

## ACADEMIC COUNCIL REPORT

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### ACTION REQUESTED:

Recommendation   
Decision   
Discussion/Direction   
Information

**DATE:** 28 March 2023

**FROM:** Graduate Studies Committee

**SUBJECT:** Major Program Modification – Master of Engineering (MEng), Doctor of Philosophy (PhD) and Master of Applied Science (MAsc) in Mechanical Engineering

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### COMMITTEE MANDATE:

In accordance with the Graduate Studies Committee (GSC) Terms of Reference, GSC has the responsibility “to examine proposals for new graduate degree and diploma programs, major changes to existing programs and to recommend their approval, as appropriate, to the Academic Council”.

### MOTION FOR CONSIDERATION:

That, pursuant to the recommendation of the Graduate Studies Committee, Academic Council hereby approves the Major Program Modification to the Master of Engineering (MEng), Doctor of Philosophy (PhD) and Master of Applied Science (MAsc) in Mechanical Engineering.

### BACKGROUND/CONTEXT & RATIONALE:

The Faculty is proposing the following changes specific to the Master of Engineering (MEng):

1. Specify additional four core courses that must be taken;
2. Change the number of undergraduate courses allowed for course-based and project-based options;
3. Change the number of out-of-program courses allowed for course-based and project-based options;
4. Add a clarification on the scope of the project for the project-based option;
5. Clarify the admission process for the project-based option;
6. Add two new courses, ENGR 5200G – Programming Methodology and Abstraction for Engineers, ENGR 5201G – Engineering Communication and Ethics

In addition, the following proposed changes apply to the MEng, PhD and MASc programs:

7. Reinstate ENGR 5013G as a course offering;
8. Replace a Course Listing previously shared by the MEng, PhD and MASc program entries so that each calendar entry accurately reflects courses associated with each program.
9. Add ENGR 5014G: Pollution Prevention and Sustainable Engineering and ENGR 5320G: Automotive Aerodynamics to the Course Listings.

**RESOURCES REQUIRED:**

No immediate additional resources required. An additional hire may be required based on enrolment.

**TRANSITION PLAN:**

Fall 2023 and future cohorts will follow the new program requirements. Students enrolled before Fall 2023 will follow existing program requirements.

**CONSULTATION AND APPROVAL:**

- Graduate Studies Committee: 24 January 2023 (Items 1-8), 28 February 2023 (Item 9)
- Faculty Council: 6 October 2022 (Items 1-7), 8 December 2022 (Item 8), 26 January 2023 (Item 9)
- Graduate Curriculum Committee: 23 September 2022 (Items 1-7), 17 November 2022 (Item 8), 16 January 2023 (Item 9)

Discussed in each department graduate committee (which include student representatives from each department) and department council for feedback.

**NEXT STEPS:**

Pending the approval of Academic Council, the changes will be included in the 2023-2024 Academic Calendar.

**SUPPORTING REFERENCE MATERIALS:**

- [Master of Engineering in Mechanical Engineering](#)
- [Master of Science and Doctor of Philosophy in Mechanical Engineering \(Course Listing\)](#)
- [Master of Engineering, Master of Science and Doctor of Philosophy in Mechanical Engineering \(Course Listing\)](#)
- New Courses: [ENGR 5200G](#), [ENGR 5201G](#)
- Reinstated Course: [ENGR 5013G](#)