

BSc Sciences

Undergraduate Review

Year 2 (2022) - FAR Implementation Report

(reviewed 2019/20)

Recommendation #1

Empower a faculty member to be a champion for FMS 1P00 and revamp the course to balance the content to include topics in numeracy, writing, information literacy, professional skills, presentation skills, and EDI [Equity, Diversity, Inclusion] issues in STEM.

ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted for consideration. The Committee recognizes the importance of this course to the program and the high value placed on it by the reviewers. While it may not be possible for this one course to deliver all of the additional content suggested by the reviewers, ARC encourages the program to consider how it might provide students with connections to existing campus resources which promote the topics listed.

Implementation Plan (1st Priority)

Responsible for approving:	Program
Responsible for resources:	Program
Responsible for implementation:	Program
Timeline:	Dean of Mathematics and Science to report by the end of academic year 2020/21

Actions	Responsibility	Year One*	Year Two	Year Three
Action #1 EDI [as of 2022 called IDEA] page under development	Dean's Office	T	T	
Action #2 Looking for a faculty member to promote the course	Dean's Office	T	O	

*On Target (T), Delayed (D), Complete (C), Complete and Ongoing (O)

Comments 2021:

All topics indicated by the reviewers, except the EDI related material, are currently included in the course curriculum. The Outreach and Communication officer for the Faculty of Math and Science (FMS) is involved in the development of an EDI (now called IDEA, A for accessibility) page for the university, expected to be completed by May 1, 2021. The instructor will include questions/discussions related to EDI and refer students to this page. If needed, the instructor will seek guidance from experts within the university. A certain part of the grade will be associated with the topic of EDI.

It has not been easy to find a suitable instructor for the course. Since the introduction of this course two years back, the two instructors who taught the course have left the university. At present the responsibility of championing the course rests with the FMS Dean's Office. In time, a champion/promoter of the course will be found outside the Deans' Office. Ideally this person should be knowledgeable about the course, perhaps the instructor him(her)self.

Comments 2022:

Last Fall FMSC 1P00 was taught for the first time by a BUFA member, who has also agreed to teach the course for at least a few years longer. This faculty member and the Dean's Office (Associate Dean and the Outreach and Communications Officer) will champion the course via various offices within the university (Admissions, Recruitment, Office of Concurrent Education). The course is useful for students registering under Adult and Continuing Education, as well as for some international students. The Outreach and Communications Officer will be contacting high schools in the Niagara region about this course. We will also promote this course during events such as Fall Preview, Spring Open House and OUF.

Some elements of IDEA (inclusiveness, diversity, equity and accessibility) were discussed in class by the instructor last Fall. He also discussed how various survey questionnaires, job interview questions and even computer codes show hidden social, cultural, gender and racial biases. The FMS IDEA document is in the last stage of its development, awaiting final comments from Chairs and Directors. It is based on the university's document, but incorporates steps that can be taken at the faculty and departmental level. The FMS IDEA document will be discussed in the course this coming Fall.

Recommendation #2

Augment student advising by increasing academic advising time and providing pathways for students in the form of program templates geared toward specific employment outcomes. Use outcome data to continually update and improve templates and pathways to better advise students.

ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation. Although hiring is outside the jurisdiction of the Committee, ARC recognizes that the program is working on ways to augment student advising in addition to advocating for additional advising resources.

Implementation Plan (1st Priority)

Responsible for approving:	Program
Responsible for resources:	Program
Responsible for implementation:	Program
Timeline:	Dean of Mathematics and Science to report by the end of academic year 2020/21

Actions	Responsibility	Year One*	Year Two	Year Three
Action #1 Application for a dedicated advisor for the program was made to the HRC [Hiring Review Committee].	Dean's Office	T	C	
Action #2 Various pathways for students in the program are being developed	Academic Advisor	T	O	

Comments 2021:

An application for an advisor dedicated to BSc Sciences and Neuroscience programs as well as International Students was made to the HRC. HRC has approved a fixed term one-year contract appointment with benefits. Since HRC did not approve a permanent dedicated advisor position, the position will have to be funded by the Dean's Strategic fund contrary to the Operating Budget for 2021-22. The current academic advisor's caseload has already become unsustainably high.

The current FMS Academic Advisor has agreed to develop pathways leading to various career and employment opportunities, and to work with the Outreach and Communication Officer to put these on a FMS web page. A link to this page will be placed under program notes in the calendar.

The job of updating the templates and pathways will be delegated to the advisor dedicated to this program, once the position is filled.

Comments 2022:

The Faculty now has an Academic Advisor dedicated to this program.

The FMS Recruitment and Communication Officer has created a website for this program: brocku.ca/mathematics-science/bsc-sciences

There is a link to [pathways](#) (suggestions only) to various careers for students in this program. The BSc Sciences Academic Advisor is currently working with her counterpart at Brock School of Nursing to create the pathway for a career in nursing. It will be added to the list of other pathways when complete, which is expected very soon.

Recommendation #3

Develop a robust method to track outcomes for BSc Sciences students to provide a better understanding of student outcomes and aid in program improvement.

ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation. The Committee understands that the unique nature of the program will require some time to develop a robust method to track outcomes.

Implementation Plan (2nd Priority)

Responsible for approving:	Program
Responsible for resources:	Program
Responsible for implementation:	Program
Timeline:	Dean of Mathematics and Science to report by the end of academic year 2021/22

Actions	Responsibility	Year One*	Year Two	Year Three
Action #1 Tracking of students has been initiated	Dean's Office and the Office of Institutional Analysis	T	O	

Comments 2021:

The job of tracking students to develop a better understanding of student outcomes in the program will be shared by the Dean's Office and the Office of Institutional Analysis. In conjunction with the Faculty of Mathematics and Sciences, Institutional Analysis has committed to develop and share a draft report to track BSc Sciences student outcomes by the end of April 2021. Two meetings with the Office of Institutional Analysis have taken place so far on the issue of tracking.

The Dean's Office will be involved in the planning of the future development of the program, based on the analysis of the tracking results.

Comments 2022:

Institutional Planning, Analysis & Performance (IPAP) is currently tracking three specific groups of students: 2015, 2016 and 2021 cohorts. Tracking of students in this program is different and more involved than for other programs. Students keep changing their programs to and from the BSc Sciences program, depending on their personal situation. Not all the students who join the program, either in the beginning of their studies at Brock or at some intermediate stage, graduate from this program. IPAP will be tracking the progress and graduation of various cohorts from the BSc Sciences program as well as any other program at Brock. There is also a plan to track a group of students individually. The Associate Dean and the Academic Advisor responsible for this program will be meeting with IPAP at regular intervals to discuss the tracking.

Three reports have been produced by IA as of March 2022.

Report 1- 2016 group, tracking 178 students who were enrolled in GENS (General Studies (Math and Science)) in Fall 2016.

Report 2- 2015 group, tracking 168 students who were enrolled in GENS in Fall 2015.

Report 3- 2021 group, backtracking 340 students who were enrolled in GENS or GSCL (General Sciences) in Fall 2021.