UNIVERSITY OF TORONTO

OFFICE OF THE VICE PRESIDENT & PROVOST

TO: Committee on Academic Policy and Programs

SPONSOR: Edith Hillan
CONTACT INFO: edith.hillan@utoronto.ca

DATE: January 9, 2009

AGENDA ITEM: **4**

ITEM IDENTIFICATION:
Faculty of Applied Science and Engineering: Major Calendar Changes 2009-2010

JURISDICTIONAL INFORMATION:
The Committee has authority for approval of changes to curriculum within established degree programs that can be accomplished with existing resources and are not major, as in specialist, major and minor programs.

PREVIOUS ACTION TAKEN:
The structure for Faculty of Applied Science and Engineering minor programs was approved by the Committee on Academic Policy and Programs on January 18, 2006. A minor program consists of a set of courses in a subject area that is substantially distinct from a student's chosen degree program. Minors are opportunities for certification of program completion in addition to the usual degree requirements.

On May 13, 2008 the Committee on Academic Policy and Programs approved a recommendation of the Faculty of Applied Science and Engineering to rename the "options," i.e., fields of specialization pursued by students in its Engineering Science program, as "majors," taking into account that this is the term generally used within Engineering Science programs in North America."

HIGHLIGHTS:
The Faculty of Applied Science and Engineering is proposing two new undergraduate minor programs and one new major Engineering Science program for the calendar year 2009-10. The proposed changes are outlined in the attached document, along with the associated academic rationale, program descriptions and requirements, and learning outcomes.

Environmental Engineering and Sustainable Energy Minors
The environment and sustainable energy are key global issues and the availability of the proposed minors will contribute to the Faculty's goal of educating global engineers, equipped to help address some of the world's most pressing issues. Both programs will be offered collaboratively across the Faculty. The programs will enhance the ability of Applied Science and

Engineering graduates to take leadership roles in society, given the critical role the environment and sustainable energy plays in the world today. The proposals are aligned with the degree level expectations for the B.A.Sc. degree.[1]

The Faculty currently has an undergraduate program in environmental engineering collaboratively offered by the Departments of Chemical and Civil Engineering. The minor program in environmental engineering would replace this program and will be open to all Engineering students interested in learning more about ecology, sustainable design, risk assessment and environmental impact.

Electrical and Computer Engineering Major within the Engineering Science Program
Engineering Science is a unique program within the Faculty of Applied Science and Engineering, attracting some of the University of Toronto's top ranking students and leading in science, technology, engineering and mathematics education on an international scale. The Faculty proposes to merge the currently offered Computer and Electrical majors into one program, "Electrical and Computer Engineering," that recognizes the increasing degree to which these two areas converge. The proposal is aligned with the degree level expectations for the B.A.Sc. Engineering Science degree.

(Course descriptions for existing courses that are part of the programs can be found online at http://www.undergrad.engineering.utoronto.ca/information/calendar/0809.htm)

The program proposals were reviewed by the Faculty's Curriculum Committee that includes representatives from each undergraduate program. They were approved by Faculty Council on November 26, 2008.

FINANCIAL AND/OR PLANNING IMPLICATIONS:
There are no new/additional financial resources required by the Faculty to implement the program additions and changes. The list of electives for the minor programs includes courses offered by the Faculty of Arts and Science and the Faculty of Forestry. Consultations have taken place among the Faculties for the inclusion of these courses.

Fourth year students currently enrolled in the collaborative environment program will graduate with the collaborative designation. It is anticipated that most third year students currently enrolled in the collaborative program will migrate to the minor. Should any of them prefer not to do so, however, the Departments of Civil Engineering and Chemical Engineering and Applied Chemistry will provide accommodation for them to graduate with the collaborative designation. The Environmental Engineering Collaborative Program was only available to students in 3rd and 4th year, so there are no 1st or 2nd year students affected by this program change.

Engineering Science students do not select their major programs of study until third year. Students currently in the Computer Major and in the Electrical Major will continue and graduate with those distinct Majors. The changes will apply only to students entering third year in the fall of 2009.

[1] http://www.provost.utoronto.ca/policy/academic/DLE.htm

RECOMMENDATION:
It is recommended that the Committee on Academic Policy and Programs approve:

The Faculty of Applied Science and Engineering calendar changes, as described above, effective for the academic year 2009-2010.