UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE & ENGINEERING

Minutes of the Faculty Council Meeting of November 25, 2014 at 12:10 p.m. Michael E. Charles Council Chamber (GB 202)

Present:
Tony Sinclair (Speaker)
Tarek S. Abdelrahman
Grant Allen
Cristina Amon (Dean)
Giselle Azimi
Joe Baptista
Jason Bazylak
J. Christopher Beck
Sharon Brown
Anthony Chan Carusone
Sanjeev Chandra
Margaret Cheng
Alan Chong
Jim Davis
Khuong Doan
Edem Dovlo
Jennifer Drake
Stark Draper
Natalie Enright Jerger
Greg J. Evans
Carolyn Farrell
Mohammadreza Fazeli
Genevieve Foley
Ryan Gomes
Christina Heidorn
Peter Herman
M. Reza Iravani
Greg Jamieson
Abdinoor Jelle
Jia Jia
Gina John
Mark Kortschot
Raymond Kwong
Elias Kyriacou
Antonio Liscidini
Camila Londono Ferroni
Brenda McCabe
Olivia Mogielnicki
Farid Najm
Tom Nault
Jun Nogami
Graeme Norval
Luz Puentes Jacome
Doug Reeve
Lisa Romkey
Katie Sampson
Ted Sargent
Costas Sarris
Amer S. Shalaby
Ali Sheikholeslami
Micah Stickel
Samantha Stuart
Celeste Taylor (for Gillian Sneddon)
Deborah Tihanyi
Shahrohk Valaee
Sandra Walker
Christopher Yip
Neell Young

Regrets:
Krisztina Harmath
John Harrison
Dawn M. Kilkenny
Molly S. Shoichet
Gillian Sneddon
Sorin Voinigescu
David Zingg

Guests:
Dani Couture
Leslie Grife
Jan Haugan
Dan Pettigrew
Catherine Riddell
Christina da Rocha-Feeley
Caroline Ziegler

1. Welcome and Adoption of Agenda

Council Speaker Tony Sinclair thanked members joining the second Faculty Council meeting of the 2014-2015 academic year and welcomed all present. He noted that the agenda and documents were distributed on November 11, and the minutes of the previous meeting were distributed on November 21.

Because one of the presenters had to leave early, the Speaker proposed a slight revision to the agenda by moving item 8, "Fostering Growth of Sponsored Research" to immediately after the Dean's Report.

There were no objections, and on a motion duly moved, seconded and carried, it was resolved –

THAT the agenda be adopted.

2. Adoption of Minutes of Previous Meeting

Since the minutes of the previous Council meeting were distributed, two names had been added to the attendance list: Greg Evans and Hai-Ling Margaret Cheng. No other errors or omissions were noted and on a regular motion duly moved, seconded and carried, it was resolved –

THAT the minutes of the meeting of October 8, 2014 be approved as amended.

3. Report of the Dean

Dean Amon welcomed members to Faculty Council and provided the following remarks.

(a) Ted Rogers Centre for Heart Research

Last Thursday, an historic gift of $130M from the Rogers Family Foundation was announced to establish the Ted Rogers Centre for Heart Research in partnership with the Hospital for Sick Children, University Health Network, and U of T's Faculties of Medicine and Applied Science & Engineering through IBBME.

Leasing much-needed space in the MaRS2 building, IBBME will lead the Ted Rogers Program in Translational Biology and Engineering, focusing on three initiatives: combining stem cell technology with cell and tissue engineering for the regeneration of the heart muscle, coronary vessels and heart valves; developing strategies to understand how the body's networks function as the heart develops or during disease progression, and how to modify those networks using drugs or stem cell therapies; and utilizing our biomedical engineering expertise in heart monitoring, design of home and remote cardiac function monitors and human factors engineering to support clinicians and patients.

Additionally, we will receive funding for two endowed chairs to advance this initiative. The Ted Rogers Chair in Immuno-Bioengineering will aim to catalyze research and bring new expertise to solve immunology-related problems in heart disease and regenerative cardiac therapy; and the Ted Rogers Chair in Cardiac Tissue and Cellular Systems Modelling will work with stem cells to create cardiovascular models to define the mechanisms of heart failure, and test their reversibility.

Stating that most of our Engineering departments have work related to biomedical research, Dean Amon congratulated and thanked IBBME's director, Christopher Yip, and everyone involved in bringing this exciting initiative to fruition.

(b) CEIE Update

We continue to make progress on the new building, the Centre for Engineering Innovation & Entrepreneurship (CEIE). While we have received the permit to demolish the TYP house, we must first reroute the Bell telephone lines that are currently underground before proceeding with this phase.

We are working with the city to address concerns about the height and façade of the building. We hope to have the re-zoning and building permits approved by February 2015 to go to tender, and then start construction in March or April.

(c) Dean's Strategic Fund

The goal of the Dean's Strategic Fund is to fund cross-disciplinary projects and collaborative initiatives that align with our Faculty's Academic Plan goals, and to provide start-up funding for initiatives across our departments and institutes.

A call for proposals for the next round of the Dean's Strategic Fund will be issued next week. Notices of intent are due by February 17, and the deadline for full proposals is April 3. All proposals must be submitted by the Chair or Director of the academic department, institute, or EDU:C.

(d) Engineering Instructional Innovation Program

Last week, we sent a call for proposals to all faculty members for the Engineering Instructional Innovation Program, now in its third year. The focus of this program is the creation or substantial renovation of specific undergraduate courses (particularly large, required courses), closely related groups of courses, or learning experiences. Preference will be given to projects that have the potential for significant and sustainable improvement in student engagement and learning outcomes.

The two stages for proposals are a letter of intent and mini workshop, and a full proposal. The deadline for a letter of intent is December 15, and questions can be sent to Vice-Dean Undergraduate, Susan McCahan, and Chair, First Year, Micah Stickel.

(e) ILead and LMEP Reviews

Two units in the Faculty are undergoing review: the Institute for Leadership Education in Engineering (ILead), including the undergraduate certificate in engineering leadership, and the Lassonde Mineral Engineering Program (LMEP), which is one of the undergraduate programs in the Civil Engineering Department.

Reviews are an opportunity for our Faculty to assess and improve our programs and the units in which they reside. An integral part of the review process is the unit's self-study, a candid and reflective self-assessment used by the review team to formulate recommendations for improvement. The goal of the review is to incorporate input from the review team into the unit's academic and strategic plans for the next cycle.

The Dean thanked members of the review teams, several of whom were present at the Council meeting, for their participation.

(f) Dean's Leave

Dean Amon announced that she will be taking a short administrative leave from January to March 2015, returning for short periods to attend key meetings. During this time she will also continue her philanthropic fundraising activities, including trips to California and Florida.

Professor Brenda McCabe, former Chair of Civil Engineering, has graciously agreed to be Acting Dean during this three-month period.

4. Fostering Growth of Sponsored Research

Ted Sargent, Vice-Dean, Research and Chair of the Research Committee updated Council on the growth of sponsored research in our Faculty, explaining that we surpassed our academic plan goal of reaching $25M Tri-Council funding by 2015; instead, we reached $26.2M in 2012.

The Research Committee identified three factors as key to this success: building relevant and timely institutes and centres; promoting a culture of excellence in research partnerships; and promoting and celebrating success in grants. The Committee met with each department and large institute over the past summer to discuss this success, determine if anything more can be done to accelerate this growth, and share best practices across the Faculty.

At the conclusion of the presentation, a member mentioned a recent announcement about the creation of the Ted Rogers Centre for Heart Research, a collaborative partnership between the Hospital for Sick Children, the University Health Network, and the University of Toronto (through IBBME), and funded by a donation from the Rogers family. He stated that this partnership was a missed opportunity to involve the Department of Electrical & Computer Engineering, which would have been natural due to the electrical component of the heart, and the ties between the department and the Rogers family.

In response to another question, Professor Sargent agreed that although Engineering's sponsored research growth exceeded that of other Faculties, we can learn from their successes, too.

A member asked about support for writing grant applications. Professor Sargent responded that within departments, Chairs and Associate Chairs, Research understand that they must create time for faculty to write grant applications, particularly within teams, and said that it is possible to bring in external technical writing resources.

5. Undergraduate Nanoengineering Minor

Graeme Norval, Chair of the Undergraduate Curriculum Committee, presented Report 3442, a proposal to approve and launch a Nanoengineering Minor in fall 2015.

Dr. Norval reminded members that Faculty Council had approved the closure of Engineering Science's Nanoengineering Option at its October 8, 2014 meeting and stated that the proposed minor will allow students in Engineering Science and our other undergraduate programs to continue to complement their main area of study with a focus on nanoengineering. The minor will be attractive to students from Chemical Engineering, Mechanical Engineering, Materials Science and Engineering, Electrical and Computer Engineering, and Engineering Science.

At the conclusion of the presentation, the following regular motion was moved and seconded –

> THAT the Nanoengineering Minor be approved and introduced in the 2015-2016 academic year.

A member asked about job opportunities for students who graduate with the minor. Ted Sargent responded that many students taking Engineering Science's Nanoengineering Option continued onto and were well equipped for Ph.D. studies, and that some were very successful in seeking employment. He acknowledged that it will be beneficial for students to be both tethered to a traditional engineering program, and recognized for the engaging in a multi-disciplinary program.

Another member recalled learning at the last Council meeting that two students are still enrolled in the Nanoengineering Option, and asked if any courses had been removed from the option. Dr. Norval responded that the courses are still being offered and that in Report 3442, the courses listed in italics are currently for Engineering Science students only. The only course with the potential of being moved is MSE358, which could be moved to the list of courses available to the Core 8 programs, or to Engineering Science's Engineering Physics Option.

The motion carried.

6. Major Curriculum Changes, 2015-2016

Graeme Norval, Chair of the Undergraduate Curriculum Committee, reminded members that the committee considers major changes to be new or cancelled courses. He presented Report 3443, reviewing the proposed changes to programs in Engineering Science, Materials Science & Engineering, Mechanical & Industrial Engineering, and IBBME, and the cancellation of Cross-Disciplinary Programs' Preventive Engineering and Social Development Certificate.

At the conclusion of the presentation, the following regular motion was moved and seconded–

> THAT the proposed major curriculum changes for the 2015-2016 academic year be approved.

A member pointed out a typo regarding Materials Science & Engineering, which Dr. Norval undertook to have corrected.

Another member expressed concern about the proposed cancellation of the MIE portfolio courses MIE297Y and MIE397Y, asking if they would be replaced or if students would take fewer courses. Dr. Norval confirmed that students would have to take one fewer course, but noted that some of the activities in the portfolio courses have been integrated into courses within the design spine.

The motion carried with one abstention.

7. Session Dates, 2015-2016

Graeme Norval, Chair of the Undergraduate Curriculum Committee, presented Report 3453, proposed session dates for the next academic year and reminded members that last year, the UCC began to include summer session dates in this report. Because Labour Day falls on September 7, 2015, next year's fall exam period will include exams on Saturday, December 12 and 19 in order to allow for 10 exam days.

At the conclusion of the presentation, the following regular motion was moved and seconded –

> THAT the proposed session dates for the 2015-2016 academic year be approved.

A member expressed concern that a truncated exam schedule will cause undue stress for students who will have minimal time to recover from writing exams before their next term begins. Another member noted that there are four more days in the winter exam period, and wondered if this would allow for the elimination of exams on Saturdays. Tom Nault, the Faculty's Registrar, acknowledged that the only way to achieve a longer exam period would be to start the term earlier. He said that scheduling exams for Saturdays is not unusual in other Faculties, and that sometimes they are even scheduled on Sundays.

A member asked if starting the fall term one day earlier would have less impact on students than having exams on Saturdays. It was noted that that this would affect the Faculty's orientation period, which is already packed with activities. A student member stressed the importance of orientation to all students, not just those in first year, for community building and said that having exams on Saturdays would be acceptable to students.

Another member suggested that, going forward, the Faculty might consider whether the current number of exams is necessary, or if there could be one fewer. When he was a student, there were six days of exams to cover five courses, while now there are 12 days of exams to cover five courses. Another member wondered if we ought to consider a 12.6 week term, instead of 12.8 weeks, as most undergraduate programs exceed the required accreditation units (AUs) required by the Canadian Engineering Accreditation Board. This slight reduction in course time would allow us to bypass this cyclical problem of a shortened fall exam period due to a late Labour Day.

The motion carried.

8. Graduation with High Honours

Peter Herman, Chair of the Examinations Committee, presented Report 3450 Revised, a proposal to create the new degree citation "High Honours" to recognize the Faculty's top students: graduates who have achieved a cumulative year 2-4 average of at least 87.50 percent. Accordingly, the citation of "Graduation with Honours" would be capped to an average below 87.50 (i.e. 79.50 to 87.49 range).

At the conclusion of the presentation, the following regular motion was moved and seconded–

> THAT the new degree citation of "Graduation with High Honours" be created for undergraduates who graduate with minimum year 2-4 cumulative average of at least 87.50 percent. Accordingly, the citation of "Graduation with Honours" would be capped to an average below 87.50 (i.e. 79.50 to 87.49 range).

Members discussed possible grade inflation, and whether there is historical data that demonstrates that "Honours" is no longer special. Dean Amon said that the average of our incoming first year student cohort has risen to 92.4 percent, and if we have a large number of outstanding students, they should receive this citation.

Another member asked why the committee is not recommending the establishment of a relative threshold to encompass five percent of the graduating class (Faculty or program). Professor Herman agreed that using the fixed threshold of an average of 87.50 percent will result in students in some programs receiving this citation more often (such as Engineering Science), but said that it will encompass approximately five percent of the total graduating class, which has been consistent over the past several years. This will also avoid the instability inherent to a relative threshold of five percent of the graduating class, since student marks are sometimes adjusted after the graduation date. Additionally, this method is the easiest to

administer and results in the cleanest decision-making. A member agreed, stating that a more complicated calculation might result in confusion and an increase in petitions.

A member commended the committee's efforts to recognize very strong students, but cautioned against placing too much emphasis on achieving high grades versus learning. In response, Professor Herman said that the potential competition for grades can be countered by encouraging students to develop through their co-curricular and extra-curricular activities.

A student member supported the motion in general, as it recognizes high achieving students, however, he is concerned about the retroactivity of this change: past students who have graduated with "Honours" may now be eligible to have graduated with "High Honours" and may seek this change. The Registrar stated that any change to a degree already granted would have to be approved by Governing Council, and that we would have clear documentation when the "High Honours" citation is introduced.

The Registrar also confirmed that, if approved, the "High Honours" citation would be reported to Governing Council for information only, as it already exists in other Faculties.

The motion carried, with one abstention.

9. Reports and Recommendations of Standing Committees

The Speaker noted that the following reports were approved by the Executive Committee at its November 4 meeting, and are being presented for Council's information.

(a) Engineering Graduate Education Information Report

Tom Coyle of the Engineering Graduate Education Committee presented Report 3445, which lists the approval of 11 new graduate courses.

There were no questions and the report was received for information.

(b) Minor Curriculum Changes for the 2015-2016 Academic Year

Graeme Norval, Chair of the Undergraduate Curriculum Committee, presented Report 3446 Revised, which lists minor curriculum changes in Civil Engineering, Electrical and Computer Engineering, Mechanical and Industrial Engineering, IBBME, Cross-Disciplinary Programs, and course pre-requisites, co-requisites and exclusions in Engineering Science.

There were no questions and the report was received for information.

(c) Scholarships and Awards Committee Goals, 2014-2015

Raymond Kwong, Chair of the Scholarships and Awards Committee, presented Report 3452, the committee's goals for this year. He highlighted the work being done to arrive at a long-term solution to fund awards that currently exist with low cash values, and to promote the

e-portfolio to undergraduate students and enhance its security. The committee will report on its progress at Council's spring meeting.

There were no questions and the report was received for information.

(d) Revised Awards Nominations Packages

Lisa Romkey, Chair of the Teaching Methods and Resources Committee, presented Report 3444, a series of minor recommendations to simplify and reduce the workload involved in preparing teaching award nominations.

There were no questions and the report was received for information.

(e) New Online Term Work Petition Process

Peter Herman, Chair of the Examinations Committee, presented Report 3448, which proposes changes to the term work petition process. Under the current paper-based system, students submit their term work petition forms directly to their instructors and the instructors determine if and what accommodation is in order. In the proposed system, students will submit their petitions via the Engineering Portal to their program's academic advisors, who will ensure that the petitions meet the policy and best practice requirements, and include the required documentation. Valid petitions will then be forwarded to the instructor to determine the appropriate accommodation.

These changes will allow academic advisors to discover and intervene much earlier when students experience difficulties, allow for more consistency across programs, and be less burdensome on faculty. The changes will be implemented in the paper-based system in January 2015, and will eventually be moved online to the Engineering Portal.

A member agreed with the idea of centralizing and automating the term work petition process, but was concerned that the changes will make instructors passive recipients of information and limit their involvement with the process. Professor Herman reiterated that the changes will allow advisors to streamline the administrative aspects, but they can share information with instructors as relevant. He emphasized the importance of a standardized and consistent process, citing the efforts of the Examinations Committee as an example. Professor Herman stressed that the proposed system would not affect any arrangements made between an instructor and student prior to the class or assignment.

In response to a member's concern that instructors may be unaware that a petition is underway, Professor Herman stated that once the process is moved online, there will be a mechanism to alert instructors that a petition is being reviewed.

A member stressed the importance of faculty being involved, so that they might discourage petitioning among students. Professor Herman responded that centralizing the petition process will help do this by allowing advisors to see the broader picture early on. Another member agreed that this is an evolving process that will require ongoing collaboration and input from faculty.

A member questioned why the report was being brought forward as an information item, which does not require Council to vote. The following motion was then moved, seconded and carried with one abstention –

> THAT Report 3448: New Online Term Work Petition Process not be accepted for information, but be brought as a major report before Faculty Council at its February 10, 2015 meeting.

The report will be brought back for Council's vote in February.

(f) Type C Exam Aid Sheets

Peter Herman, Chair of the Examinations Committee, presented Report 3449, which proposes modernizing the current procedure of allowing students to bring a Faculty-issued, 8.5" x 11" yellow paper aid sheet to their exams. Instead, the committee recommends that the Faculty stop printing and distributing the hard copy yellow aid sheet, and replace it with a downloadable electronic file of identical form which can be printed by the student on white or any colour of standard letter sized paper as designated by the instructor. This change will be in place for the April exam period.

In response to members' questions, Professor Herman confirmed that the decision whether to use the exam aid sheet, and its colour, will be the instructor's.

The report was received for information.

(g) Admissions Cycle Update

Christopher Yip, Chair of the Admissions Committee, presented Report 3447, which included information on the characteristics of first year intake, results of individual programs from 2004-2014, and admissions scholarships. Professor Yip also provided a verbal update on international students numbers. The report was circulated to Council members but will not be posted on the Faculty Council website.

There were no questions and the report was received for information.

10. Other Business

There was no other business.

11. Date of Next Meeting

The next Faculty Council meeting is on February 10, 2015.

12. Adjournment

The meeting was adjourned at 1:55 p.m.