UNIVERSITY OF TORONTO

FACULTY OF APPLIED SCIENCE AND ENGINEERING

MANUAL

FOR

THE UNDERGRADUATE CURRICULUM COMMITTEE

Comment [A1]: Maybe too much to change this name. But makes it clear it's not about Grad programs, which the Faculty now has oversight for in governance.

DRAFT, March 17, 2010

Deleted: November 4, 1998

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The terms of reference for each Committee must be clearly established and kept under continuing surveillance. Each Committee should have a manual, continuously updated, wherein all policy decisions can be recorded and which is available for immediate reference, to promote ease and consistency in Committee deliberations. Each Chair must assume executive responsibility for the efficient working of his/her Committee, towards which he/she can expect to have strong administrative support available through the Faculty Offices.

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Comment [G2]: By precedent: The committee is supported by several faculty offices.

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1. MEMBERSHIPS AND TERM OF OFFICE

1.1 Membership

Undergraduate Programs, faculty	8 - 10
Undergraduate students	2
Dean, ex officio	1
Vice-Dean, Undergraduate, ex officio	1
Chair, First Year, ex officio	1
Associate Dean, Cross Disciplinary Programs, ex officio	1
Registrar, ex officio	1
	15 - 17

Deleted: Graduate student . . . . . 1¶
. Alumnus . . . . . 1¶
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Comment [G3]: Minor change for approval: There has been no graduate student or alumni representative to CC for many years. The Committee sees no need for regular representation from these constituencies.

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1.2 Term of Office

The Committee shall take office at the close of the regular May meeting of Council, and shall remain in office until the adjournment of the following regular May meeting. (Elections for student representatives shall take place in the Fall).

2. TERMS OF REFERENCE

The primary responsibility of the Committee is to help ensure that the undergraduate programs in the Faculty result in graduates with the highest professional competencies. Because of differences among students and professional needs in the different programs, the Committee recognizes the role of departments and divisions to define their particular needs.

To support this, the Committee shall:

(1) determine the needs of employers and research institutions in order to define broad criteria for “highest professional competencies” in our graduates in both technical and non-technical areas;

(2) identify and promote advances in the design of engineering curricula;

(3) advise departments and divisions about these criteria and advances in order to assist departments and divisions in the design and review of their programs;

(4) where there are common curriculum needs across all programs, review current policies and develop new broad policies on these matters for consideration by Council;

(5) monitor, coordinate broadly and revise, with the approval of Council, all undergraduate academic programs and courses offered by the Faculty; and

(6) be aware of and report on significant resource implications of proposed changes in curricula and engineering education practice.

3. RULES OF PROCEDURE

The Committee shall operate according to the rules of procedure established and from time to time amended by Council as set out in "Procedures for Committees of Council of the Faculty of Applied Science and Engineering."

4. DUTIES

To fulfill its terms of reference, the Committee shall carry out the following duties at the intervals indicated:

4.1 Major Policy Duties

(1) Consult with future employers and research institutions in order to establish criteria for "highest professional competencies" in our graduates.

(2) Monitor and review advances in undergraduate engineering curricula.

(3) Advise departments and divisions of these criteria and advances to assist them in the design and review of their programs.

(4) Based on these criteria and advances, develop and annually review Faculty policies on curricula, and disseminate any changes in these to departments and divisions in time for them to prepare proposals to amend their programs.

(5) Remain current with the policies and requirements of the Canadian Engineering Accreditation Board (C.E.A.B) and their relation to this Faculty's programs.

(6) Remain current with the policies and requirements of the University of Toronto's Quality Assurance Process (e.g. Undergraduate Degree Level Expectations) in relation to our Faculty's programs.

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4.2 Routine Curriculum Duties

(1) Annually, receive, co-ordinate, negotiate, approve and report (normally as routine) all proposed changes in curricula from Divisions and Departments.

(2) Annually, receive and consider outlines of all new or significantly amended courses offered by other Faculties that are listed in the Applied Science and Engineering Calendar under numbers that identify them as being particular to this Faculty.

(3) Annually, approve and report (normally as routine) the list of acceptable humanities/social science electives and exceptions.

(4) Receive and consider all available workload surveys and their relation to specified weightings of courses.

(5) Annually, strike and report (normally as routine) sessional dates for this Faculty.

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. (2) . Annually, receive, co-ordinate, negotiate, approve and report . . . (normally as routine) programs and text of Engineering courses for the Part-time Program offered through Woodsworth College.¶

Comment [G4]: By precedent: The Part-time program is no longer offered.

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Comment [G5]: Note: The Committee does not conduct or receive workload surveys. If the course surveys are meant to provide data, the Committee questions the quality of that data for performing this duty. The Committee does consider workload in its review of new or revised courses.

4.3 Routine Administrative Duties

A subcommittee of the Chair of the Committee and the Faculty Registrar are empowered to carry out the following routine administrative duties consistent with decisions of the Committee and Faculty Council:

(1) When each new or amended policy or precedent is approved by Executive Committee or Council, update this Manual.

(2) Annually, receive and record updates to the master database of course information required by the Canadian Engineering Accreditation Board.

Comment [G6]: By precedent

(3) Annually, receive in part, originate in part, co-ordinate, approve and report (normally as routine) all text for the annual Calendar of the Faculty.

(4) Annually, receive, examine and report (normally as routine) all changes to listings of courses offered by Departments or Divisions of this Faculty that appear in calendars of other faculties.

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Comment [G7]: Rephrasing: Current examples limited to Materials Science & Engineering

4.4 Reporting and Coordinating Duties

(1) Interact as needed on curriculum matters with appropriate committees of this and other Faculties and of the Governing Council.

(2) Report actions and recommendations of the Committee according to the rules of procedure established and from time to time amended by Council as set out in "Procedures for Committees of Council of the Faculty of Applied Science and Engineering."

5. MAJOR POLICIES

Other than the terms of reference and composition of the Committee, the major policies that Council has approved for the operation of this Committee, and for which this Committee is the prime Faculty body responsible for proposing modifications when and as needed, are listed below. Policy items not so listed are of a routine or minor nature.

(1) Programs leading to the degree of Bachelor of Applied Science should be offered in:

Civil Engineering
Mineral Engineering
Mechanical Engineering
Industrial Engineering
Chemical Engineering
Electrical Engineering
Materials Engineering
Computer Engineering

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(2) A program leading to the degree of Bachelor of Applied Science in Engineering Science should be offered with major fields of study in:

Comment [G8]: By precedent.

Aerospace Engineering
Biomedical Engineering

Electrical and Computer Engineering
Energy Systems Engineering
Engineering Mathematics, Statistics and Finance
Infrastructure Engineering
Nanoengineering
Physics

(3) Courses of study leading to various Engineering Minors and Certificates as approved by Faculty Council.

(4) The Departments and Divisions that Council has established for the administration of these programs are:

Department of Civil Engineering
Department of Mechanical and Industrial Engineering
Division of Engineering Science
Department of Chemical Engineering and Applied Chemistry
The Edward S. Rogers Sr. Department of Electrical and Computer Engineering
Department of Materials Science and Engineering
Office of Cross-Disciplinary Programs

(5) The Curriculum Committee shall co-ordinate and approve the curricula for all programs.

(6) Each degree program shall meet the "Degree Level Expectations for Graduates Receiving the Degree of Bachelor of Applied Science" or the "Degree Level Expectations for Graduates Receiving the Degree of Bachelor of Applied Science in Engineering Science".

(7) It is the policy of the Faculty to meet the accreditation requirements of the Canadian Engineering Accreditation Board for of all of its degree programs.

(8) Each degree program shall consist of a four-year curriculum, within which students may be allowed to proceed at a variable rate.

(9) The curriculum shall be structured, insofar as is possible, on a term basis (two terms per year).

(10) In no program shall a student be required to take more than six half-course equivalents (thesis included), and in no case shall a student be required to write more than six final examinations in a term.

(11) Pre- and post-session courses are permitted by precedent in some programs.

(12) The weighting specified for a course and used in computing averages shall be representative of the expenditure of time expected of an average student to obtain an average grade in that course.

(13) In addition to offering full-time B.A.Sc. programs, the Faculty shall offer part-time studies in all years of the four-year degree programs in Chemical Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, Mineral Engineering, Industrial Engineering, Mechanical Engineering, and Materials Engineering.

Comment [G9]: Minor Change for approval: The CC is responsible for reviewing and approving changes to Engineering Minors and Certificate programs (to be forwarded to Executive Committee).

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Comment [G10]: By precedent

Deleted: Division of Environmental Engineering¶

Comment [G11]: By precedent: Faculty Council has approved differences in first-year programs.

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(3) The first year curriculum shall be common for all programs other than Engineering Science.¶

Comment [G12]: By precedent

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Comment [G13]: Note: The new CEAB Graduate Attributes requirements allow for the deletion (below) of requirements for various complementary studies components.

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Comment [G14]: By precedent.

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(8) Accredited programs must contain not only adequate mathematics, science and engineering, but they must also develop communication skills and an understanding of the environmental, cultural, economic and social impacts of engineering on society and the concept of sustainable development. (CEAB Annual Report - Purposes & Criteria for Accreditation)¶

(14) There shall be at least a one-term thesis or capstone design project in the fourth year of each program.

Comment [G15]: added in an attempt to retain the statement.

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Comment [G16]: For discussion: Faculty Council has already approved programs without a thesis requirement. CEAB requires capstone elements in all programs. Thesis is still an option in all programs. Recommend striking this item.