



MEMORANDUM

To: Executive Committee of Faculty Council (November 4, 2014)
Faculty Council (November 25, 2014)

From: Dr. Graeme Norval
Chair, Undergraduate Curriculum Committee

Date: October 18, 2014

Re: Major Curriculum Changes for the 2015-2016 Academic Year

REPORT CLASSIFICATION

This is a major policy matter that will be considered by the Executive Committee for endorsing and forwarding to Faculty Council for vote as a regular motion (requiring a simple majority of members present and voting to carry).

BACKGROUND

The Undergraduate Curriculum Committee is tasked with managing the curriculum change process for the Faculty. This report summarizes the program course changes for the upcoming academic year

STRUCTURE

Several programs have requested to make curriculum changes for the upcoming academic year.

Engineering Science

For the Biomedical Systems Option, the courses APM384F Partial Differential Equations will become a technical elective, and MIE439F Biomechanics will be moved to term 4W, creating two technical electives in the 3rd year.

The seminar course BME479 Introduction to Biomedical Systems Engineering Design Concepts will be cancelled.

Materials Science & Engineering

A new course, MSE4XX Optical and Photonic Materials is proposed, as a 3/1/2 course (4 x 3hr labs). The course will cover optics, wave theory of light, coherence and diffraction, optics of materials and lead to the design of photonic materials.

Mechanical and Industrial Engineering

The Portfolio courses MIE297Y and MIE397Y will be cancelled. The communication efforts around the development of a design portfolio will be integrated into the four courses MIE243F Mechanical Design, MIE221S Manufacturing, MIE301F Kinematics and Dynamics, and MIE315S Design for the Environment.

A new course MIE233F Differential Equations will be created for the IE program, and will replace the course MIE234, which will remain for ME students.

A new technical elective, MIE4XX Non-Destructive Evaluation, will be created.

The course MIE313 Heat and Mass Transfer will become a core course in term 3S, and the course MIE333S Engineering Physics will become a 4th year technical elective. As a consequence, the course MIE411 Thermal Energy Conversion will become the first course in the Energy and Environment Stream, replacing MIE313, and the course MIE515 Alternate Energy Systems will become the second course in the stream.

IBBME

BME221F Biomedical Design in Society will be cancelled. The course will be replaced with BME4XXY1Y Biomedical Engineering Capstone Design.

The Biomedical Engineering Minor will be modified by having either BME499 Research Thesis or BE4XX Capstone Design be the allowable courses.

Cross-Disciplinary Programs

The Preventive Engineering and Social Development Certificate will be cancelled. The instructor who taught the three courses has retired, and there are no plans to continue the courses.

PROGRAM(S)

All relevant programs are involved in these changes, and the impact on students in the various programs has been considered.

PROCESS AND CONSULTATION

This proposal has been reviewed and approved by the Undergraduate Curriculum Committee, which is comprised of faculty representatives from each undergraduate program; undergraduate students; the Vice-Dean, Undergraduate Studies; the Chair of First Year; the Associate Dean, Cross-Disciplinary Programs; and the Registrar. The Committee meets regularly and reviews changes to the undergraduate curriculum.

RECOMMENDATION AND MOTION FOR FACULTY COUNCIL

THAT the proposed curriculum changes for the 2015-2016 academic year be approved.