UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE & ENGINEERING

Minutes of the Faculty Council Meeting

Wednesday, December 1, 2010

12:10 – 2:00 p.m.

Michael E. Charles Council Chamber, Galbraith Building

Present:
Yu-Ling Cheng (Acting Speaker)
Vanessa Abaya
Edgar Acosta
Barry J. Adams
J. Stewart Aitchison
Grant Allen
Cristina Amon (Dean)
Yi-Wei Ang
Ridha Ben Mrad
Evan Bentz
Sharon Brown
Phil Byer
David Clease
William L. Cleghorn
Will Cluett
Keith Cochrane
Dan Cormier
Tom W. Coyle
Chris Damaren
David C. Del Rey Fernandez
Gabriele M. T. D'Eleuterio
Levente L. Diosady
Adam Doyle
Elizabeth Edwards
Carolyn Farrell
Daniel Faulkner
Catherine Gagne
Lea Janossy
Gina John
Bryan Karney
Oh-Sung Kwon
Zheng-Hong Lu
Brenda McCabe
Susan McCahan
Barbara McCann
Oya Mercan
Liam Mitchell
Farid N. Najm
Evelyn Ng
Jun Nogami
Graeme Norval
Austra Ozolins
Joseph C. Paradi
Andrew Paton
Karl Peterson
M. Jane Phillips
Doug W. Reeve
Paul Santerre
Dan Sellan
Shamim A. Sheikh
Kevin Siu
Christopher Yip
Mohamed Zakaria Kamh
Safwat Zaky
David W. Zingg
Jean W. Zu

Guests:
Erika Bailey
Estina Boddie
Janet Hunter
Leslie Mak
Myrtle Millares
Tom Nault
Paul Readings
Geoff Wichert
Caroline Ziegler

Regrets:
Sara Dolcetti
John Harrison
Nadine Ibrahim
E. Stewart Lee
Jonathan Rose

1. Welcome/Adoption of the Agenda

The Acting Speaker, Professor Yu-Ling Cheng, thanked members joining the Faculty Council meeting and welcomed all present. She indicated that she has been appointed Acting Speaker on behalf of Speaker Professor Jonathan Rose, who was unable to attend this meeting.

The Acting Speaker noted that members had received the agenda on November 17. On a motion duly moved and seconded, it was resolved

THAT the agenda be adopted.

The Acting Speaker took this opportunity to remind members of the procedure for speaking. Members may speak when recognized by the Acting Speaker. She asked that they please stand, address the Acting Speaker, and introduce themselves.

2. Memorial Tribute

The Acting Speaker called upon Professor Safwat Zaky to read a memorial tribute to the late Professor Emeritus Peter Boulton of The Edward S. Rogers Sr. Department of Electrical and Computer Engineering.

Peter Irwin Paul Boulton was born on May 11, 1934. He put himself through university after graduating from school in Toronto. While he was a St. Michael's College School and a University student, he worked for a number of companies, notably as a lead inspector in a company making television sets in Toronto. He also worked for Ferranti Packard as a design engineer for a project to develop a display using discs with a magnetic drive to flip small coloured pixels. He received his PhD in Electrical Engineering from the University of Toronto in 1966 and joined the faculty as an Assistant Professor and was promoted to Associate Professor in 1970 and to Professor in 1984.

Peter had a full career as an academic, and was one of the department's finest true engineers. His approach to problems fully displayed his talents. He was one of the co-inventors of Hubnet, which had a fibre-optic local area computer network operating at 50 Megabits/s as early as 1981, at the time by far the highest datarate of any operating network.

Later, Peter held a number of important administrative posts: he was an Associate Dean of the Faculty, the Director of the Computer Systems Research Institute, the President of the University of Toronto Faculty Club and the President of the University of Toronto Faculty Association. Towards the end of his career he oversaw the planning and construction of the Bahen Building. As a result, he also helped with the management of the development of the University of Ontario Institute of Technology. His meticulous attention to detail was legendary.

Dr. Boulton died after a short but traumatic illness at Humber Memorial Hospital in Toronto, having immediately previously been a patient at a succession of other hospitals.

On a motion duly moved and seconded, it was resolved

> THAT the Council of the Faculty of Applied Science and Engineering record with deep regret the death on September 25, 2010 of Peter Irwin Paul Boulton.

It was further resolved

> THAT a record of his service be inscribed in the minutes of this Council, and that a copy be sent to his family as an expression of the respect and gratitude of the members of Council.

Members of Council stood and observed one minute of silence in honour of the late Professor Boulton.

3. Approval of the Minutes of the Previous Meeting

On a motion duly moved and seconded, it was resolved

> THAT the minutes of the meeting of May 26, 2010 be approved as circulated.

4. Introduction of New Members

The Acting Speaker called upon Professor Brenda McCabe to introduce new faculty members in the Department of Civil Engineering: Professors Oh-Sung Kwon, Oya Mercan, Karl Peterson and John Harrison. Professor Harrison was regrettably unable to attend this meeting.

The Acting Speaker welcomed the undergraduate and graduate Faculty Council student members present and thanked them for attending the meeting.

5. Report of the Dean

Dean Cristina Amon welcomed members to Faculty Council and provided an update on the 2010-11 academic year.

5 (a) Incoming Undergraduate First Year Class

The 2010-11 academic year has seen a successful undergraduate first year admissions cycle, which, with 1,219 students enrolled, is above target by 10%. The Faculty also registered a notably diverse student population: 288 female students, representing 23.6% of the incoming class (the most in the history of the Faculty), and 275 international students, representing 22.6% of the incoming class. The incoming average has increased to 89.2% with a minimum cut-off of 80%.

5 (b) Academic Programs

Dean Amon mentioned the success of the new Engineering Minors, which are now in their second year. These have been very popular with undergraduate students as they provide more breadth in their studies. There are currently 472 students enrolled in the Minors programs: Bioengineering (est. 2007-08): 161; Environmental Engineering:100; and Sustainable Energy (est. 2009-10): 211.

Dean Amon also said that a proposed Engineering Business Minor is under review.

Last year, Faculty Council approved a new Engineering Science Major in Engineering Mathematics, Statistics and Finance. This September, its registration exceeded the expected target enrolment with over 30 students enrolled.

5 (c) Faculty of Applied Science and Engineering External Review

The External Review of the Faculty occurred in May. The international external reviewers were impressed with the Faculty's progress and accomplishments since the last external review, noting our strong, innovative undergraduate and graduate programs, the quality of our students and top international scholars, the notable progress in gender and international diversity, and our leading-edge research initiatives.

In addition to our findings in the Faculty Self-Study, the external reviewers articulated opportunities where we might further strengthen our Faculty. These will be addressed in our Academic Plan, and include: consideration of how undergraduate students can have increased opportunities to reflect on their learning, and develop skills and interests in co- and extra-curricular activities; strengthened communications competencies for undergraduate students; increased summer internship and research opportunities for undergraduate students; strengthened teaching assessments and how we conduct and communicate them to students; reduced time-to-graduation for MASc and PhD students; and further development of our industry collaborations.

5 (d) Other External Reviews

In early December, the Department of Chemical Engineering and Applied Chemistry will undergo an external review. The review team will include Professor Andrew Gellman, Head, Department of Chemical Engineering, Carnegie Mellon University; and Professor Andrew Hrymak, Dean, Faculty of Engineering, University of Western Ontario and former Chair, Department of Chemical Engineering, McMaster University.

Engineering Science will also undergo an external review in early December. The review team will include Professor Tyseer Aboulnasr, Dean, Faculty of Applied Science, University of British Columbia and former Dean of Engineering at the University of Ottawa; and Professor Patricia Burchat, Chair, Department of Physics, Stanford University and alumna of the Engineering Science Program.

Members of the Faculty were invited to email comments regarding either review to Lisa Simpson-Camilleri.

5 (e) New Budget Model

Dean Amon spoke of the new budget allocation model, which was rolled out by the Faculty in May 2010. The new process will align the funding received by each Department and Institute more closely with each unit’s activity, and will provide greater transparency, allowing academic units to directly benefit from their strategic enrolment decisions.

5 (f) Philanthropic Campaign

It is expected that the University will launch a philanthropic campaign in 2011. In September, Principals and Deans participated in a half-day retreat to discuss plans for the upcoming campaign and to review and comment on the proposed campaign themes. These themes express the aspirations of the University and how its faculty, alumni, and students can make a positive impact in the world. The vision and many of the priorities for our Faculty are evident in the University's key campaign themes, and several Engineering projects will have a prominent position in the University's campaign.

Chairs and Directors will play a significant role in the Faculty's campaign, which will be a subset of the University's campaign. We are currently refining the key themes that highlight our aspirations and strengths, and with Chairs and Directors, we have established a catalogue of fundraising priorities. Vanessa Abaya will work with Chairs and Directors over the coming months to fine-tune key projects that relate to the themes in the *Faculty's Case for Support,* a document that expresses to potential donors how philanthropic support enhances the Faculty's strengths in research and engineering education.

5 (g) Acting Vice-Dean, Undergraduate

Dean Amon stated that Professor Grant Allen, Vice-Dean, Undergraduate, will be on sabbatical from January to June 2011. During this time, Professor Sanjeev Chandra from the Department of Mechanical and Industrial Engineering will serve as Acting Vice-Dean. Dean Amon expressed her gratitude to Professor Chandra.

5 (h) Dean's Student Town Hall

On November 5, members of the administrative team met with over 60 undergraduate students at the Dean's Student Town Hall, hosted with the Engineering Society. Students provided thoughtful input on their experiences, both in the classroom and in extra-curricular activities. Further input was received on the Engineering Career Centre, building access, and mathematics skills. We are working on these issues and will follow-up with students both by email and at the next Student Town Hall in February.

5 (i) *Toike Oike*

Dean Amon discussed a recent issue regarding the October edition of *Toike Oike*, which depicted images of violence against women. Since then, the Faculty has been dealing with numerous complaints from students and staff at the University regarding these images. Unfortunately *The Varsity* reissued the disturbing images after members of the Engineering Society, together with the Editor of the *Toike Oike,* made every effort to remove them from electronic and print distribution. Dean Amon thanked the Engineering Society, in particular President Kevin Siu, for their prompt and active attention to this matter.

The Faculty is working in close collaboration with the Engineering Society to engage in positive dialogue with our students and members of the University community and to identify ways in which we can achieve meaningful and lasting change.

The Student's Ombudsperson has established a mid-year online survey to poll students on their experiences that will include questions on the readership and audience of the *Toike Oike*. Underway until December 6, the survey will provide timely input from students to the Engineering Society and our administration team to gain a better understanding of the *Toike Oike's* relevance and reputation among current Engineering students.

5 (j) Academic Plan

In Fall 2009 the Faculty established the Academic Plan Steering Committee, which developed an Academic Planning Framework used by administrative and academic units to garner broad, Faculty-wide perspectives on main topics: Positioning; Culture of Excellence; Educating Future Engineers; Research Foci; Outreach, Collaboration and Influence; Resource Allocation; and Priorities, Weaknesses and Implications.

The Dean anticipates having a full draft of the Plan early in the new year and will extend consultation further to all Faculty members. We aim to bring the Academic Plan to Faculty Council in spring 2011.

The Dean's report was received for information.

6. Proposal to Establish BioZone, a Centre for Collaborative Bioengineering Research, as an Extra-Departmental Unit C (EDU:C)

The Acting Speaker advised members that the motion under consideration pertains to the establishment of a new Extra-Departmental Unit C (EDU:C) and is therefore a Special Motion requiring approval by no less than two-thirds of members present. The motion was distributed to Faculty Council members 14 days in advance of the meeting. The Acting Speaker noted that:

- An EDU:C is normally a multi-disciplinary, multi-department research and/or academic unit with a defined research domain in a particular area of academic work
- It exists to foster research and scholarly interest in the area and across the Faculty
- It has no primary teaching staff appointing rights; teaching staff may not hold their primary appointment in an EDU:C
- Graduate membership may be extended to a cross-appointment

Professor Doug Reeve thanked Professor Elizabeth Edwards for her contributions and presented the proposal outlined in Report 3273 to establish this new model for integrated research, development and technology transfer in applied bioengineering. He described BioZone's mission, the required infrastructure renewal, funding, teaching support, interest from students, and why the initiative is being presented as an EDU:C. Professor Reeve indicated that BioZone should be open in the Fall of 2012.

The Acting Speaker invited discussion.

A member asked what the Faculty's other EDU:Cs are, to which Dean Amon listed the Emerging Communications Technology Institute (ECTI), the Institute for Robotics and

Mechatronics (IRM), the Institute for Leadership Education in Engineering (ILead), and the Centre for Global Engineering (CGEN) as examples.

On a Special Motion duly moved and seconded, it was resolved

> THAT the Faculty establishes BioZone, a Centre for Collaborative Bioengineering Research as an Extra-Departmental Unit: C (EDU:C) with the mandate to engage in research and scholarly work in applied bioscience and bioengineering, and to provide viable technological innovation in energy, environment and health.

7. Academic Appeals Board

The Acting Speaker indicated that there are two motions regarding the Academic Appeals Board. The first is to consider the amendments to the Terms of Reference, and the second is to approve the Annual Report. Council will vote on these separately.

7 (a) Academic Appeals Board Terms of Reference

Professor Evan Bentz presented the amendments to the Terms of Reference of the Academic Appeals Board as outlined in Report 3264. He stated that the Academic Appeals Board, formerly known as the Ombuds Committee, continues to refine its practices and procedures and align them with University standards and best practices. In particular, the changes reflect realistic timelines for correspondence and unburden appealing students from unnecessary middle steps in their attempts to request a hearing.

The Acting Speaker invited discussion. No discussion arose.

On a motion duly moved and seconded, it was resolved

> THAT the revised Terms of Reference of the Academic Appeals Board be approved.

7 (b) Annual Report of the Academic Appeals Board, December 2009 - September 2010

Professor Evan Bentz presented the Annual Report of the Academic Appeals Board for the period of December 2009 to September 2010 as described in Report 3265, noting that during this time there were 16 appeals on decisions made by the Examinations Committee. In eight of the appeals, the Board found cause to intervene, and in the remaining eight the Board rendered a decision of “no action”. Professor Bentz encouraged faculty members to complete the student marks section of the required forms quickly, including comments on the back page, so that appeals could be considered in a timely manner.

The Acting Speaker invited discussion. No discussion arose.

On a motion duly moved and seconded, it was resolved

> THAT the Annual Report of the Academic Appeals Board, December 2009 - September 2010 be approved.

8. Undergraduate Curriculum Committee Reports

There are four motions to consider regarding the Undergraduate Curriculum Committee, which will be voted on by Council separately.

8 (a) Proposed Engineering Business Minor

Professor Graeme Norval presented the proposal to establish an Engineering Business Minor as described in Report 3267. He acknowledged and thanked Professors Bryan Karney, staff, and faculty at Rotman School of Management for their input into this proposal. Professor Norval gave an overview of the proposal, mentioning the demand for the program (since 2005, there were over 50 students graduating with a Minor in Economics), as well as the Minor's structure and courses.

The Acting Speaker invited discussion.

A member asked how plausible it would be for students to take social science electives in addition to three Complementary Studies (JRE) courses. Professor Norval responded that the five courses could count as 225 units already required by the CEAB, and that they had tried to make the impact as minimal as possible.

Another member enquired about the degree of collaboration taken, to which Professor Bryan Karney responded that the minor will open doors to further collaboration with Rotman School of Management, especially at the graduate level.

On a motion duly moved and seconded, it was resolved

> THAT the Faculty establishes a Minor in Engineering Business and that its associated JRE 300- and 400-level courses be approved.

8 (b) Proposed Engineering Business Certificate

Professor Graeme Norval described Certificate requirements, noting that they are the equivalent of a half a Minor and that there are already two in place. He presented the proposed Engineering Business Certificate as outlined in Report 3268 and discussed the courses involved.

The Acting Speaker invited discussion.

A member asked why Certificates are not noted on student transcripts. Professor Bryan Karney responded that Certificates are kept with student files and can be mentioned on CVs and references. He further noted that the omission of Certificates on transcripts has historically been due to software limitations and that the Office of Cross-Disciplinary Programs is investigating whether this practice might be changed in the future.

Another member asked if the Certificate will have the 488 courses (Entrepreneurship and Business for Engineers) as an option. Professor Norval responded that they will not be an option for the Certificate because they are electives for the Engineering Business Minor, of which this Certificate represents half the course load.

On a motion duly moved and seconded, it was resolved

> THAT the Faculty establishes an Engineering Business Certificate.

8 (c) Proposed Global Engineering Certificate

Professor Graeme Norval presented the background and structure of the proposed Global Engineering Certificate as described in Report 3269.

The Acting Speaker invited discussion.

A member asked if the additional humanities and social sciences / complementary studies elective has been developed. Professor Karney responded that APS510 Technologies and Organizations in Global Systems already exists and APS520 Technology, Engineering and Global Development will be created and piloted as a graduate-level course.

Another member asked if this is the usual way undergraduate courses are created, and if a more detailed description is not required. Professor Norval replied that this is indeed the usual way of creating courses: the Undergraduate Curriculum Committee meets weekly or biweekly to consider departmental submissions, which contain more detailed descriptions. The Acting Speaker asked Professor Norval to confirm that the Committee would have reviewed a more detailed description of this particular course.

A third member asked if APS520 is already on the books and will be in place when the program in launched. Professor Norval said that it will be in place, as the Certificate program will begin in January 2011 and the course instructors are currently assigned in ROSI.

On a motion duly moved and seconded, it was resolved

> THAT the Faculty establishes an Global Engineering Certificate and that its associated APS courses be approved.

8 (d) Proposed Curriculum Changes, 2011-2012

Professor Graeme Norval presented Report 3270, Proposed Curriculum Changes for 2011-2012, and noted that some changes will be retroactive to the current calendar year.

The Acting Speaker invited discussion.

A member pointed out a typo.

Another member indicated that under the Report's section on Civil Engineering, the course title for the new 500-level course should be "Environmental Bioengineering" not "Environmental Bioremediation", and that course CIV382S is being removed from third year, and is not being moved to fourth year.

It was discussed whether a motion to amend was required, however, Council decided that the original motion could stand provided the Undergraduate Curriculum Committee would make these corrections.

On a motion duly moved and seconded, it was resolved

> THAT the curriculum changes for the 2011-2012 Academic Year presented in the report be approved.

9. Reports of Standing Committees

9 (a) Examinations Committee

There are two regular motions to consider regarding the Examinations Committee. The first is to approve the Manual and Terms of Reference, and the second is to amend the Promotion Regulations concerning first year students proceeding to second year. Council will vote on these separately.

9 (a) (i) Revision of Examinations Committee Manual and Terms of Reference

Professor Tom Coyle presented the changes to the Manual and Terms of Reference of the Examinations Committee as described in Report 3274, which include clarifying the responsibilities for assignment of official course grades, the routine duties, and the clear, consistent and fair adjudication of petitions.

The Acting Speaker invited discussion. No discussion arose.

On a motion duly moved and seconded, it was resolved

> THAT the revised Manual and Terms of Reference of the Examinations Committee be approved.

9 (a) (ii) Undergraduate Promotional Regulations

Professor Tom Coyle presented Report 3275 which documents changes to the Promotion Regulations concerning first year students proceeding to second year, namely that no First Year student in Core 8 and TrackOne shall proceed to second year with more than two outstanding first year courses, and that no First Year Engineering Science student transferring to a Core 8 program shall proceed to second year with more than two outstanding Core 8 course equivalents. These recommendations will encourage more students to take summer courses to remedy failed or incomplete courses.

The Acting Speaker invited discussion.

A member asked if the Examinations Committee had considered the capacity to accommodate more summer students. Professor Coyle responded that the changes will encourage more students to improve their grades in a timely manner.

On a motion duly moved and seconded, it was resolved

> THAT the promotional regulations concerning First Year students proceeding to second year be amended as set out in the report.

9 (b) Undergraduate Curriculum Committee

9 (b) (i) Proposed Sessional Dates, 2011-2012

Professor Graeme Norval presented the recommendations outlined in Report 3271. He noted that since students select courses in February, the calendar must be complete by December and therefore the term dates must be approved by Faculty Council at its December meeting.

The Acting Speaker invited discussion. No discussion arose.

On a motion duly moved and seconded, it was resolved

THAT the 2011-2012 sessional dates, as outlined in the report, be approved.

10. Reports of Standing Committees (for information)

10 (a) Engineering Graduate Education and Research Committee

Engineering Graduate Education and Research Committee Reports 3262 and 3272 were circulated in advance and were received for information.

10 (b) Admissions Committee

Report 3276, documenting the 2010 Admissions Cycle, was circulated in advance and was received for information.

A member enquired as to why the bar charts represent Computer Engineering, Electrical Engineering, and Electrical and Computer Engineering individually. Tom Nault responded that Electrical and Computer Engineering is in the chart for 2000 only, and that in 2001 onwards, it is split into Computer Engineering and Electrical Engineering which are represented separately.

Another member asked why the chart on page three of the Report indicates no intake for Electrical Engineering in 2004 (which is shown to have an intake of 1,017 students in the preceding table). Professor Christopher Yip stated that there was indeed intake into this program in 2004, that this is an error and that he will follow up on it.

11. Other Business

There was no other business.

12. Next Meeting

The date of the next Faculty Council meeting is Tuesday, March 8, 2011. The Acting Speaker reminded Faculty Council members that Professor Jonathan Rose will assume his role as Speaker at this meeting.

13. Adjournment

The meeting adjourned at 1:20 p.m.