

Earth Sciences

Graduate and Undergraduate Review

Year 2 (2022) - FAR Implementation Report

(reviewed 2019/20)

Recommendation #1

Unit should define their strategic niche, especially in the context of competition with other universities in southern Ontario. Emphasis could be in Environmental geoscience, Quaternary geology, Palynology, remote sensing, in conjunction with Geography appointments, and linked to planetary science.

ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation. The Committee recognizes that the Department has already taken steps toward occupying a niche, such as the proposal for a new BA in Earth and Planetary Science Communication, which is undergoing the review process in 2020. The Committee expects that the definition of a strategic niche will require a number of years of development by the Department.

Implementation Plan (3rd Priority)

Responsible for approving:	Department
Responsible for resources:	Department
Responsible for implementation:	Department
Timeline:	Dean of Mathematics and Science to report by the end of academic year 2022/23

Actions	Responsibility	Year One*	Year Two	Year Three
Action #1 Revision of new BA program in process; Introduction of micro- certificate.	Department	T	O	

Comments 2021:

The department continues its effort to develop a strategic niche that utilizes the unique composition of our faculty. We also welcome closer integration with our colleagues from Geography and Tourism, several of whom already supervise graduate students within our department. Beyond the ongoing efforts, we plan on making this a major point of discussion during our retreat (Recommendation#5), which has been postponed until we can meet in person for several hours.

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

Comments 2022:

We are currently awaiting final government approval for our BAsC program in Earth and Planetary Science Communication. This degree is unique in Canada and clearly helps to identify the strategic niche of the department. The revision of the proposal was undertaken by a committee that included three faculty members from Geography and Tourism Studies as well as one from Communication, Popular Culture & Film (CPCF). The governance of the degree itself will also be overseen by such a committee.

Recommendation #2

Unit should develop a 5-10 year hiring strategy, focused on their strategic niche as well as possible future retirements. The rationale for each hire should be justified based on the unit's own strategic plan as well as linked to the overall mission and strategic university plans.

ARC Disposition of the Recommendation

ARC considers the recommendation to develop a 5-10 year hiring strategy to be accepted and in the process of implementation. The Committee recognizes that hiring lies outside of its jurisdiction and expects that the Department will proceed through normal channels of advocacy for faculty resources.

Implementation Plan (1st Priority)

Responsible for approving:	Department
Responsible for resources:	Department
Responsible for implementation:	Department
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 Hydrologist is top priority; detailed plan to wait until retreat.	Department	T	O	

Comments 2021:

The dept. has already decided that the next position it will pursue will likely be a Hydrologist. The need for this position and the possible curriculum changes with it are part of the FMS growth position plan, completed in the Fall of 2020. We have no immediately pending retirements. We will discuss a more complete plan, which will also include the needs of the new program, during the faculty retreat (Recommendation #5).

Comments 2022:

As the result of our retreat (Recommendation #5) we have an existing replacement strategy that serves the need of the department. As mentioned in last year's comments, we have already requested a Hydrologist for a retirement on December 31, 2022. With the pending approval of our new BAsC program, the next urgent need will be for a Planetary Scientist with expertise in planetary igneous processes. This position will address needs in both Professional Geoscientists Ontario (PGO) and BAsC programs. To help the department develop programs, such positions naturally need to be long term, tenure track positions. Hence the current offer of a 1 yr Hydrologist position is of very limited use to the department.

Recommendation #3

The unit should investigate increasing opportunities for international enrollments, especially in niche areas (such as palynology) that can service an international need. Perhaps consider developing a 2+1 or 2+2 program. The aim should be to increase international students by 5-10.

ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation.

Implementation Plan (1st Priority)

Responsible for approving:	Department
Responsible for resources:	Department
Responsible for implementation:	Department
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 Discussion about niche programs ongoing, international student program plan delayed.	Department	D	T	

Comments 2021:

We have not yet formalized program plans and have not actively pursued any 2+1 or 2+2 programs this year. We will be scheduling a meeting with Brock International to discuss option prior to our retreat.

Comments 2022:

To attract international students and provide Geoscientists with existing degrees with an overview of modern and innovative techniques in several focused areas, the department developed an 8-month certificate program last year. We were not able to bring this certificate proposal forward as one of our colleagues, who was scheduled to teach a quarter of the required courses in it, took advantage of one of the retirement offers and is no longer teaching as of Dec 31, 2022. We will revisit this option.

Recommendation #4

Examine strategies to increase undergraduate enrollment, and especially recruitment from 1st year students that transfer into the program, emphasizing niche areas of expertise.

ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation.

Implementation Plan (1st Priority)

Responsible for approving: Department
 Responsible for resources: Department
 Responsible for implementation: Department
 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 Changed admission requirements, added micro-certificate, revision for new program ongoing.	Department	T	O	

Comments 2021:

The most significant immediate action undertaken was to change our admission requirements and align them with our competing schools. Prior to that change, we required more high school courses than other Universities in the province, so our program was less accessible to many potential students than other programs with which we compete. Our new, unique micro-certificate has been added to the calendar and we are currently revising the proposed new program.

Comments 2022:

We have made additional efforts to convert students in our first-year courses into ERSC majors. We also hope that full government approval for our new BAsC program in Earth and Planetary Science Communication will be in time for the 2023 cohort and are currently working on promotional material for this program. We are also currently working on an articulation agreement with Fleming College that should provide a path for graduates of their Earth Resources Technician program.

Recommendation #5

Recommend a facilitated retreat to address recommendations 1, 2, 3 and 4. Retreat should include participation of jointly and cross-appointed faculty, especially in physical geography.

ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation. The Committee understands that a Departmental retreat is just one of the options available in taking steps to address recommendations 1,2,3 and 4.

Implementation Plan (3rd Priority)

Responsible for approving: Department
 Responsible for resources: Department
 Responsible for implementation: Department
 Timeline: Dean of Mathematics and Science to report by the end of academic year 2022/23

Actions	Responsibility	Year One*	Year Two	Year Three
Action #1 Retreat delayed until post-pandemic.	Department	D	C	

Comments 2021:

The department has had several successful retreats over the years and we look forward to holding one when it is possible to do so in person. None of us are keen to participate in a multi-hour Teams event, which would surely not be as productive. We plan on holding our retreat during the fall term when we are back to an in-class mode. Our retreat will be scheduled before the end of 2021.

Comments 2022:

Due to ongoing Covid restrictions the department held a virtual retreat on Monday December 13, 2021. The department did not see the need for a facilitator. We discussed several of the recommendations above, but the main focus was on replacement strategies. We had frank

discussions in which several faculty members outlined their tentative retirement plans. The department also confirmed that it remains committed to PGO and the new BAsC programs. Based on those commitments, it was easy to identify the necessary replacement strategy.

Recommendation #6

We recommend that Brock University establish a student-supervisor agreement that is reviewed by both the student and supervisor at the start of the student's graduate program.

ARC Disposition of the Recommendation

ARC considers the recommendation to be already current practice at Brock. The Committee expects that the Department will benefit from ongoing efforts by the Faculty of Graduate Studies and the Centre for Pedagogical Innovation to improve and streamline these practices.

Implementation Plan

No action required.

Recommendation #7

The Department should develop a NWS that is reflective of the workload required in both undergraduate and graduate teaching and mentoring

ARC Disposition of the Recommendation

ARC considers the recommendation to be not accepted as it lies outside of the jurisdiction of the Committee

Implementation Plan

Recommendation not accepted.