



MEMORANDUM

To: Executive Committee of Faculty Council

From: Dr. Graeme Norval
Chair, Undergraduate Curriculum Committee

Date: April 3, 2013 for April 18, 2013 Faculty Council Meeting

Re: Changes to the Undergraduate Curriculum for 2013/14 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 voting to carry).

BACKGROUND

This report summarizes the major changes to the Undergraduate Program. These changes include course creation and deletion, as well as changes that impact multiple programs.

STRUCTURE

Chemical Engineering

The course CHE397Y1Y – Communications Portfolio II will be cancelled. The communications portfolio course in 2nd year remains, and the Engineering Communications program is working more closely with existing courses and written/oral assignments to improve delivery of these services.

The course APS443F – Leadership and Leading for Groups and Organizations is currently a 2/0/1 course, and has been run twice. The student and instructor response is that an extra tutorial would be beneficial, and the course will be modified to 2/0/2.

Cross-Disciplinary Office

The course CHE460H1 – Environmental Pathways and Impact Assessment is added as an Introductory Elective to the Sustainable Energy Minor.

The course ECE514H1 - Power Electronics: Converter Topologies is added as an Advanced Elective to the Sustainable Energy Minor.

Electrical and Computer Engineering

As a result of the recent accreditation review, the following changes in course contact hours are proposed:

Course	Title	Current Lecture	Current Lab.	Current Tut.	New Lect.	New Lab.	New Tut.
ECE 527F	Photonic Devices	2	0	1	3	0	2
ECE 535F	Advanced Electronic Devices	2	0	0	3	1.5	1
ECE 525S	Lasers and Detectors	3	0	1	3	0	2
ECE 510F	Introduction to Lighting Systems	2	0	1	3	0	2
ECE 524F	Microwave Circuits	2	3	1	3	3	1
ECE 533S	Power Electronics: Switch-Mode Power Supplies	3	0	1	3	1	1
ECE 5XXF	Power Electronics: Converter Topologies	3	0	1	3	1.5	1
ECE 534F	Integrated Circuit Engineering	2	3	0	3	3	0
ECE 530S	Analog Integrated Circuits	2	3	1	3	3	1
ECE 532S	Digital Systems Design	2	3	0	3	3	0
ECE 446F	Sensory Communication	3	3	0	3	3	1
ECE 411S	Real-Time Computer Control	3	3	0	3	3	1
ECE 516S	Intelligent Image Processing	2	3	0	3	3	0
ECE 361S	Computer Networks I	3	3	1	3	3	2
ECE 552F	Computer Architecture	3	0	1	3	1.5	1
CSC 467F	Compilers and Interpreters	2	0	1	3	1.5	1
CSC 444F	Software Engineering I	2	0	1	3	1.5	1
ECE 419S	Distributed Systems	3	1	0	3	1.5	1
CSC 326F	Programming Languages	2	0	1	3	1.5	1
ECE 540S	Optimizing Compilers	2	3	0	3	3	0
ECE472	Engineering Economics	3	0	1	3	0	2

Engineering Science

Biomedical Engineering Option

Several minor changes are required to this final option year, as a result of other curriculum changes. In term 4F, the course ECE455 is added to replace ECE362F which was cancelled; course CHE575F is renumbered as CHE475S.

The new option design course BME489S is added as an elective, with the note that the course BME479F is a pre-requisite. Students returning to the program from PEY will be allowed to overload in the fall term by taking BME479F.

This calendar entry will be removed once the returning cohort of students has convocated.

Nanoengineering Option

The elective course CHM426F – Polymer Chemistry, is to be replaced with CHE562F – Chemical Properties of Polymers. These two courses have been co-taught for the past few years. All other programs and options select CHE562F. This change removes one course entry from the calendar.

Engineering Communication Program

A new course is proposed, APS2XX – Language and Meaning, 2/0/2, which will be a CS elective.

The course description is “As students study how language is used to make meaning in diverse contexts they will hone their own skills in deploying written and oral professional engineering language. The course explores the nature of language across linguistic, discipline and cultural boundaries through a study of how meaning is made. Students will apply the theoretical knowledge of language and language learning to their own written and oral language performances. Weekly lecture and tutorial.”

This course will not be open to all students; students will need program approval to take this course. The course will be targeted at students requiring substantial English assistance, and the course capacity will be limited, so that the students receive considerable spoken and written English language support. The course will be timetabled in the evenings so that it is accessible to students from all programs.

Mineral Engineering

As a result of the CEAB accreditation review, the current elective courses MIN401S – Mineral Reserve and Mineral Resource Estimation, and MIN470S – Ventilation and Occupational Health, will become core in term 4S. It is understood that the Mineral program will review the curriculum, with an eye to adding some elective choices for the students.

PROCESS

The Undergraduate Curriculum Committee is composed of representatives from each program; the Vice-Dean, Undergraduate Studies; the Chair, First Year; the Associate Dean, Cross-Disciplinary Programs; and the Registrar's Office. The Committee meets regularly, and reviews changes to the curriculum.

These changes conform with common practice in most programs in the Faculty, and thereby bring the calendar in-line with practice.

PROGRAM

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

RECOMMENDATION AND MOTION FOR FACULTY COUNCIL

THAT the changes to the Undergraduate Curriculum for the 2013/14 Academic Year be approved.