Ryerson University Graduate Studies

1 YEAR FOLLOW-UP REPORT

Graduate Program:	**Applied Mathematics (MSc)**
Peer Review Team:	Dr. Gail Wolkowicz (McMaster University) Dr. Ruodu Wang (University of Waterloo) Dr. Ali Miri (Ryerson University)
Site Visit:	July 4 and 5, 2018
PRT Report:	August 2, 2018
Program Response:	November 26, 2018
YSGS Response:	November 29, 2018
PPR Approved by Senate:	Jan 28, 2020
1 Year Follow Up Report Due:	Jan 28, 2021

As mandated by Ryerson Senate Policy 126: Periodic Program Review of Graduate and Undergraduate Programs[1], within one year of Senate approval of the PPR, a 1 Year Follow-Up Report is to be submitted to the Faculty Dean or Dean of Record and the Vice-Provost and Dean, YSGS, on the progress of the implementation plan and any further recommendations. This follow-up report will be also be reviewed by Programs and Planning Committee, YSGS Council, and finally Senate. The PPR Report to Senate may also include a date(s) for subsequent Follow-up Reports.

What follows are the PRT recommendations, the program responses, YSGS responses, and the implementation plan, including the 1 year follow-up status reports by the program.

The recommendations are divided into two broad categories: academic and administrative/financial and for simplicity, all of this information is presented in the form of tables.

[1] https://www.ryerson.ca/content/dam/senate/policies/pol126.pdf

ACADEMIC RECOMMENDATIONS

Recommendation	Program Response	YSGS Response	Proposed Action	Responsibility to Lead Follow Up	Timeline	Applied Math (MSc) 1 Year Follow- Up
1. Restructure the MRP Option to the MSc degree to reduce from 5-term, 9-courses to 4-term, 7-courses.	The program agrees with the recommendation. The Graduate Program in Applied Math (GPAM) analyzed the restructuring of the MRP Option. The program engaged with faculty, current students, and YSGS to understand benefits and drawbacks and make an informed decision for the benefit of the program. The GPAM will recommend restructuring the MRP Option. The program will begin work on this during the Fall 2018 term. Further details are available on pages 3 and 4 of the program's response to the PRT report.	YSGS supports the program response. YSGS notes that any curriculum modification needs to be undertaken in accordance with Ryerson University Policy 127. This proposed change appears to be a Category 2 minor revision under the policy, though YSGS encourages the program to consult with the Associate Dean, Programs of YSGS as needed.	GPAM analyzed the restructuring of the MRP Option. Engaged with faculty, current students, and YSGS to understand benefits and drawbacks and make an informed decision for the benefit of the program. The GPAM will recommend the restructuring on the MRP Option. GPAM has already modified the MSc Seminar course to replace the requirement to attend weekly two-hour seminar to attend a certain number of seminars/colloquia and deliver one presentation.	GPAM, Faculty of Science (FOS), Yeates School of Graduate Studies (YSGS).	(2018) Fall	Done.

2. Restructure the MSc Seminar AM8000.	The program agrees with the recommendation. GPAM has already modified the MSc Seminar course to replace the requirement to attend a weekly two-hour seminar with a requirement to attend a certain number of seminars/colloquia and deliver one presentation. Further details are available on page 4 of the program's response to the PRT report.	YSGS supports the program response. YSGS notes that revisions to the course description in the graduate calendar is a Category 1 minor revision under Policy 127. If any changes to the course description have been made, the approvals designated in Policy 127 will need to be obtained.	GPAM has already modified the MSc Seminar course to replace the requirement to attend weekly two-hour seminar to attend a certain number of seminars/colloquia and deliver one presentation.	GPAM	(2018) Fall	Done.
3. More elective courses offerings in each of the Fall and Winter. Offer Applied Statistics course each year.	The program agrees with the recommendations. GPAM will work on restructuring the elective course offerings, including the possibility of cross-listed courses with other departments, in both the Fall and Winter terms in 2018-2019 to create new electives. Further details are available on pages 4 and 5 of the program's response to the PRT report.	YSGS supports the program response. YSGS notes that the addition of any new courses to the curriculum are considered a Category 2 minor revision under Policy 127. As above, the program is encouraged to consult with the Associate Dean, Programs of YSGS as needed.	GPAM works on restructuring the elective course offerings in both the Fall and Winter terms and to create new electives.	GPAM, FOS, YSGS.	(2018-2019)	Done.

4. Increase the size of the program.	The program agrees with the recommendation. GPAM will work with FOS and YSGS to expand the MSc program from a target of 10 MSc students/year to at least 12 MSc students/year. Further details are available on page 5 of the program's response to the PRT report.	YSGS is open to discussing the target for the MSc program with the program and the Faculty of Science. It notes, however, that any adjustment to the program's target needs to take into account slot allocations within both the Faculty of Science and the university as a whole.	GPAM works with FOS and YSGS to expand the MSc program from a target of 10 MSc students/year to at least 12 MSc students/year	GPAM, FOS, YSGS.	2019	FOS proposed a pilot program to increase the target from 10 MSc students/year to 13 MSc students/year, for the Fall 2020 admission cycle. Its impact will be evaluated by the FOS. The GPAM met the new target.

5. Recruit more outstanding international students, with substantial resources and funding from the University.	The program agrees with the recommendation. The GPAM will work with Faculty and YSGS to provide additional funding to attract very strong international students. Further details are available on pages 5 and 6 of the program's response to the PRT report.	YSGS supports the program response. YSGS notes, however, that the university already provides substantial funding to the program. YSGS also notes that it will continue to advocate for international graduate scholarships as a part of a broader university strategy for international graduate student recruitment and retention. YSGS encourages the program's faculty to continue to pursue external funding to continue to provide strong funding packages for international students. YSGS further encourages faculty members interested in supporting specific international students to contact the Associate Dean, Research and Graduate Studies in the Faculty of Science.	The GPAM works with Faculty and YSGS to provide additional funding to attract very strong international students	GPAM, FOS, YSGS.	2019	Done.

6. Change the requirement that students must take both core courses, to requiring one of them and counting the other as elective.	The program will study this recommendation and investigate the implications. The current structure of the program, including the core courses, ensures training in modern Applied Mathematics (AM). The GPAM will investigate if such a change is appropriate for a degree in AM, since other Applied Mathematics graduate programs in Ontario have similar requirements. Further details are available on page 6 of the program's response to the PRT report.	YSGS supports the program response. As previously noted, any curriculum modifications will need to be completed in accordance with Policy 127.	The current structure of the program, including the core courses, ensures training in modern Applied Mathematics (AM). The GPAM will investigate if such a change is appropriate for a degree in AM, since other Applied Mathematics graduate programs in Ontario have similar requirements.	GPAM, FOS, YSGS.	2020	The current structure of the program, with the two core courses, is maintained. Other AM graduate programs in the province have similar requirements.

ADMINISTRATIVE AND FINANCIAL RECOMMENDATIONS

Recommendation	Program Response	YSGS Response	Proposed Action	Responsibility to Lead Follow Up	Timeline	Applied Math (MSc) 1 Year Follow- Up
1. Reduce the TA portion of the student funding support (currently at 50%) and replace it by additional student scholarships.	The program agrees with the recommendations. The program notes that there are ongoing efforts to support the MSc students financially at competitive levels, while exploring funding opportunities other than teaching assistantships. Further details are available on page 5 of the program's response to the PRT report.	YSGS supports the program's efforts to provide strong funding packages for its graduate students. In addition to providing support through TA positions and Ryerson Graduate Fellowships, YSGS encourages the program to provide funding through stipends wherever possible.	Ongoing efforts to support the MSc students financially at competitive levels, while exploring funding opportunities other than teaching assistantships.	GPAM, FOS, YSGS.	2019-2020	Done.

Summary Statement/Conclusion: We thank the external reviewers and colleagues in Applied Mathematics for a very thorough evaluation of the strengths and challenges for the MSc program in Applied Mathematics. The PRT recommendations helped improve the program.