

ACADEMIC COUNCIL REPORT

ACTION REQUESTED:

Recommendation	<input type="checkbox"/>
Decision	<input type="checkbox"/>
Discussion/Direction	<input type="checkbox"/>
Information	<input checked="" type="checkbox"/>

DATE: 24 October 2023

FROM: CIQE

SUBJECT: Cyclical Program 18-Month Follow-up –
Bachelor of Science in Applied and Industrial Mathematics

COMMITTEE MANDATE:

In accordance with Article 8 of the Ontario Tech University Institutional Quality Assurance Process (IQAP) Cyclical Review and Auditing Procedures, eighteen months following the completion of a program review the Dean will prepare a brief follow up report and “A summary of the progress report will be approved by the appropriate standing committee of Academic Council”. This summary report will be reported to Academic Council for information and subsequently posted to the Ontario Tech corporate website.

BACKGROUND/CONTEXT & RATIONALE:

Eighteen months after the completion of a program review the Faculty is asked to report on the progress to date in implementing the agreed upon plans for improvement. The report is sent to the Academic Resource Committee for review and further follow-up, if required.

RESOURCES REQUIRED:

The Faculty’s plans to address any remaining resource needs are outlined in the 18-Month report. Information and support will be required from various areas of the University in order to implement the plan as originally agreed.

COMPLIANCE WITH POLICY/LEGISLATION:

The Ontario Universities Council on Quality Assurance (Quality Council), established by the Council of Ontario Universities in July 2010, is responsible for oversight of the Quality Assurance Framework processes for Ontario Universities. The Council operates at arm’s length from both Ontario’s publicly assisted universities and Ontario’s government. Under the Quality Assurance Framework, academic programs must undergo a cyclical review at least every eight years following their implementation. The purpose of the cyclical program review is to critically examine the components of a program with the assistance of outside reviewers with the goal of continuous improvement. A program review’s purpose is not solely

to demonstrate the positive aspects of the program, but also to outline opportunities that will lead to improvements for the future.

NEXT STEPS:

- Following presentation to Academic Council this summary will be posted to the University's website.

SUPPORTING REFERENCE MATERIALS:

- 18-Month Report Summary



**18-Month Follow-Up
SUMMARY REPORT
May 31, 2023**

**Bachelor of Science (Hons) Applied and Industrial Mathematics
Dean: Dr. Greg Crawford**

Under Ontario Tech University's Institutional Quality Assurance Process (IQAP) and the Ontario Quality Assurance Framework (QAF), all programs are subject to a comprehensive review at least/at minimum every eight years to ensure that they continue to meet provincial quality assurance requirements and to support their ongoing rigour and coherence. Program reviews involve several stages, including:

1. A comprehensive and analytical self-study brief developed by members of the program under review.
2. A site visit by academic experts who are external to and arm's length from the program. The visit involves discussions with senior academic administrators, faculty, staff, and students.
3. Submission of an external reviewers' report including recommendations on ways the program may be improved based on a review of the program's self-study brief, discussions during the site visit and supporting material.
4. Internal responses to the external review and recommendations prepared separately by the Program and Dean.
5. Development of an Implementation Plan prepared by the Dean including resource requirements and a timeline for acting on and monitoring the implementation of the recommendations.

All programs that undergo a review must provide a report eighteen months after the completion of the review to gather information on the progress that has been made implementing the agreed upon plans for improvement.

In 2017 - 2019 a review was scheduled for the Bachelor of Science (Honours), Applied and Industrial Mathematics program, with a site visit on Monday, March 8th- Thursday, March 11th, 2021. The program has submitted to the Provost's Office a report outlining the progress they have made relative to the implementation plan resulting from the review. A summary of this progress is provided on the following pages.

Action Item(s)		Timeline	Status*	18 Month Follow-Up Comments
Review the responsibilities associated with UPD and course coordinator roles, identify repetitive/administrative tasks, and identify appropriate staffing help within the university to alleviate these pressures.	a) Review of UPD and course coordinator roles and identify staffing to provide additional support.	a) Evaluate fall '21; implement fall '22/winter '23	a) continuous	Approval of a program coordinator position to manage responsibilities such as TA hiring; transfer credit assessment, letters of permission; organizing math majors mentorship program; running math minor info sessions to alleviate pressure on UPD and other staff.
	b) Formation of program faculty committee.	b) Evaluate fall '21; implement fall '22 / winter '23	b) continuous	b) The program faculty created two standing committees: <ul style="list-style-type: none"> • Communications • Recruitment/Outreach
Identify measures to considerably enhance the exposure of early-year students to research faculty.	Improve exposure of 1 st and 2 nd year students to research faculty.	Evaluate fall '21; implement fall '22/winter '23	continuous	The program runs various events throughout the year to help improve exposure of 1 st and 2 nd year students to research faculty, including: <ul style="list-style-type: none"> - AIM/IMCS welcome orientation in the Fall for all incoming AIM and IMCS students to be able to meet and connect with the Professors. -Research Professors to give presentations at our monthly Marvelous Math Monday's (M[^]3) seminar series.

				<p>-Research faculty present their summer research opportunities each winter.</p> <p>-Math mentorship program: all math Professors are assigned to individual AIM students throughout their University career. This mentorship program allows each Professor to have one-on-one as well as group meetings with their AIM students to help foster connections, engagement and sense of community.</p> <p>-Annual Pi day math mixer to allow all students interested in math to come interact with the Professors, play games, eat pie and create a positive culture.</p>
Examine teaching/service allocations, ensuring that student recruitment is a unit-wide priority.	AIM faculty re-examine teaching/service, ensuring student recruitment is a unit-wide priority.	Evaluate fall '21; implement fall '22/winter '23	Continuous	<p>We have done the following to ensure student recruitment is a priority:</p> <p>-faculty members work with the Recruitment Office to call prospective students</p> <p>-continuing with math minor info session</p> <p>-established a recruitment sub-committee</p>
4. Explore and expand upon connections with other faculties (Engineering,	a. Explore potential connections to other Faculties.	Evaluate fall '21; implement fall '22/winter '23	Continuous	a) A collaborative project was developed with the Faculty of Education for the Digital Fluency course to support online post-secondary mathematics instruction through eCampusOntario. Four modules were created

<p>Business, Education).</p>	<p>b. Identify courses in other Faculties of potential value to AIM students.</p>	<p>Evaluate fall '21; implement fall '22/winter '23</p>	<p>Completed</p>	<p>that are designed to support post-secondary instructors, tutors, and teaching assistants in learning the key principles of high-quality online mathematics teaching.</p> <p>b) Increased connections have been made with faculty from FEAS (esp. Nuclear) and FBIT, primarily at the graduate level (e.g., faculty from these programs have joined the Modeling and Computational Science grad program); this has led to more seminars, supervisory and examination committees, and shared student office space. Again, although at the grad program level, this is increasing connectivity between Math faculty and faculty in other programs.</p> <p>b) A list has been compiled (noting that AIM students only have space for 4 electives). The list includes a range of BUSI and COMM courses, as well as a few ESNS/ENGR courses.</p>
<p>5. Consider the program be renamed, for instance, "Math for Science and Industry".</p>	<p>Review options for changing program name and determine if a change is warranted.</p>	<p>Evaluate fall '21; implement fall '22/winter '23</p>	<p>Completed</p>	<p>Three alternative names were identified.</p> <p>The Recruitment Office was consulted, to provide a student-facing perspective.</p> <p>The program faculty opted for Math for Science and Industry. A major program change has been submitted and approved.</p>

*Process Status Legend:

Complete: Accomplished action item; no further steps required.

Continuous: Initial action item complete but requires ongoing monitoring and/or enhancement.

In Progress: Progress on the action item has been initiated but is not complete at this time.

Outline all steps taken in the comment's column.

On Hold: Unable to complete due to other dependent factor(s).

Cancelled: Item no longer relevant or resources unavailable.

This summary report will be sent for approval to the appropriate standing committee of Academic Council (USC or GSC), and will subsequently be reported to Academic Council. It will then be posted on the Ontario Tech corporate website.

Next Scheduled Program Review: 2025-2027