McMaster University
DigitalCommons@McMaster

SGS Graduate Committees: Agenda & Minutes | School of Graduate Studies

1-1-2010

Minutes of Meeting: Faculty of Engineering Graduate Curriculum and Policy Committee, April 21, 2010

Medy Espiritu
School of Graduate Studies, McMaster University, espiritu@mcmaster.ca

Follow this and additional works at: http://digitalcommons.mcmaster.ca/sgs_min

Recommended Citation
Espiritu, Medy, "Minutes of Meeting: Faculty of Engineering Graduate Curriculum and Policy Committee, April 21, 2010" (2010). *SGS Graduate Committees: Agenda & Minutes.* Paper 128.
http://digitalcommons.mcmaster.ca/sgs_min/128

This Report is brought to you for free and open access by the School of Graduate Studies at DigitalCommons@McMaster. It has been accepted for inclusion in SGS Graduate Committees: Agenda & Minutes by an authorized administrator of DigitalCommons@McMaster. For more information, please contact scom@mcmaster.ca.

FACULTY OF ENGINEERING GRADUATE CURRICULUM AND POLICY COMMITTEE
APRIL 21, 2010, 2:00 P.M.
COUNCIL CHAMBERS, GILMOUR HALL 111

PRESENT: Dr. H. Sheardown (Chair), Dr. D. Cassidy, Dr. A. Deza, Dr. T. Davidson, Mr. S. Jones, Mr. R. Love, Mr. P. Malysz, Dr. J. McDermid, Ms. O. Peshko, Mr. J. Samuel, Mr. K. Stoll, Dr. C. Swartz, Dr. M. Thompson, Mr. N. Trutwin, Mr. D. Volante, Mrs. M. Espiritu (Assistant Secretary)

BY INVITATION: Dr. H. de Bruin, Dr. V. Mahalec, Dr. D. Potter, Dr. J. Wilson

---

I. Minutes of Meeting

The minutes of the meeting of April 21, 2010 were approved on a motion by Dr. Swartz, seconded by Dr. Davidson, with one correction. On page 3, the phrase, *"due to the broad range of the established norms for course requirements in the disciplines that lie within the scope of the School"* was added to the last sentence of paragraph 9.

II. Business Arising

There was no business arising from the minutes of the previous meeting.

III. Graduate Curriculum Revisions

Biomedical Engineering

Dr. de Bruin presented the proposed curriculum changes from the Biomedical Engineering program.

Ph.D. program – change in comprehensive examination procedure

Request to cross-list:
Mechanical Engineering *715 – Biomechanics of Injury and Prevention as Biomedical *715

Request to add CAS *757 – Modern Software Technology for eHealth to Biomedical course listing

Dr. McDermid moved, and Dr. Swartz seconded,

"that the Faculty of Engineering Graduate Curriculum and Policy Committee approve the proposed curriculum changes from the Biomedical Engineering program, as listed above, and described in the documents."

Dr. de Bruin explained that the Biomedical Engineering program has proposed revising its Ph.D. comprehensive examination procedure by adjusting the examination time from 6-18 months to 6-15 months after the student's initial registration in the Ph.D. program.

The motion was **carried**.

Chemical Engineering

Dr. Swartz briefly discussed the curriculum recommendations from the Chemical Engineering Department.

New courses:
#702 – Special Topics in Chemical Engineering
755 – Dynamic Optimization
Request to cross-list
Mechanical Engineering *752 – Advanced MEMS Fabrication and Microfluidics as Chemical Engineering *750

Request to cross-list the following courses subject to SBME Operating Committee approval:
Biomedical Engineering *701 – Biomedical Engineering as Chemical Engineering *781
Biomedical Engineering *704 – Gene Therapy for Bioengineers as Chemical Engineering *784

Dr. Cassidy moved, and Mr. Jones seconded,

"that the Faculty of Engineering Graduate Curriculum and Policy Committee approve the proposed curriculum changes from the Chemical Engineering Department listed above, and described in the documents."

The motion was **carried**.

Civil Engineering

Dr. Wilson presented the proposed curriculum changes for the Civil Engineering Department.

M. Eng. program – addition of course-based option

New course:
*726 – Advanced Analysis of Reinforced Concrete Structures

Course cancellations:
#725 – Advanced Design and Analysis of Masonry
#733 – Investigation and Retrofit of Existing Masonry Buildings
#773 – Physico-chemical Processes in Environmental Systems

Dr. Wilson explained that the department is proposing to add a course-based option to its M. Eng. degree. The department believes the proposal would attract more students into the program.

Ms. Peshko moved, and Mr. Volante seconded,

"that the Faculty of Engineering Graduate Curriculum and Policy Committee approve the curriculum recommendations from the Civil Engineering Department listed above, and described in the documents."

In response to a question, Dr. Wilson explained that students who choose the course-based option is required to complete 8 half courses, of which at least 4 courses should be from within the department. He further explained that students in the program will also be required to attend the course, *761 – Graduate Seminar.

The motion was **carried.**

Computational Engineering and Science

Dr. Davidson presented the curriculum revisions from the School of Computational Engineering and Science.

New course:
*744 – Algorithms for Combinatorial Optimization

Request to cross-list courses:
Mathematics *6B03 – Calculus on Manifolds as CES *6B03
Mechanical Engineering *751 – Advanced Mechanical Engineering Control Systems as CES *751
Electrical & Computer Engineering *775 – Cognitive Dynamic Systems as CES *775

Dr. McDermid moved, and Mr. Jones seconded,

"that the Faculty of Engineering Graduate Curriculum and Policy Committee approve the curriculum recommendations from the School of Computational Engineering and Science, as described in the documents."

The motion was **carried**.

Computing and Software

Dr. Deza briefly discussed the proposed changes from the Computing & Software Department.

Request to change prefix for 700-level courses

New course
*762 – Cryptography

Change in course title:
*730 – Machine Learning and Data Mining

Request to cross-list the following CAS courses with the eHealth program
*6CD3 – Distributed Computer Systems (cross-listed as eHealth *6CD3)
*6D03 – The Human Computer Interface (cross-listed as eHealth *6D03)
*6M03 – Databases (cross-listed as eHealth *6M03)
*6WW3 – Web Systems and Web Computing (cross-listed as eHealth *6WW3)
*730 – Machine Learning and Related A1 Topics (cross-listed as eHealth *730)
*747 – Software Architecture Modeling and Reverse Engineering (cross-listed as eHealth *747)
*750 – Model-Based Image Reconstruction (cross-listed as eHealth *750)
*757 – Modern Software Technology for eHealth (cross-listed as eHealth *757)

Course cancellation:
*759 – Medical Image Registration

Dr. Deza explained that the change of prefix for the 700-level courses from COM SFWR to CAS will help students find the courses easily on SOLAR (Student On-Line Academic Registration).

Dr. McDermid moved, and Ms. Peshko seconded,

"that the Faculty of Engineering Graduate Curriculum and Policy Committee approve the proposed curriculum changes from the Computing & Software Department, as described in the documents."

The motion was **carried**.

Electrical and Computer Engineering

Dr. Davidson presented the proposal from the Electrical and Computer Engineering Department.

New courses:
*6BD4 – Biomedical Instrumentation
*721 – Digital Communications
*733 – Nonlinear Optimization for Engineers

Change in course description:
*775 – Cognitive Dynamic Systems

Course cancellations:

*6DL4 – Real-Time and Distributed Computer Systems
*6PJ3 – Rotating Machines
*6EL3 – Biomedical Electronic Instrumentation
*724 – Space-Time Communication Theory
*726 – Local Area Networks in a Manufacturing Environment
*743 – Solid-State Switch Mode Power Converters
*751 – Microwave Circuits
*752 – Electromechanical Devices for RF Applications
*770 – Bayesian Sequential State Estimation
*772 – Neural Networks and Learning Machines
*773 – Adaptive Filter Theory
*781 – Design and Operation of Induction Motors
*782 – Dynamic Analysis of Power Systems
*784 – Power Electronics

Ms. Peshko moved, and Dr. Cassidy seconded,

"that the Faculty of Engineering Graduate Curriculum and Policy Committee approve the proposed curriculum revisions from the Electrical and Computer Engineering listed above, and described in the documents."

The motion was **carried**.

Walter G. Booth School of Engineering Practice

Drs. Potter and Mahalec presented the curriculum changes for the Walter G. Booth School of Engineering Practice.

New course (Master of Engineering Entrepreneurship and Innovation):
*727 – Technology Entrepreneurship for Engineers and Scientists

New courses (Master of Engineering Design):
*745 – Design of Sustainable Community Infrastructure I
*746 – Design of Sustainable Community Infrastructure II
*763 – Special Topics in Engineering Design
*764 – Visual Thinking
*765 – Design Development

Change in course title and description (Master of Engineering Design):
*760 – Design Thinking
*761 – Design Innovation

Dr. McDermid moved, and Mr. Jones seconded,

"that the Faculty of Engineering Graduate Curriculum and Policy Committee approve the proposed curriculum changes from the Walter G. Booth School of Engineering Practice listed above, and described in the documents."

Upon reviewing the documents, there was a comment that the course contents for *764 – Visual Thinking and *765 – Design Development are similar. The presenters will clarify the issue with the instructors.

The motion was **carried** (subject to clarification of courses *764 and *765 mentioned above).

Engineering Physics

Dr. Cassidy briefly discussed the curriculum submissions from the Engineering Physics Department.

New courses:
*6MD3 – Advanced Materials and Next-Generation Devices
*727 – Advanced Reactor Physics and Analysis

Request to cross-list Mechanical Engineering *752 – Advanced MEMS Fabrication and Microfluidics as Engineering Physics *752

Request to cross-list Engineering Physics *719 – MEMS Devices: Design, Fabrication and Applications as Mechanical Engineering *719

Dr. McDermid moved, and Mr. Jones seconded,

"that the Faculty of Engineering Graduate Curriculum and Policy Committee approve the proposals from the Engineering Physics Department listed above, and described in the documents."

The motion was **carried**.

Mechanical Engineering

Dr. McDermid presented the curriculum submissions from the Mechanical Engineering Department.

New course:
*715 – Biomechanics of Injury and Prevention (cross-listed as Biomedical Engineering *715)
Change in course title and description:
*6K03 – Robotics
*6U03 – Compressible Flow and Turbomachinery

Request to cross-list Engineering Physics *719 – MEMS Device: Design, Fabrication, and Applications as Mechanical Engineering *719

Request to cross list Mechanical Engineering *752 – Advanced MEMS Fabrication and Microfluidics as Chemical Engineering *750 and Engineering Physics *752

ADMI new courses:
DM0828 – Lean Manufacturing – Principles, Applications and Implementation
DM0827 – Renewable Energy Systems

Dr. Thompson moved, and Mr. Jones seconded,

"that the Faculty of Engineering Graduate Curriculum and Policy Committee approve the proposed curriculum changes from the Mechanical Engineering Department listed above, and described in the documents."

The motion was **carried**.

Materials Science and Engineering

In the absence of a representative from the Materials Science and Engineering Department, Dr. Sheardown presented the proposed new course, #714 – Phase Field Methods in Microstructure Modeling.

Dr. McDermid moved, and Mr. Jones seconded,

"that the Faculty of Engineering Graduate Curriculum and Policy Committee approve the new course, #714 – Phase Field Methods in Microstructure Modeling, from the Materials Science and Engineering Department as described in the document."

The motion was **carried**.

Interdisciplinary Program

M.Sc. eHealth

Dr. Archer briefly discussed the proposed curriculum changes for the M.Sc. eHealth program.

M.Sc. eHealth

- Change to admission requirements
- Change to program completion time

Request to cross-list the following courses with Computing and Software:
*6CD3 – Distributed Computer Systems (cross-listed as eHealth *6CD3)
*6D03 – The Human Computer Interface (cross-listed as eHealth *6D03)
*6M03 – Databases (cross-listed as eHealth *6M03)
*6WW3 – Web Systems and Web Computing (cross-listed as eHealth *6WW3)
*730 – Machine Learning and Data Mining (cross-listed as eHealth *730)
*747 – Software Architecture Modeling and Reverse Engineering (cross-listed as eHealth *747)
*750 – Model-Based Image Reconstruction (cross-listed as eHealth *750)
*757 – Modern Software Technology for eHealth (cross-listed as eHealth *757)

Dr. McDermid moved, and Mr. Love seconded,

"that the Faculty of Engineering Graduate Curriculum and Policy Committee approve the proposed curriculum changes from the M.Sc. in eHealth program listed above, and described in the documents."

Change to admission requirements

Dr. Archer explained that students who are interested in the M.Sc. eHealth program are required to have a background in computer science. To address this issue, it was proposed to add the following in the admission requirements of the program: *"….Students will not be admitted to the program unless they can present evidence that they have taken a minimum of two computer science – related courses at the undergraduate level. At least one of these courses must have involved computer programming….. All students admitted to the program must pass a background test in information technology (IT) before taking the required course eHealth 757. Students preparing for this test will be provided with study materials and, where possible and appropriate, tutorial assistance."*

In response to a query, Dr. Archer explained that students without any computer science background may be considered and admitted conditionally to the program. The educational background of students in this category will be checked in detail and they may be required to take additional undergraduate courses in order to fulfil the requirements of the program.

Program Completion

Dr. Archer explained that students in the thesis option will now be expected to complete the program within 24 months. Dr. Archer said the current 20-month completion time is not sufficient for students to complete the 8-month internship, the research and submit a thesis.

The motion was **carried**.

Other Business

Dr. Sheardown reminded the committee of the deadline to submit nominations for the International Excellence Award. She added that the Faculty of Engineering was allotted seven awards. She then asked the members if they are willing to volunteer to be part of the ranking

committee for this award. Two student representatives, Kurt Stoll and Joshua Samuel, volunteered to assist with the ranking.

There was no other business, and the meeting adjourned at 3:10 p.m.