

Computer Science

Graduate and Undergraduate Review

Year 1 (2020) - FAR Implementation Report

(reviewed 2018/19)

Recommendation #1

The de facto admission average needs to be raised to 80%.

ARC Disposition of the Recommendation

ARC considers the recommendation to be not accepted. The de facto admission average is not under the sole control of the Department and cannot be set at a certain level in contradiction to provisions in the Faculty Handbook or university enrolment targets. ARC encourages the Department to investigate other measures (such as 2nd year entry) to address concerns of competitiveness and student quality as well as retention and student success.

Implementation Plan

Recommendation not accepted.

Comments 2020:

Although raising the student minimal entrance average would be detrimental to intake numbers (although it would improve retention rates), another option we are discussing is to require 2 high school mathematics credits for students entering any COSC Honours degrees (Honours, Honours Co-op, etc.). We would retain the current 1 HS mathematics requirement for students entering the 4-year with major program. This would better prepare Honours students for the mathematics requirements of the program.

Recommendation #2

Infusion of PLO 3b across program courses

ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation. The Committee believes the Department is best-positioned to determine how to incorporate PLO 3b across program courses.

Implementation Plan (2nd 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 Identify appropriate technologies and resources appropriate to the goals studied in various artificial intelligence courses (and others).	Department	T		

Comments 2020:

The ultimate responsibility for course content is the instructor. As new faculty join the department, new courses will be introduced, and appropriate technologies and resources will be considered and used when deemed appropriate, at the discretion of the instructor.

Recommendation #3

Inclusion of a required "Communication Skills for the Computer Scientist" workshop course

ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted for consideration. The Committee believes the Department is best-positioned to determine how to incorporate communication skills into the curriculum, in conjunction with relevant campus resources.

Implementation Plan (2nd 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 The department will discuss this item at the next department retreat, tentatively planned sometime during 2020-21.	Department	D		

Comments 2020:

The department is planning a department retreat during 2020-21, to discuss this and other matters, including curriculum revision. We have been waiting for additional new faculty to be hired, who will introduce fresh perspectives and ideas.

Note: Due to COVID-19 mitigation measures, this action item has been delayed, due to prohibition of group meetings, as well as postponement of faculty searches. Once meetings are allowed again and faculty interviews resume, this action item will proceed.

Recommendation #4

Hiring of new faculty members.

ARC Disposition of the Recommendation

ARC considers the recommendation to be not accepted as it lies outside of the Committee's jurisdiction. The Committee expects that the Department will proceed through normal channels of advocacy for these faculty resources.

Implementation Plan

Recommendation not accepted.

Recommendation #5

Renovation of the department's teaching lab space, equipment, and software.

ARC Disposition of the Recommendation

ARC recognizes the necessity of ongoing renovation of lab space, equipment and software, however the Committee considers the recommendation to be not accepted as it lies outside of its jurisdiction. The Committee expects that the Department will proceed through normal channels of advocacy for these resources.

Implementation Plan

Recommendation not accepted.

Comments 2020:

A Facilities Management committee approved \$25,000 per lab for cosmetic renovations of two of our undergraduate labs (J301, J310). The Dean has offered to top up the funding as well. Although more significant renovations are necessary, this help is appreciated. All the hardware in all our labs will be replaced in 2020, thanks to funding by the Dean and the Office of Research Service (for research and graduate hardware).

Recommendation #6

Development of a comprehensive plan for graduate training, research, and funding opportunities.

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 2019/20

Actions	Responsibility	Year One*	Year Two	Year Three
Action #1 The department will hold a retreat to fully consider this recommendation.	Department	D		
Action #2 The department's plan for a future Centre of Intelligent Systems will be a means for supporting graduate training, research, and funding opportunities.	Department	T		

Comments 2020:

As with Recommendation #3, the department will discuss this item at a planned department retreat. The addition of newly hired faculty will help to infuse new ideas to possibly address this item. The Centre of Intelligent Systems will also help propel this initiative.

Note: Due to COVID-19 mitigation measures, this action item has been delayed, due to prohibition of group meetings, as well as postponement of faculty searches. Once meetings are allowed again and faculty interviews resume, this action item will proceed.

Recommendation #7

Highlighting the strategic importance of Computer Science.

ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation. The Committee also recognizes the reviewers' recommendation in the contextual comments, to develop a long-term plan for faculty renewal. The Committee understands that advocacy for future faculty resources will need to proceed through normal channels.

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

Actions	Responsibility	Year One*	Year Two	Year Three
<p>Action #1 The department successfully promotes our undergraduate programs at institutional and regional university fairs (OUF). Our intake of domestic and international students into our programs continues to grow. Interest in our MSc program also continues to be strong, especially amongst international applicants.</p>	Department	T		
<p>Action #2 The department continues to prepare for the new BSc in Data Science and Analytics program (jointly offered with Mathematics & Statistics, and Fac of Business). Progress in the joint PhD in Intelligent Systems and Data Science is also progressing. Both initiatives have the full support of the Dean.</p>	Department	T		
<p>Action #3 The department is planning the creation of a Centre of Intelligent Systems. Detailed planning will commence once the PhD proposal has been approved by ARC. The Centre will be a means for promoting the department's research, and the department's strategic importance to Brock.</p>	Department	T		

Comments 2020:

The department is pleased to report that the Dean's office, as well as Research Office, have contributed funds to overhaul our computer hardware resources. Our undergraduate labs, graduate computing workstations, research cluster, and data storage, will be replaced by the end of Summer 2020. We greatly appreciate that the administration have recognized the strategic importance of computer science in this way.

Recommendation #8

Grow the Department's graduate program.

ARC Disposition of the Recommendation

ARC considers the recommendation be accepted and in the process of implementation. The Committee recognizes that a Program Proposal Brief for a new PhD program is in the final stages of development.

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 2019/20

Actions	Responsibility	Year One*	Year Two	Year Three
<p>Action #1 Two new faculty have joined the department in January 2020, and both members are research active and are admitting new MSc students. New hires, including a CRC Tier II, are expected in 2020-21. All these hires will result in growth to the existing graduate program.</p>	Department	T		
<p>Action #2 The PhD in Intelligent Systems and Data Science (jointly with Dept of Mathematics and Statistics) is nearing submission to ARC.</p>	Department	T		
<p>Action #3 A planned Centre of Intelligent Systems will help promote the graduate programs (see items #6 and #7)</p>	Department	T		

Comments 2020:

Above action items are self-explanatory.

Recommendation #9

CIPS accreditation.

ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted for consideration.

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 2021/22.

Actions	Responsibility	Year One*	Year Two	Year Three
Action #1 Discussion of curriculum revisions will be an item of discussion at future department retreat.	Department	D		

Comments 2020:

Action item is self-explanatory.

Note: Due to COVID-19 mitigation measures, this action item has been as well as postponement of faculty searches. Once meetings are allowed again, this action item will proceed.

Recommendation #10

Intra-department collaborations.

ARC Disposition of the Recommendation

ARC understands the recommendation to be referring to “inter” departmental collaborations from the context provided in the Reviewers’ Report. The Committee considers the recommendation to be accepted and in the process of implementation. To an extent, this is already current practice as described by the Department in its response.

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 2019/20.

Actions	Responsibility	Year One*	Year Two	Year Three
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<p>Action #1 New and future hires (including CRC Tier II with Dept of Biological Sciences) will encourage interdepartmental collaboration.</p>	Department	T		
<p>Action #2 Future Centre of Intelligent Systems will further promote collaborative research with other departments.</p>	Department	T		

Comments 2020:

As new faculty join the department, the chances of collaborative ties improve. The CRC Tier II with BIOL will further strengthen existing collaboration between Computer Science and Biological Sciences in bioinformatics research. Collaboration is an academic freedom issue, and hence is always at the discretion of individual faculty members.