



## ACADEMIC COUNCIL REPORT

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### ACTION REQUESTED:

- Recommendation
- Decision
- Discussion/Direction
- Information

**DATE:** 23 April 2019

**PRESENTED BY:** Langis Roy, Chair, Graduate Studies Committee

**SUBJECT:** Final Assessment Report – Materials Science Program Review

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### COMMITTEE MANDATE:

In accordance with Article 1.1 of By-law Number 2, the Academic Council “holds the authority to establish academic standards and curricular policies and procedures of the University, and to regulate such standards, policies and procedures, including:

- b) determining academic quality”.

Under Section 3, part e of the Graduate Studies Committee (GSC) Terms of Reference, GSC is to “Receive and review reports, recommendations and action plans arising out of the cyclical review of graduate programs and report to Academic Council on the outcomes of all reviews conducted during the academic year, and the implementation of recommendations”. GSC has reviewed the report, confirmed that it synthesizes the review, and recommends to Academic Council the approval of the 18-Month Follow-Up Final Assessment Report.

### MOTION FOR CONSIDERATION:

**That Academic Council hereby approve the 18-Month Follow-Up Final Assessment Report for the Master of Science and Doctor of Philosophy in Materials Science Program Review, as presented.**

### BACKGROUND/CONTEXT & RATIONALE:

In academic years 2016-2018 a program review was scheduled for the Master of Science (MSc) and Doctor of Philosophy (PhD) in Materials Science. After developing an action plan resulting from the review, identifying the strengths of the program as well as the opportunities for program improvement and enhancement, the program has submitted to the Provost’s Office a comprehensive chart outlining the progress they have made relative to that action plan. A summary of this progress is provided on the 18-

Month Follow-Up Final Assessment Report. The summary report is reviewed by the appropriate standing committee of Academic Council, and is subsequently reported to Academic Council and the Board of Governors.

**RESOURCES REQUIRED:**

Any remaining required resources allocated are outlined in the Final Assessment Report. Information and support will be required from various areas of the University in order to implement remaining items in the plan.

**CONSULTATION:**

Work with the Teaching and Learning Centre, Office of Planning and Analysis, School of Graduate and Post-Doctoral Studies, and the Registrar's Office will take place during the implementation and follow-up phases of the review.

**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 the approval of Academic Council this report will be presented to the Board of Governors for information and posted to the University's website

**SUPPORTING REFERENCE MATERIALS:**

- MSc and PhD in Materials Science Program Review 18-Month Follow-Up Final Assessment Report



**FINAL ASSESSMENT REPORT**  
**March 2019**  
**MSc and PhD in Materials Science**  
**18-Month Follow-Up**  
**Dean: Dr. Greg Crawford**

Under UOIT's Quality Assurance Framework, all degree programs are subject to a comprehensive review 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 who prepare a report and recommendations on ways that it may be improved based on a review of the program's self-study and supporting material, and a two day site visit involving discussions with faculty, staff and students and a tour of the facilities.
3. Development of a plan for improvement by the program and proposed timelines for implementation.

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 2015/16 a program review was scheduled for the MSc and PhD in Materials Science, with a site visit in October 2015. The program has submitted to the Provost's Office a comprehensive chart outlining the progress they have made relative to the action plans resulting from the review. A summary of this progress is provided on the following pages. The summary report is reviewed by the appropriate standing committee of Academic Council, and is subsequently reported to Academic Council and the Board of Governors.

**Next Scheduled Program Review: 2023-2025**

<b>Action Items</b>	<b>Process Status</b>	<b>Comments</b>
FAR Action Item 1 - That the program adapt as the field evolves and make certain that the sub-disciplines remain cohesive. (eg. Biomaterials)	Complete	We have worked to create more formal research ties between the sub-disciplines with the co-supervision of grad students and postdocs, and with research collaborations. By way of example, Franco Gaspari, Olena Zenkina, and Brad Easton published a paper that was highlighted recently as an example of strong collaboration: (How to Succeed at Scientific Collaboration   Part 1: A Cross-Disciplinary Collaboration). The addition of the new Experimental Physics faculty hire at UOIT will help with future opportunities for interdisciplinary collaboration.
FAR Action Item 2 - That Materials Science graduate program be specifically included in strategic planning at both universities, in order to increase visibility	Complete	In the UOIT Faculty of Science unit plan (a part of the university integrated academic plan), the Materials Science program is clearly identified as a key priority through the need for a Materials Characterization Centre and a Materials Chemistry hire during SMA3.
FAR Action Item 3 - That the current expertise in the chemistry/physics of biodegradable materials be developed; greatest need for Trent is in organic chemistry and at UOIT it is experimental physics.	Complete	UOIT has recently hired a new experimental Physicist.
FAR Action Item 4 - That course offerings be planned at least one year in advance to facilitate course selection for students and that a predictable pattern of course offerings be established.	Complete	We have implemented this in the past two years and the graduate directors at the two institutions are working to shore up the course offerings for the future. Course offerings is a planned discussion point for the annual meeting. We hope to see course offerings established on a 2-year schedule.
FAR Action Item 5 - That a formal agreement concerning the number of courses offered at each institution each year be determined.	Complete	Assurances from the Deans that two MTSC courses will be staffed on load at Trent each year has been obtained. We intend to formalize an agreement by June 30, 2019.
FAR Action Item 6 - That course offerings be taught on load if possible.	Not Applicable	This is not an issue at UOIT as grad courses have always been counted towards the normal teaching load (with a minimum number of students).

FAR Action Item 7 - Improved access to online resources in the libraries	On Going	This is a library resource issue. We continue to advocate that relevant online publications are be made available.
FAR Action Item 8 - Encourage more generous foreign student fee waivers	In Progress	At UOIT, a committee was established that examined international fees and will be making a recommendation to the Board of Governors soon.
FAR Action Item 9 - Creation of a Materials Characterization Laboratory for hands-on experience in areas of research and teaching	Complete	This recommendation has been incorporated into the UOIT Faculty of Science unit plan. It should be noted that a number of characterization instruments are already being pooled by the Faculties.
FAR Action Item 10 - Contact graduates and begin building a community of its Alumni.	On Going	Many supervisors have informally tracked the postgrad pathways of their grads. We will continue to explore better ways to formally track this (perhaps with Alumni Affairs) as incoming students routinely want to know about typical post-grad careers.
FAR Action Item 11 - Greater presence at graduate fairs and undergraduate conferences to increase recruitment efforts.	On Going	Each institution is exploring better ways to publicize the program in order to recruit new students
FAR Action Item 12 - To grow enrolment in the MSc program, provide student funding that is competitive in the Ontario market.	On Going	At UOIT, the program is actively engaged in the ongoing dialog with SGPS around improving graduate support (funding) levels across campus.
FAR Action Item 13 - That program meetings between faculties be regularly scheduled.	Complete	A regular meeting was reinstated starting in the 2016-2017 academic year, and includes Directors and a faculty representative from each institution.