MEMORANDUM

To: Alyssa Voigt, Quality Assurance Office

From: Jeremy Bergen

Date: April 17, 2019

Re: Review of Two-Year Progress Report for Pure Math (MMath/PhD)

Alyssa,

I have reviewed the Two-Year Progress Report (as well as the Final Assessment Report) for Pure Math (MMath/PhD) and recommend that SGRC endorse the report.

All reports have affirmed the high quality of the program. The Final Assessment Report made five recommendations, along with timelines and accountabilities for implementation. According to the Two-Year Progress report, the first four recommendations have been implemented successfully and no further action is required. The fifth recommendation is to develop a 5-year proposal to present to Dean and Provost regarding faculty appointments required to become the strongest doctoral program of its kind in Canada. According to the report, the strategic planning that will lead to such a proposal is underway. Of course, developing a plan is not the same thing as have the resources to implement it. But the development of the plan is in process.

The program should be commended for its positive and timely responses to the recommendations.

Jeremy

Jeremy M. Bergen
Associate Professor of Religious Studies and Theological Studies
Director of Theological Studies
Conrad Grebel University College, University of Waterloo
July 4, 2018

Re: Quality Assurance Office

The Faculty of Mathematics endorses the June 2018 Two year progress report for the Pure Math (MMath/PhD) program. Pure math has completed four of the five recommendations.

The last recommendation, to build the strongest PhD program in Canada, is currently in progress. The chair of the department will be preparing a long-term plan within the next year, and this plan will need to be combined careful with the Math Faculty strategic plan.

Stephen M. Watt
Dean, Faculty of Mathematics
Two-Year Progress Report
Pure Mathematics (MMath/PhD)
February 2019

Background
The program review for the graduate programs in the Department of Pure Mathematics was completed in 2016, with the final assessment report approved by the Senate Graduate and Research Council in December 2017.

The reviewers reported that the Pure Mathematics graduate programs are of very high quality, are well viewed by faculty members, students and alumni and have very good outcomes. The reviewers noted that there were no critical issues that required immediate attention.

The review made five recommendations, several of which were advice in response to topics about which their opinion had been asked. These recommendations and the actions have been taken, or will be taken; details are below. Phrases in square brackets in the statement of the recommendations were added for clarification.

Progress on Implementation Plan:

Recommendation 1.
“We recommend that the Department not offer a direct entry to the PhD program without a MMath (or equivalent) degree.”
Status: completed - We are following this recommendation. No changes were made or needed.

Recommendation 2.
“We recommend that the Department work with the Office of the Associate Provost, Graduate Studies, (now Office of Graduate Studies and Postdoctoral Affairs) to try to resolve this issue [the issue being the restricted opportunities to take 600 level courses]. On the part of the Department this may involve making the different expectations (including expected extra work) between the two groups of students [the groups being undergraduate and graduate students] clearer and more explicit in all course descriptions.”
Status: completed - Masters students now have access to standard graduate level courses. It is clearly understood that there are different expectations for graduate and undergraduate students when taking ‘held-with’ courses.
Recommendation 3.
“We recommend that the Department review the comprehensive exam procedures.”
Status: completed - The Graduate Officer and Graduate Committee have reviewed the procedures. A proposal to revamp PhD committees and comprehensive exams has been approved by the department, and is working its way through the university approval processes.

Recommendation 4.
“We recommend that the Department provide some flexibility in the MMath program.”
Status: completed – Flexibility, in terms of time taken to complete the degree, is provided to students on a case-by-case basis. Students typically complete in three terms, but are allowed to take longer (up to two years) in special circumstances.

Recommendation 5.
“The Department should write a 5 year proposal to present to the Dean and the Provost outlining a plan that would achieve this goal [to build the strongest PhD program in Canada] by making appointments above the assistant professor level.”
Status: in progress - The Math Faculty is currently undertaking a strategic planning process. A long-term plan for the Department will be developed by the Chair over the coming year in accordance with the Faculty strategic plan.

Explain any circumstances that have altered the original implementation plan: N/A

Address any significant developments or initiatives that have arisen since the program review process, or that were not contemplated during the review: N/A

Report on anything else you believe is appropriate to bring to Senate concerning this program: N/A
Updated Implementation Plan:

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Proposed Actions</th>
<th>Responsibility for Leading and Resourcing (if applicable) the Actions</th>
<th>Timeline for addressing Recommendations</th>
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</thead>
<tbody>
<tr>
<td>1. We recommend that the Department not offer a direct entry to the PhD program without a MMath (or equivalent) degree.</td>
<td>Completed</td>
<td>N/A</td>
<td>N/A</td>
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<td>2. We recommend that the Department work with the Office of the Associate Provost, Graduate Studies, to try to resolve this issue [the issue being the restricted opportunities to take 600 level courses]. On the part of the Department this may involve making the different expectations (including expected extra work) between the two groups of students [the groups being undergraduate and graduate students] clearer and more explicit in all course descriptions.”</td>
<td>Completed</td>
<td>N/A</td>
<td>N/A</td>
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<td>Completed</td>
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<td>4. We recommend that the Department provide some flexibility in the MMath program.</td>
<td>Completed</td>
<td>N/A</td>
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<td>5. The Department should write a 5 year proposal to present to the Dean and the Provost outlining a plan that would achieve this goal [to build the strongest PhD program in Canada] by making appointments above the assistant professor level.</td>
<td>The Department will develop a long range hiring plan, in consultation with the Dean, as part of the Math Faculty strategic planning process.</td>
<td>Chair</td>
<td>Spring 2019</td>
</tr>
</tbody>
</table>

The Department Chair/Director, in consultation with the Dean of the Faculty shall be responsible for monitoring the Implementation Plan.
Date of next program review: 2022

Signatures of Approval:

Chair/Director

AFIW Administrative Dean/Head (For AFIW programs only)

Faculty Dean

Associate Vice-President, Academic
(For undergraduate and augmented programs)

December 10, 2018

Associate Vice-President, Graduate Studies and Postdoctoral Affairs
(For graduate and augmented programs)