



UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE & ENGINEERING

Minutes of the Faculty Council Meeting

Wednesday, February 24, 2010

12:10 – 2:00 p.m.

Michael E. Charles Council Chamber, Galbraith Building

Present:

Yu-Ling Cheng (Speaker)

Vanessa Abaya

J. Stewart Aitchison

Mohannad Al-Durgham

Dione Aleman

Cristina Amon (Dean)

Erika Bailey

J. Christopher Beck

Foued Ben Amara

Ridha Ben Mrad

Estina Boddie

Mireille Broucke

Sharon Brown

Phil Byer

Tim Chan

Will Cluett

Tom W. Coyle

Chris Damaren

Levente Diosady

Khoung Doan

Birsan Donmez

Catherine Gagne

Greg Jamieson

Gina John

Mark T. Kortschot

Ofer Levi

Liam Mitchell

Farid N. Najm

Jun Nogami

Graeme Norval

Austra Ozolins

Daman Panesar

Vladimiro Papangelakis

M. Jane Phillips

Doug W. Reeve

Lisa Romkey

Paul Santerre

Hamed Shalileh

Shamim Sheikh

Chris Yip

David W. Zingg

Jean W. Zu

Guests:

Estina Boddie

Adam Fox

Tom Nault

Dan Pettigrew

Geoff Wichert

Regrets:

Bryan Karney

Saminur Majumder

Heather McLean

Tony Sinclair

Lorna Wong

1. Welcome/Adoption of the Agenda

The Speaker, Professor Yu-Ling Cheng, thanked members joining the meeting and welcomed all present to the Faculty Council meeting. She noted that a revised agenda was distributed at the beginning of the meeting.

On a motion duly moved and seconded

THAT the agenda be adopted.

The Speaker called upon Professor Jean Zu, Chair of the Department of Mechanical and Industrial Engineering, to introduce her new faculty members, Professors Birsan Donmez and Tim Chan. Professor Zu introduced Professors Donmez and Chan.

The Speaker called upon Professor Farid Najm, Chair of The Edward S. Rogers Sr. Department of Electrical and Computer Engineering, to introduce his new faculty member, Professor Ashish Khisti who, regrettably, cannot be present today. Professor Najm introduced Professor Khisti.

2. Report of the Dean

Dean Cristina Amon provided a brief update on the Faculty's Self-Study, Academic Planning and External Review.

The Faculty Self-Study started in the fall of 2009 to critically reflect and assess our collective achievements and Faculty-wide academic and administrative performance. This document will serve as a foundation for the creation of the Academic Plan for the next five to seven years.

The Self-Study will also be provided to the External Review, commissioned by the Provost, which falls within the cyclical review practice set out for all of the University's academic Departments and Faculties. A team of three reviewers will visit the Faculty on May 5 and 6, 2010 to meet with faculty, staff, students, alumni and external stakeholders.

The members of the review team are: Professor Adel Sedra, Dean of Engineering, University of Waterloo, and former Vice-President and Provost, University of Toronto; Professor Steve Director, Provost and Senior Vice-President for Academic Affairs, Northeastern University, and former Dean, College of Engineering, University of Michigan; and Professor Vijay Dhir, Dean, Henry Samueli School of Engineering and Applied Science, UCLA

The Dean encouraged members to ask further questions of Faculty Council's guest speaker, Professor Cheryl Regehr, Vice-Provost, Academic Programs, who can further discuss the External Review process.

The write-up of the Self-Study is well under-way. During the process, broad consultations have been conducted with several groups and through the Faculty eNewsletter, including Chairs and Directors, Undergraduate Student Leaders, Standing Committees of the Faculty Council, Outreach and Recruitment, Associate Chairs and Associate Directors, Presidents of Engineering Graduate student groups, members of the University's Central Administration, Faculty Innovation Administrative Team, Registrar's Office and Undergraduate Counsellors. The Dean thanked all those who have provided input and welcomes and invites further feedback.

Dean Amon indicated that the Faculty's current Academic Plan, *Stepping Up*, concludes in June 2010. The Faculty's Academic Planning process began in the summer of 2009 with the Steering Committee, made up of students, alumni, administration and faculty representatives from across the Faculty. The Steering Committee prepared a draft of the Academic Planning Framework. Chairs and Directors provided further input on the Framework.

2. Report of the Dean (continued)

This Framework guides Departments, Institutes, Divisions and Administrative Units during their current development of respective units' Academic Plans. Units are asked to consider: Positioning; Culture of Excellence; Educating Future Engineers; Student Experience; Research Foci; Research Collaboration, Outreach and Influence; and Resource Allocation. It also asks us to reflect critically on our priorities, challenges, weaknesses and the implications of our Plan. Units can also add components that address that Unit's particular uniqueness. The Dean encouraged members of Council to be involved.

When the draft Academic and Administrative Units' Plans are received, they will be synthesized into the Faculty Academic Plan and iterated to Departments and Institutes. This Plan will guide us for the next five to seven years. The target date for completion of the Plan is by summer 2010.

The Dean noted that the next Dean's Town Hall for Students will take place on Monday, March 15 at 12:00 noon in the Michael E. Charles Council Chamber. The Town Halls started a couple years ago and happen once or twice each semester. This is an opportunity for students to provide input, to ask questions and to have their concerns addressed. The Dean will also provide an update on what is happening in the Faculty. She asked that members encourage their students and for students, to please join her for this meeting.

Finally, Dean Amon noted that the third Annual Celebrating Success event will be held on Thursday, April 22 at 4:00 pm in the Michael E. Charles Council Chamber. This will be an opportunity to recognize the many accomplishments over the past year. In particular, the two faculty teaching awards and the five staff awards will be awarded at this event, rather than at the traditional date, which used to be at the May Faculty Council meeting. Dean Amon thanked everyone for the nominations put forward this year. She asked members to hold the April 22 date and to plan to attend.

The Dean's report was received for information.

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 November 25, 2009 be approved as circulated.

4. Business Arising from the Minutes of the Previous Meeting

Professor Cheng provided one item to Council for information, arising from the Minutes of the Previous Meeting. At the last meeting of Faculty Council in November 2009, the motion to approve of a new Engineering Science Major (Bachelor of Applied Science in

Engineering Science) in Engineering Mathematics and Finance was approved in principle, subject to minor changes, which included a possible name-change of the Major.

Between November and January Grant Allen, Will Cluett and colleagues from the Faculty of Arts and Science discussed the possible name change. It was agreed that a modified name would more accurately reflect the nature of the Major's curriculum. The name proposed is Bachelor of Applied Science in Engineering Science – Major in Engineering Mathematics, Statistics and Finance.

The motion, with the revised name, was approved by the Committee on Academic Policy and Programs at its meeting on January 12, 2010.

This update was received for information.

5. Proposal for an Institute for Robotics and Mechatronics (IRM)

The Speaker reminded Faculty Council that meetings are formal and our rules of order and standard parliamentary procedure require that a motion be seconded before discussion ensues. The motion pertains to changes in organizational structure and is, therefore, a special motion. A special motion requires 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.

Professor Cheng provided background on the designation of an Extra-Departmental Unit, or EDU:C. It is normally a multidisciplinary, multidepartment 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. An EDU:C 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 status only, cross-appointment.

The Speaker called upon Professor Ridha Ben Mrad to present a recommendation for the establishment of an Institute for Robotics and Mechatronics.

Professor Ben Mrad said they were asked in the fall to put together a proposal to establish an Institute for Robotics and Mechatronics (IRM). The group consulted with Departments and Institutes across the Faculty. They found that rapid development of fundamental enabling technologies, such as robots, MEMS, micro-motors or operating systems, makes the establishment of an EDU in Robotics and Mechatronics timely. It will respond to these developments and will enhance the visibility for our researchers and our Faculty nationally and internationally.

The primary objective of the IRM is to coordinate the large number of academic and research activities already underway at the Faculty. The assembly of a number of research groups will enhance cross-disciplinary research and initiatives. It will also facilitate the commercialization of technology and, going forward, will consider teaching programs focused on Robotics and Mechatronics in both undergraduate and graduate levels.

Dean Amon moved

THAT an Institute for Robotics and Mechatronics in the Faculty of Applied Science and Engineering be established as an EDU:C

Jean Zu seconded the motion.

Members discussed the opportunities for industrial collaboration, the broad-reaching goals within the Faculty and the source of funding for the Institute.

The speaker called the question. The motion was duly passed.

6. Reports of Standing Committees (for information)

6.a) Curriculum Committee Report

The attached report (#3243) of the Curriculum Committee was circulated in advance and was received for information.

6.b) Engineering Graduate Education and Research Committee Report

The attached report (#3244) of the Engineering Graduate Education and Research Committee was circulated in advance and was received for information.

6.c) Committee on Scholarships and Awards Report

The attached report (#3245) of the Committee on Scholarships and Awards was circulated in advance and was received for information.

6.d) Teaching Methods and Resources Committee Report

The attached report (#3246) of the Teaching Methods and Resources Committee was circulated in advance and was received for information.

6.e) Admissions Committee Report

The attached report (#3247) of the Committee on Admissions was circulated in advance and was received for information.

7. Guest Speaker: Cheryl Regehr, Vice-Provost, Academic Programs

Professor Cheng welcomed Professor Regehr to Faculty Council to discuss the Quality Assurance changes and how these changes may impact our academic program evaluations.

Professor Regehr said that as part of new Ontario Council of Academic Vice-Presidents (OCAV) *Quality Assurance Framework* process, every publicly assisted Ontario university that grants degrees is responsible for ensuring the quality of all programs of

study. The *Framework* resulted from the Council of Ontario Universities comprehensive analysis of the long-established OCGS procedures. The recommendations in the final report included aligning the quality assurance processes for approval and review of undergraduate and graduate programs, and establishing a new quality assurance body under the direction of the OCAV. This new body is the Ontario Universities Council on Quality Assurance (the Quality Council), established in 2009.

Accordingly, we are in the process of developing our own University of Toronto Quality Assurance Process (UTQAP) to be submitted to the University governance for approval and to the Quality Council for ratification. Once approved, the University will be responsible for commissioning external reviews for appraisal of new program proposals and cyclical program reviews. New program proposals will be submitted to the Quality Council for approval. Existing programs must be reviewed on a cycle no longer than eight years. The Quality Council will conduct its subsequent audit of our institutional compliance with our UTQAP.

By the end of 2010 both UPRAC and OCGS will have dissolved. The responsibility will now change to the Universities to ensure that they establish their review processes and follow them. The model is one-up where the Dean commissions reviews for Departments, Institutes and Divisions, and the Provost commissions reviews for Faculties. The plan is to have External Reviews with a minimum of three reviewers visit where at least two are external to the University. The Reviews follow the Terms of Reference set out by the University's template.

Once the University of Toronto Quality Assurance Process (UTQAP) is established, then Faculties can determine how best to organize and time their reviews. They can be bundled to review both Undergraduate and Graduate programs at the same time. Professor Regehr noted that these are reviews of academic programs, not of the leaders.

One aspect of reviews is for Faculties to set benchmarks and comparative data to show evidence of improvements, changes and excellence. Full data reports will be required University-wide, however each Faculty will be unique to their discipline. As a part of this, the Degree Level Expectations (both Undergraduate – UDLE, and Graduate- GDLE) must be included.

One approach would be that the alignment of approvals of undergraduate programs goes through Faculty Councils and then to the University's Committee on Academic Policy and Programs. Graduate Programs go through the School of Graduate Studies and then to the University's Committee on Academic Policy and Programs.

Members of Council discussed whether these processes are conducted at arms-length from the Quality Council. Professor Regehr said yes, that the University follows its own Quality Assurance Process (UTQAP) and the reviews are to provide a balance of expertise. The Quality Council checks every seven years that we follow our processes.

Members discussed the nature and source of peer data, the importance of the Self-Study, the government mandate and agreement with COU, the scope of the reviews and the process the Faculty of Applied Science and Engineering's reviews would follow.

Dean Amon confirmed that a Working Group is developing the framework for the cyclical reviews to combine the Undergraduate and Graduate Programs with external reviews of our Departments and Institutes, fulfilling the following requirements:

- Undergraduate and Graduate cyclical program reviews within 8-year cycles (IQAPs)
- CEAB reviews within 6-year cycles (Accreditation)
- External reviews are timed to coincide with the end of term of the unit's head, normally conducted every five years but not to exceed ten years as per UofT Guidelines as of June 2008

The Undergraduate and Graduate Degree Level Expectations (UDLEs and GDLEs) and CEAB Graduate Attributes will impact the assessment of our engineering students and programs. This will require us to identify each program's major learning objectives and include CEAB Graduate Attributes, create measurable assessment criteria/quality indicators for objectives and attributes, map these criteria to courses, identify assessment measures appropriate for the criteria and utilize the assessment outcomes for feedback and improvement.

Next, we will outline the process for assessing, demonstrating and tracking the compliance of our undergraduate programs with the new CEAB Graduate Attributes. Finally, we will describe the Faculty governance processes for ensuring that undergraduate and graduate new program proposals and changes are consistent with UDLEs and GDLEs.

Professor Yu-Ling Cheng thanked Professor Regehr for her time and discussion on Quality Assurance.

8. Tribute

The Speaker called upon Professor Farid Najm to read a memorial tribute to the late Professor Shahsi Bhushan Dewan.

Moved by: Professor Farid Najm

Seconded by: Ms Barbara McCann

Be it resolved that the Council of the Faculty of Applied Science and Engineering record with deep regret the death on November 17, 2009 of Shahsi Bhushan Dewan.

Shahsi Bhushan Dewan was born on April 16, 1941. He received his PhD in Electrical Engineering from the University of Toronto in 1966 and joined the faculty as an Associate Professor.

Shashi co-authored three major books on power electronics and applications and had more than three hundred publications and thirty patents. He contributed enormously to the foundation and development of power electronics and his book "Power Semiconductor Circuits", published by Wiley in 1975, is still widely used and referred to. He was awarded the IEEE Newell award for outstanding contribution to the field of power electronics in 1977, and the Killam Fellowship for full-time research during 1981-

1982. Dr. Dewan became a fellow of the IEEE in 1982 and served as the board of directors of over ten public and private companies.

In 1980, he founded "Inverpower Controls" in Burlington Ontario and took the company public on Toronto Stock Exchange in 1994. He then founded and was President of Digital Predictive Systems Inc (DPS) and CEO of IE Power Ltd, a wholly owned subsidiary of DPS. Professor Dewan retired in 1996 from the University of Toronto and continued his research collaboration with the University through the Centre for Applied in Power Electronics (CAPE) where he was instrumental for the leading edge research, development, demonstration, and marketing of power electronics systems for number of applications.

Dr. Dewan died suddenly at his home in Toronto on 17 November 2009.

Be it 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 member.

9. Other Business

There was no other business.

10. Next Meeting

The date of the next Faculty Council meeting will be Wednesday, May 26, 2010.

11. Adjournment

The meeting adjourned at 2:00 p.m.