



MEMORANDUM

To: Executive Committee of Faculty Council (November 20, 2017)
Faculty Council (December 12, 2017)

From: Professor Evan Bentz
Chair, Undergraduate Curriculum Committee

Date: November 23, 2017

Re: **Updates to Undergraduate Curriculum Committee Manual**

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 Manual was last updated in 2012. Several changes have taken place since then, requiring the document to be updated. These include changes to the Committee membership and to the language emphasizing the ongoing assessment of graduate attributes, which is fundamental to the continued CEAB accreditation of the Faculty's undergraduate programs. Further, a list of policy documents for which the Committee is responsible has been appended.

PROCESS AND CONSULTATION

Revisions to the Committee's manual were approved by the Undergraduate Curriculum Committee in October 2017.

PROPOSAL/MOTION

THAT the Manual of Procedures for the Undergraduate Curriculum Committee, as attached to Report 3565 Revised, be approved effective immediately.

UNIVERSITY OF TORONTO

FACULTY OF APPLIED SCIENCE AND ENGINEERING

MANUAL

FOR

THE UNDERGRADUATE CURRICULUM COMMITTEE

Approved April 26, 2012

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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.

1. MEMBERSHIPS AND TERM OF OFFICE

1.1 Membership

Undergraduate Programs, faculty	7
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
Teaching and Learning Specialist (Dean's Appointee), ex officio (non-voting)	<u>1</u>
	15

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 regularly 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.

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.

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 and to manage the Faculty's Graduate Attributes process.

(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.

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

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

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
Division of Mineral Engineering
Department of Mechanical and Industrial Engineering
Division of Engineering Science
Department of Chemical Engineering and Applied Chemistry
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 all of its degree programs by the Canadian Engineering.

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

~~UNIVERSITY OF TORONTO~~

~~FACULTY OF APPLIED SCIENCE AND ENGINEERING~~

MANUAL OF PROCEDURES

FOR THE

UNDERGRADUATE CURRICULUM COMMITTEE

Approved by the Council of the Faculty of Applied Science & Engineering: April 26, 2012
Revision approved: December 12, 2017~~October 6th 2017~~TBD

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1. PREAMBLE

Each Committee must be have a clearly established and frequently monitored manual of procedures and terms of reference, 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 she/he can expect to have strong administrative support through the Faculty Offices.

~~12. MEMBERSHIP AND TERM OF OFFICE~~

~~13.2.~~

~~Membership~~

~~Undergraduate Programs, faculty — 7~~

~~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~~

~~Teaching and Learning Specialist (Dean’s Appointee), ex officio (non-voting) — 1~~

~~15~~

<u>Constituency</u>	<u>Voting</u>	<u>Non-Voting</u>
<u>Undergraduate programs: 1 faculty member per program (see note below)</u>	<u>9</u>	
<u>IBBME, faculty</u>		<u>1</u>
<u>UTIAS, faculty</u>		<u>1</u>
<u>Undergraduate students</u>	<u>2</u>	
<u>Dean, ex officio</u>	<u>1</u>	
<u>Vice-Dean, Undergraduate, ex officio</u>	<u>1</u>	
<u>Vice-Dean, Chair, First Year, ex officio</u>	<u>1</u>	
<u>Associate Dean, Cross Disciplinary Programs, ex officio</u>	<u>1</u>	
<u>Registrar, ex officio</u>	<u>1</u>	
<u>Director of First Year Curriculum, ex-officio</u>	<u>1</u>	
<u>Teaching and Learning Specialist (Dean’s Appointee), ex officio</u>		<u>1</u>
<u>Scheduling Officer, ex officio</u>		<u>1</u>
<u>Engineering Communication Program</u>		<u>1</u>
<u>Engineering & Computer Science Library</u>		<u>1</u>

Note: For Departments housing more than one program (e.g. CIV, MIE, ECE), a single person could be appointed to the committee who would provide their own vote as well as a proxy vote for the other program in the department.

14.3. TERM OF OFFICE

The Committee shall take office at the close of the ~~regular May final~~ meeting of Faculty Council in an academic year, and shall remain in office until the adjournment of the ~~following regular May final~~ meeting of the subsequent academic year. (~~Elections for Appointment of student representatives shall take place in the Fall be completed by early September.~~)

15.4. TERMS OF REFERENCE

The primary responsibility of the Committee is to help ensure that the Faculty's undergraduate programs in the Faculty result in graduates with the highest professional competencies are delivered in a fashion that conforms with to professional accreditation requirements, provincial standards, and Faculty and University policies, standards and requirements. 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:

- a) Manage the curriculum change process.
- b) Manage the Faculty's graduate attributes and continuous improvement process and other accreditation processes and make decisions as needed for improvements.
- c) Monitor resource allocation and usage information with the departments and divisions and the Registrar's office to implement timetabling and scheduling improvements, and make recommendations for changes in the amount and nature of resources available to the Faculty.

~~16. 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;~~

~~17. —~~

~~18. identify and promote advances in the design of engineering curricula;~~

~~19. —~~

~~20. advise departments and divisions about these criteria and advances in order to assist departments and divisions in the design and review of their programs;~~

~~21. —~~

~~22. where there are common curriculum needs across all programs, review current policies and develop new broad policies on these matters for consideration by Council;~~

~~23. —~~

~~24. monitor, coordinate broadly and revise, with the approval of Council, all undergraduate academic programs and courses offered by the Faculty; and~~

~~25. be aware of and report on significant resource implications of proposed changes in curricula and engineering education practice.~~

26.5. RULES OF PROCEDURE

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

27.6. DUTIES

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

28.7. MAJOR POLICY DUTIES

- ~~a) Consult with future employers and research institutions in order to establish criteria for “highest professional competencies” in our graduates.~~
- ~~b) Monitor and review advances in undergraduate engineering curricula.~~
 - a) ~~Advise departments and divisions of these criteria and advances to~~ Assist departments and divisions ~~them~~ in the design and review of their programs.
 - b) ~~Based on these criteria and advances,~~ Develop and regularly review Faculty policies on curricula, and disseminate any changes ~~in these~~ to departments and divisions in a timely manner ~~time~~ for them to prepare proposals to amend their programs.
 - c) Remain current with the policies and requirements of the Canadian Engineering Accreditation Board (~~C.E.A.B.~~) and their relation to ~~this the~~ Faculty's programs.
 - d) 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 the~~ Faculty's programs.

29.8. ROUTINE CURRICULUM DUTIES

- ~~a) Annually, receive, review (for conformity with Faculty and University policies and guidelines), identify and resolve any potential knock-on impacts (such as scheduling), co-ordinate cross-program issues, as required, negotiate, approve and report (normally as routine) all proposed changes in curricula from Departments and Divisions. Receive proposed curricula changes from departments and divisions. Review such proposed changes for conformity with Faculty and University policies and guidelines; identify and resolve any potential knock-on impacts such as scheduling; and co-ordinate cross-program issues as required. Endorse and report changes to Faculty Council.~~
- ~~a)b) Annually,~~ Receive and consider outlines of all new or significantly amended technical courses offered by other Faculties that are listed in the

Faculty of Applied Science and Engineering cCalendar under numbers that identify them as being particular to this Faculty.

~~b)c) Annually, A approve and report (normally as routine) the list of acceptable humanities/social science and complementary studies electives and exceptions. Receive and consider all available workload surveys and their relation to specified weightings of courses.~~

~~e)d) Annually, S strike and report (normally as routine) sessional dates for this the Faculty each academic year.~~

30.9. ROUTINE ADMINISTRATIVE DUTIES

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

- a) ~~Update the Committee manual when~~ When each new or amended policies or precedents ~~are is~~ approved by Faculty Executive Committee or Council, ~~update this Manual.~~
- b) ~~Annually, r~~ Receive and ~~review~~ record annual updates to the master database of course information required by the Canadian Engineering Accreditation Board ~~and~~ to manage the Faculty's gGraduate aAttributes process.
- c) ~~On an annual basis, Annually,~~ receive in part, originate in part, co-ordinate, approve and report (normally as routine) all text pertaining to curriculum for in the ~~annual~~ Faculty of Applied Science & Engineering cCalendar ~~of the Faculty.~~
- d) ~~On an annual basis, Annually,~~ receive, examine and report (normally as routine) all changes to course lists listings of courses offered by the Faculty of Applied Science & Engineering's dDepartments or dDivisions, ~~of this Faculty that which~~ appear in the calendars of other Ffaculties.

31.10. REPORTING AND COORDINATING DUTIES

- a) Interact as needed on curriculum matters with appropriate committees of this and other Faculties and of the Governing Council.
- b) Report actions and recommendations of the Committee according to the rules of procedure established and from time to time amended by Faculty Council, as set out in the *Procedures for Committees of Council of the Faculty of Applied Science and Engineering.*

11. GUIDING PRINCIPLES

- a) The Committee shall approve courses of study leading to various Engineering minors and certificates as approved by Faculty Council.
- b) The Faculty will meet the accreditation requirements of the Canadian Engineering Accreditation Board for all of its undergraduate degree programs.
- a)c) Each undergraduate degree program shall nominally consist of a four-year curriculum (five year with PEY), within which students may be allowed to proceed at a variable rate.
- d) The curriculum shall be structured, insofar as is possible, on a term basis (two terms per year).
- b)e) Pre- and post-session courses are permitted in all programs.
- f) The weighting specified for a course and used in computing averages shall be representative of the relative expenditure of time expected of an average student to obtain an average grade in that course.
- There shall be at least a one term capstone design project in the fourth year of each program.

MAJOR POLICIES

~~Other than the Committee Manual terms of reference and composition of the Committee, the major policies that Council has approved by Faculty Council 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.~~

- Regulations for Self-Initiated Minors

Procedure for Granting Transfer Credits

APPENDIX A: Programs and Departments

Programs leading to the degree of Bachelor of Applied Science are offered in:

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

A program leading to the degree of Bachelor of Applied Science in Engineering Science is offered with specializations in:

Aerospace Engineering
Biomedical Systems Engineering
Electrical and Computer Engineering
Energy Systems Engineering
Engineering Mathematics, Statistics and Finance
Engineering Physics
Infrastructure Engineering
Robotics Engineering

The departments, divisions and offices in the Faculty of Applied Science & Engineering established by Faculty Council for the administration of these programs are:

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

APPENDIX B: Curriculum Change Process

This process defines the approach to be followed for curriculum changes within the undergraduate programs of the Faculty of Applied Science & Engineering, and applies to all courses that students, in all programs, can take for degree credit.

1. HSS/CS ELECTIVES

Non-FAPSE courses

The Registrar's Office maintains a list of known HSS courses as well as known CS courses and course prefixes; known exclusions to the list are recorded as well. Students can access this list and are able to suggest courses for review and addition to the list.

The decision as to whether a course can be taken as an HSS or CS credit is the consensus view of the Undergraduate Curriculum the Committee's Chair, Vice-Chair, Registrar and Associate Registrar. If a consensus cannot be reached, the decision is referred to the entire Committee.

FASEPC courses

Decisions related to the creation, modification or cancelation of HSS or CS elective courses will be taken by the entire Committee.

Decision-making criteria:

- There is an ongoing commitment from a program to provide the instructor(s) for the course.
- The course can be timetabled in a fashion which accommodates a significant number of students.

Note: all students take HSS and CS electives – the annual demand for HSS and CS course places is ~2000 of each type; consideration should include timing of delivery and the appropriate class size, so as to benefit as many students as possible.

2. TECHNICAL ELECTIVES

A technical elective course can cover any combination of Mathematics, Natural Science, Engineering Science and Engineering Design content. Decisions relating to the creation, modification, or cancelation of such courses are taken by the entire Committee. The course can be created at any time during the academic year; the preference is that the course is approved in the academic year prior to the one in which the course will be first offered.

A course information sheet must be completed prior to the course being reviewed.

Decision-making criteria:

- There is an ongoing commitment from a program to provide the instructor(s) for the course.
- The course can be timetabled in a fashion which accommodates a significant number of students.
- The course material is at a level commensurate with a university education.
- The required resources are identified and available.

As part of the review process, the Committee will discuss existing courses which have similar or related content to help identify the correct set of prerequisites and ensure that the Academic Unit definition is consistent with existing courses. The review will also assess the learning outcomes and graduate attribute indicators, and ensure that they are consistent with the Faculty's global outcomes indicators.

3. CORE COURSES

A core course can cover any combination of Complementary Studies, Mathematics, Science, Engineering Science and Engineering Design content. A course which is Core for one program can be an elective course for any other program. Decisions relating to the creation, modification or cancelation of such courses are taken by the entire Committee.

Changes to courses which impact only the program(s) for which they are core can be implemented at any time during the academic year. Changes to such courses which impact multiple programs and/or create scheduling difficulties will be implemented in the next academic year.

A course information sheet is to be completed prior to the course being reviewed.

The Committee will review the course information sheet and supporting information, which can include feedback from external stakeholders (e.g. employers or ~~or~~ alumni), instructors and students, an analysis of the curriculum map, and/or data analysis from the indicators.

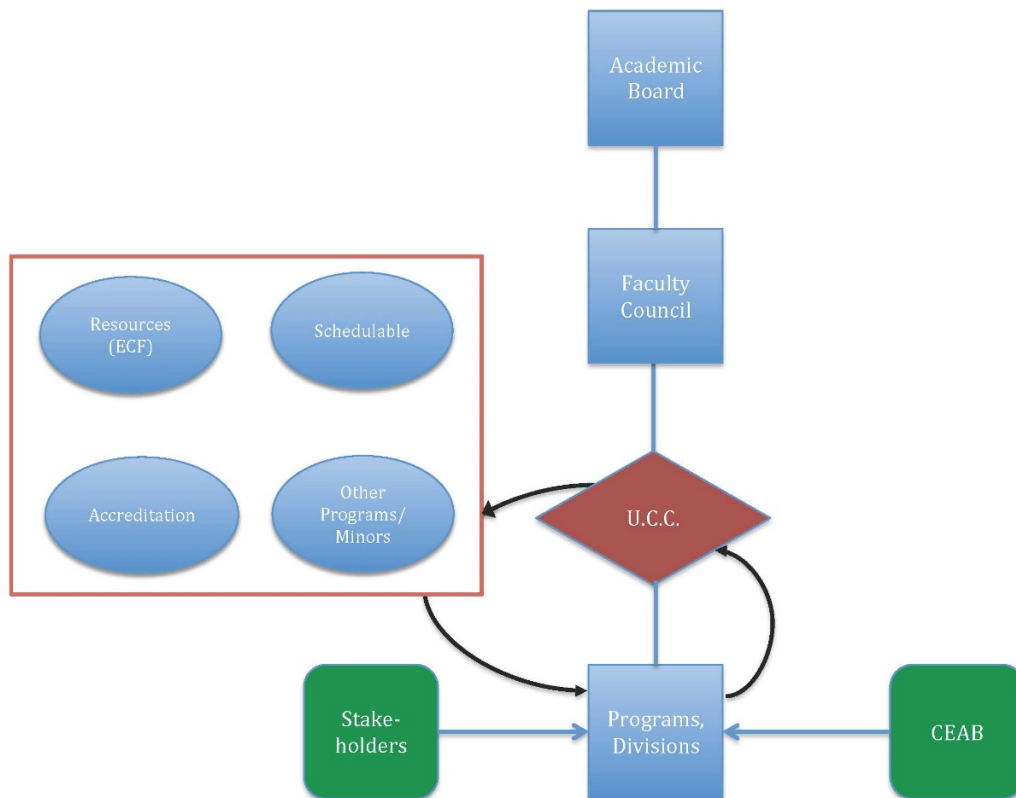
As part of the review process, the Committee will discuss existing courses which have similar or related content; this will help identify the correct set of prerequisites and ensure that the Academic Unit definition is consistent with precedent. The review will also assess the ~~the~~ learning outcomes and graduate attribute indicators, and ensure that they are consistent with the Faculty's global outcomes indicators.

4. PROGRAM CHANGES

A program change is a change in the order in which core courses and electives are taken, as well as any change in the course or elective identity. Decisions on such changes are taken by the entire Committee.

The Committee will review the supporting information which could be the same as that for a change to a core course. This can include feedback from external stakeholders (e.g. employers or alumni), instructors and students, an analysis of the egraduate attribute curriculum map, and/or data analysis from the indicators.

Program changes must be approved in the academic year preceding the year in which the change is to be implemented.



APPENDIX C: Major Policies

Other than the Committee Manual, the major policies approved by Faculty Council for the operation of the Committee and for which the 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.

- a) Edits to Regulations for Self-Initiated Minors (approved March 8, 2011)
- b) Procedure for Granting Transfer Credits (approved April 26, 2012)
- c) Proposed Addition of Certification Notations on Student Transcripts (approved April 26, 2012)



UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE & ENGINEERING

MANUAL OF PROCEDURES

FOR THE

UNDERGRADUATE CURRICULUM COMMITTEE

Approved by the Council of the Faculty of Applied Science & Engineering: April 26, 2012
Revision approved: December 12, 2017

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1. PREAMBLE

Each Committee must have a clearly established and frequently monitored manual of procedures and terms of reference, 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 her/his Committee, towards which she/he can expect to have strong administrative support available through the Faculty Offices.

2. MEMBERSHIP

Constituency	Voting	Non-Voting
Undergraduate programs: 1 faculty member per program (see note below)	9	
IBBME, faculty		1
UTIAS, faculty		1
Undergraduate students	2	
Dean, ex officio	1	
Vice-Dean, Undergraduate, ex officio	1	
Vice-Dean, First Year, ex officio	1	
Associate Dean, Cross Disciplinary Programs, ex officio	1	
Registrar, ex officio	1	
Director of First Year Curriculum, ex officio	1	
Teaching and Learning Specialist (Dean's Appointee)		1
Scheduling Officer, ex officio		1
Engineering Communication Program		1
Engineering & Computer Science Library		1

Note: For Departments housing more than one program (e.g. CIV, MIE, ECE), a single person may be appointed to the committee who would provide their own vote as well as a proxy vote for the other program in the department.

3. TERM OF OFFICE

The Committee shall take office at the close of the final meeting of Faculty Council in an academic year, and shall remain in office until the adjournment of the final meeting of the subsequent academic year. (Appointment of student representatives shall be completed by September.)

4. TERMS OF REFERENCE

The primary responsibility of the Committee is to help ensure that the Faculty's undergraduate programs are delivered in a fashion that conforms to professional accreditation requirements, provincial standards and Faculty and University policies, standards and requirements.

To support this, the Committee shall:

- a) Manage the curriculum change process.
- b) Manage the Faculty's graduate attributes and continuous improvement process and other accreditation processes, and make decisions as needed for improvements.
- c) Monitor resource allocation and usage information with the departments and divisions and the Registrar's office to implement timetabling and scheduling improvements, and make recommendations for changes in the amount and nature of resources available to the Faculty.

5. RULES OF PROCEDURE

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

6. DUTIES

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

7. MAJOR POLICY DUTIES

- a) Assist departments and divisions in the design and review of their programs.
- b) Develop and regularly review Faculty policies on curricula and disseminate any changes to departments and divisions in a timely manner for them to prepare proposals to amend their programs.
- c) Remain current with the policies and requirements of the Canadian Engineering Accreditation Board and their relation to the Faculty's programs.
- d) 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 the Faculty's programs.

8. ROUTINE CURRICULUM DUTIES

- a) Receive proposed curricula changes from departments and divisions. Review such proposed changes for conformity with Faculty and University policies and guidelines; identify and resolve any potential impacts such as scheduling; and co-ordinate cross-program issues as required. Endorse and report changes to Faculty Council.

- b) Receive and consider outlines of all new or significantly amended technical courses offered by other Faculties that are listed in the Faculty of Applied Science & Engineering calendar under numbers that identify them as being particular to this Faculty.
- c) Approve and report a list of acceptable humanities/social science and complementary studies electives and exceptions.
- d) Strike and report sessional dates for the Faculty each academic year.

9. ROUTINE ADMINISTRATIVE DUTIES

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

- a) Update the Committee manual when new or amended policies or precedents are approved by Faculty Council.
- b) Receive and review annual updates to the master database of course information required by the Canadian Engineering Accreditation Board to manage the Faculty's graduate attributes process.
- c) On an annual basis, receive in part, originate in part, co-ordinate, approve and report (normally as routine) all text pertaining to curriculum in the Faculty of Applied Science & Engineering calendar.
- d) On an annual basis, receive, examine and report (normally as routine) all changes to course lists offered by the Faculty of Applied Science & Engineering's departments or divisions, which appear in the calendars of other Faculties.

10. REPORTING AND COORDINATING DUTIES

- a) Interact as needed on curriculum matters with appropriate committees of this and other Faculties and of the Governing Council.
- b) Report actions and recommendations of the Committee according to the rules of procedure established and from time to time amended by Faculty Council, as set out in the Procedures for Committees of Council of the Faculty of Applied Science & Engineering.

11. GUIDING PRINCIPLES

- a) The Committee shall approve courses of study leading to various Engineering minors and certificates as approved by Faculty Council.

- b) The Faculty will meet the accreditation requirements of the Canadian Engineering Accreditation Board for all of its undergraduate degree programs.
- c) Each undergraduate degree program shall nominally consist of a four-year curriculum (five-year with PEY), within which students may be allowed to proceed at a variable rate.
- d) The curriculum shall be structured, insofar as is possible, on a term basis (two terms per year).
- e) Pre- and post-session courses are permitted in all programs.
- f) The weighting specified for a course and used in computing averages shall be representative of the relative expenditure of time expected of an average student to obtain an average grade in that course.

APPENDIX A: Programs and Departments

Programs leading to the degree of Bachelor of Applied Science are offered in:

- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Industrial Engineering
- Materials Science and Engineering
- Mechanical Engineering
- Mineral Engineering

A program leading to the degree of Bachelor of Applied Science in Engineering Science is offered with specializations in:

- Aerospace Engineering
- Biomedical Systems Engineering
- Electrical and Computer Engineering
- Energy Systems Engineering
- Engineering Mathematics, Statistics and Finance
- Engineering Physics
- Infrastructure Engineering
- Robotics Engineering

The departments, divisions and offices in the Faculty of Applied Science & Engineering established for the administration of these programs are:

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

APPENDIX B: Curriculum Change Process

This process defines the approach to be followed for curriculum changes within the undergraduate programs of the Faculty of Applied Science & Engineering and applies to all courses that students, in all programs, can take for degree credit.

1. HSS/CS ELECTIVES

Non-FASE courses

The Registrar's Office maintains a list of known HSS courses as well as known CS courses and course prefixes; known exclusions to the list are recorded as well. Students can access this list and are able to suggest courses for review and addition to the list.

The decision as to whether a course can be taken as an HSS or CS credit is the consensus view of the Undergraduate Curriculum Committee's Chair, Vice-Chair, Registrar and Associate Registrar. If a consensus cannot be reached, the decision is referred to the entire Committee.

FASE courses

Decisions related to the creation, modification or cancelation of HSS or CS elective courses will be taken by the entire Committee.

Decision-making criteria:

- There is an ongoing commitment from a program to provide the instructor(s) for the course.
- The course can be timetabled in a fashion which accommodates a significant number of students.

Note: all students take HSS and CS electives – the annual demand for HSS and CS course places is ~2000 of each type; consideration should include timing of delivery and the appropriate class size, so as to benefit as many students as possible.

2. TECHNICAL ELECTIVES

A technical elective course can cover any combination of Mathematics, Natural Science, Engineering Science and Engineering Design content. Decisions relating to the creation, modification, or cancelation of such courses are taken by the entire Committee. The course can be created at any time during the academic year; the preference is that the course is approved in the academic year prior to the one in which the course will be first offered.

A course information sheet must be completed prior to the course being reviewed.

Decision-making criteria:

- There is an ongoing commitment from a program to provide the instructor(s) for the course.
- The course can be timetabled in a fashion which accommodates a significant number of students.
- The course material is at a level commensurate with a university education.
- The required resources are identified and available.

As part of the review process, the Committee will discuss existing courses which have similar or related content to help identify the correct set of requisites and ensure that the Academic Unit definition is consistent with existing courses. The review will also assess the learning outcomes and graduate attribute indicators and ensure that they are consistent with the Faculty's global outcomes.

3. CORE COURSES

A core course can cover any combination of Complementary Studies, Mathematics, Science, Engineering Science and Engineering Design content. A course which is Core for one program can be an elective course for any other program. Decisions relating to the creation, modification or cancelation of such courses are taken by the entire Committee.

Changes to courses which impact only the program(s) for which they are core can be implemented at any time during the academic year. Changes to such courses which impact multiple programs and/or create scheduling difficulties will be implemented in the next academic year.

A course information sheet is to be completed prior to the course being reviewed.

The Committee will review the course information sheet and supporting information, which can include feedback from external stakeholders (e.g. employers or alumni), instructors and students, an analysis of the curriculum map and/or data analysis from the indicators.

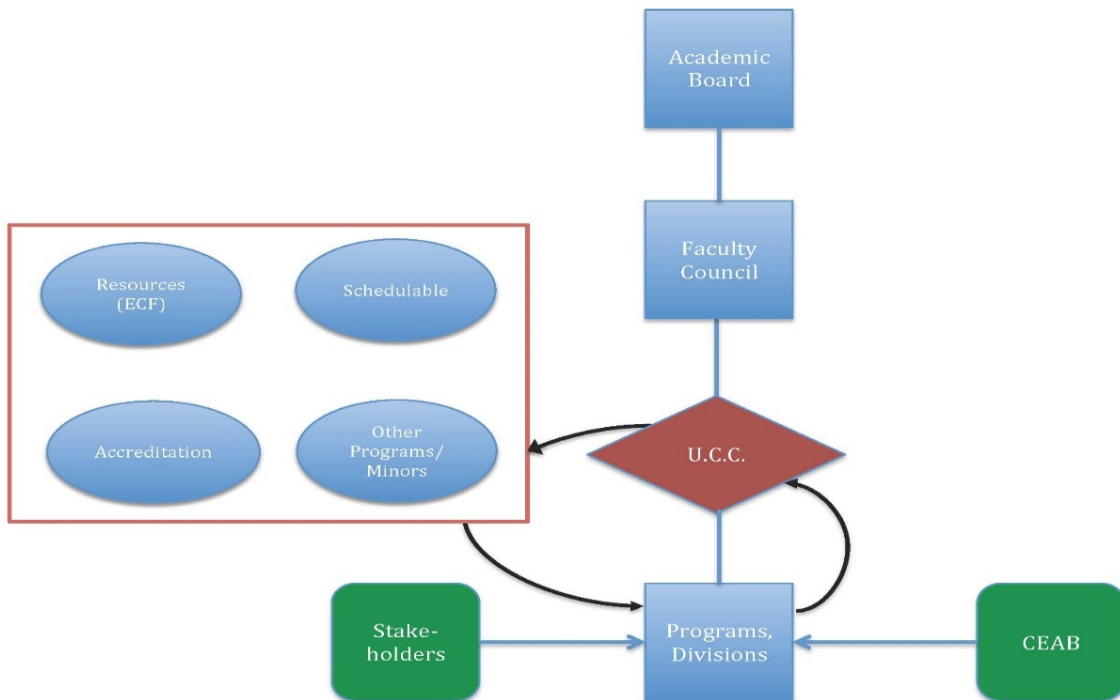
As part of the review process, the Committee will discuss existing courses which have similar or related content; this will help identify the correct set of requisites and ensure that the Academic Unit definition is consistent with precedent. The review will also assess the learning outcomes and graduate attribute indicators and ensure that they are consistent with the Faculty's global outcomes.

4. PROGRAM CHANGES

A program change is a change in the order in which core courses and electives are taken, as well as any change in the course or elective identity. Decisions on such changes are taken by the entire Committee.

The Committee will review the supporting information which could be the same as that for a change to a core course. This can include feedback from external stakeholders (e.g. employers or alumni), instructors and students, an analysis of the graduate attribute curriculum map and/or data analysis from the indicators.

Program changes must be approved in the academic year preceding the year in which the change is to be implemented.



APPENDIX C: Major Policies

Other than the Committee manual, the major policies approved by Faculty Council for the operation of the Committee and for which the 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.

- a) Edits to Regulations for Self-Initiated Minors (approved March 8, 2011)
- b) Procedure for Granting Transfer Credits (approved April 26, 2012)
- c) Proposed Addition of Certification Notations on Student Transcripts (approved April 26, 2012)