018 academic year [when data first collected]

**58 units\* continue to survey all or nearly all courses with the SCES in Fall 2021**

Discussions continue to be underway with many others to determine preferences in a return to in-class teaching

\*as represented by course code

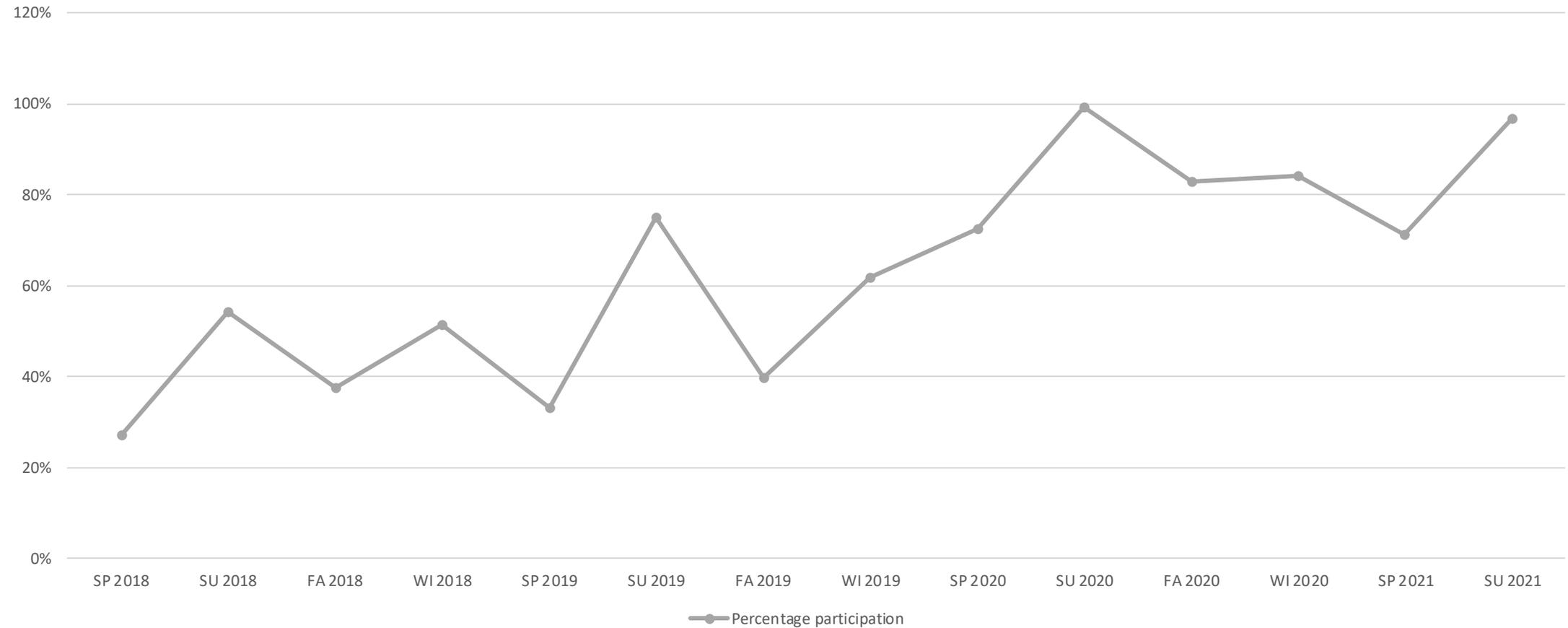
**85 evaluative instruments used within the system**

As determined by participating units

**Almost 142,000 survey forms have been completed online by students since Spring 2018**

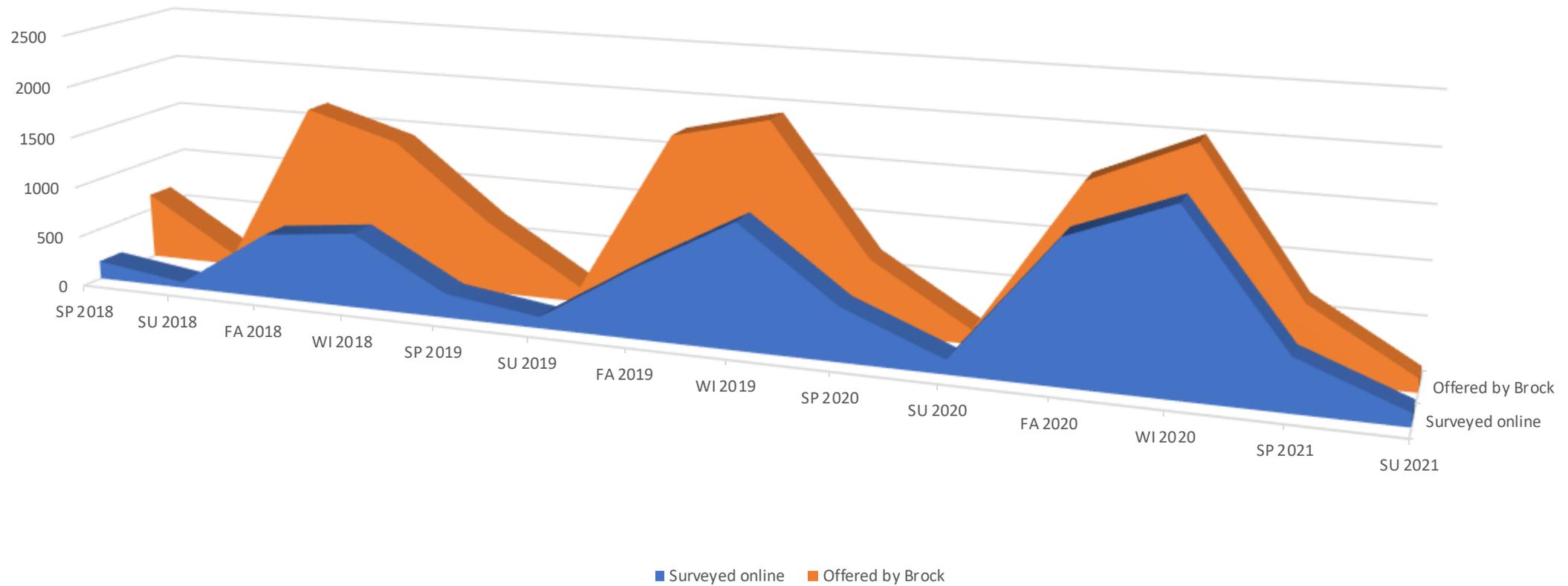
# SCES participation by the numbers [2]

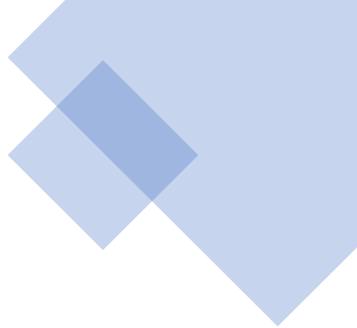
Percentage participation for all Brock courses



# SCES participation by the numbers [3]

Surveyed courses vs. Offered courses





## CPI's role in the SCES online system

1. Primarily stewards of the system with support for best evaluative practice and technical usage
  2. During onboarding, CPI works with academic units to gather requirements and understand previous practice. This includes
    - Virtualizing the reporting process that was used by the unit previously;
    - Digitizing existing departmental instrument for use in SCES; and
    - If valued by the unit, support for enhancing the departmental instrument to align with DLEs or other outcomes
  3. Two members of CPI perform technical administrator tasks. Only these two Brock individuals have access to all system data.
  4. Pedagogical support to instructors and other teaching staff in receiving student feedback
- 



# CPI's operational principles in stewarding the SCES



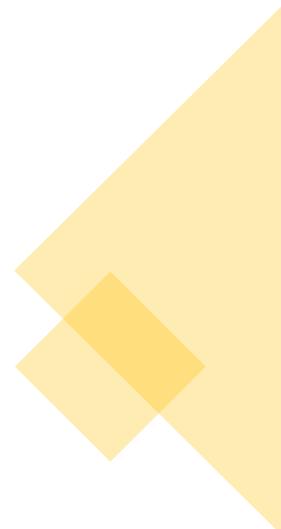
1. ALLOW FUNCTIONING 'IN THE BACKGROUND'  
WITHOUT DIRECT ATTENTION FROM BUSY  
COURSE INSTRUCTORS BUT PROVIDE BENEFIT  
FROM THEIR OPTIONAL INVOLVEMENT



2. PROVIDE OPPORTUNITIES TO INCREASE  
DEPARTMENTAL AGENCY IN SCES PROCESS  
WHERE DEPARTMENT DESIRES IT



3. BALANCE OPERATIONAL SUSTAINABILITY WITH  
CUSTOMIZATION



# A proposed SCES results deletion schedule

## Benefits of a deletion schedule:

- Supports a records management process
- Limits the amount of personal information that could be exposed in the event of a privacy breach
- Supports maintain-ability as system grows and becomes more complex

## Existing precedent

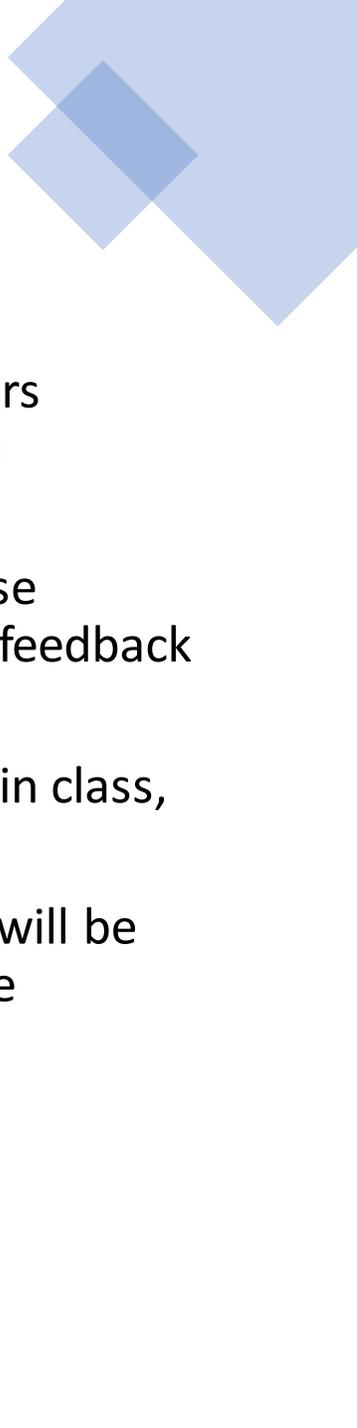
**Sakai sites** used to facilitate course work are deleted after four years + one academic term

*This aligns with the undergraduate careers of most students*



# Proven strategies for enhancing engagement

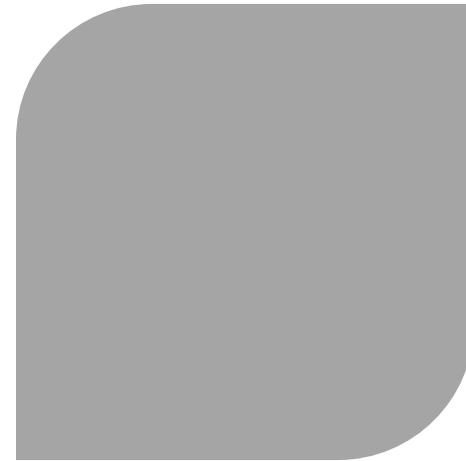
Literature and CPI's experience with Brock instructors indicate that these strategies are shown to enhance response rates:

1. Dedicating a few minutes of class time to course feedback indicates instructor validation of the feedback process
  2. Provide reminders, whether via mass email or in class, that the survey is available to students
  3. Help students understand how their feedback will be used to enhance future deliveries of the course
- 

# Guidance from T & L P Committee



RETENTION OF SCES  
FEEDBACK DATA?



ENGAGEMENT STRATEGIES?





To: Chabriol Colebatch, University  
Secretary & General Counsel, Brock  
University

From: Michael Ashton  
Chair, Research and Scholarship  
Policy Committee

Date: October 19, 2021

### Report to Senate 693 October 27, 2021

#### Consent Item - Information

1. Generative discussion at Senate: International agreements and human rights violations

The Committee considered a three-part motion to recommend to Senate that Senate recommend that the University (a) terminate international agreements with institutions in the People's Republic of China, (b) initiate efforts to seek international agreements elsewhere in Asia, including within the Chinese cultural realm, and (c) continue efforts to oppose anti-Asian racism (including prejudice against persons of Chinese ethnicity) and anti-Islamic prejudice.

After considerable discussion, the committee passed (a) a motion to defer the motion above and (b) a motion to propose the topic of international agreements and human rights abuses for a generative discussion at Senate.

The Chair of the Committee has subsequently sent to the Chair of Senate a document with proposed guidelines by which the University should decline to enter into or to maintain an international agreement on ethical grounds, out of concern that such agreements would make the University complicit in some severe human rights violations.



**Report to Senate #693, October 27, 2021**

**TO:** Chabriol Colebatch, Secretary to the University and General Counsel  
Brock University

**FROM:** Jens Coorssen  
Chair, Governance Committee

**DATE:** October 27, 2021

**ACTION ITEMS**

None.

**DISCUSSION ITEMS**

None.

**CONSENT ITEMS - FOR APPROVAL**

None.

**CONSENT ITEMS - FOR INFORMATION**

**1. Appointment to Senate Committee**

**MOVED** (McCarthy/Blayer)

THAT the Governance Committee appoint Haley Myatt as the Graduate Student Representative to the Planning, Priorities, and Budget Advisory Senate Committee for a one-year term ending 2022.

**RATIONALE**

- The previous representative for the GSA, Amanda Macdonald, resigned her role as Vice- President of the GSA in August 2021.
- A new representative, Haley Myatt, was submitted by the GSA for appointment to the Planning, Priorities, and Budget Advisory Committee on October 7, 2021.
- The Committee appointed Haley Myatt as the Graduate Student Representative to the Planning, Priorities, and Budget Advisory Senate Committee for a one-year term ending 2022 pursuant to its authority under the Faculty Handbook to fill mid-

term vacancies. In accordance with FHB 2:9.5.1, the Committee may make such appointments provided they are reported to Senate at its next meeting, at which point Senate may rescind the appointment. This appointment is being reported to Senate for this purpose.

## **2. Eligibility to Serve on Senate**

Following discussion, the Committee directed the University Secretary to proceed with drafting changes to the Faculty Handbook to remove the restrictions regarding full-time teaching staff on leave serving on Senate. The changes will be brought forward at a future meeting for approval.

## **3. Advisory Committee Nomination Process**

The Committee discussed concerns raised during the deputation to Senate on September 15, 2021 regarding the nomination review process for advisory committees. Comments will be summarized in a report to be brought to the Committee by the University Secretary at the next meeting.

## **4. Senate's Generative Discussion Topic**

The Committee provided feedback on several proposed generative discussion topics for Senate for October 2021. A vote by show of hands was taken and Topic #1: "Increasing administrative tasks and requirements placed on faculty/departments" received majority support.

## **5. Nominations to the Advisory Committee on the Vice-Provost, Indigenous Engagement**

The Committee recommended several nominees to the Provost and Vice-President, Academic, for appointment to the Advisory Committee on the Vice-Provost, Indigenous Engagement.

## **6. Nominations to the Advisory Committee on the Vice-President, Research**

The Committee recommended several nominees to the President for appointment to the Advisory Committee on the Vice-President, Research.

## **7. Nominations to the Advisory Committee on the Dean, Faculty of Mathematics & Science**

The Committee recommended several nominees to the Provost and Vice-President, Academic, for appointment to the Advisory Committee on the Dean, Faculty of Mathematics & Science.

## **Appendices**

None.