

Faculty of Engineering

Faculty Council

Meeting 2021.04

9:00 a.m. Sep 13, 2021, Bi-modally in CBY A707 and on Microsoft Teams

PRESENT

Officers of the Faculty

J. Beauvais, K. Hinzer, L. Peyton, M. Labrosse, D. Yaylor, T. Lethbridge, C. D'Amours, N. Baddour, M.Fall, X. Cao, C. Adams, H. Anis.

Professors

K. Meek, B. Lessard, A. Sowinski, C. Lan, A. Macchi, H. Aoude, B. Martin-Perez, J. Infante-Sedano, H. Schriemer, H. Al Osman, J. Yao, E. Petriu, G-V. Jourdan, M. Bouchard, J. Zhao, N. Zaguia, T. Uchida, A. Weck, I. Catelas, R. St-Gelais, W. El Ahmar, M. Majeed.

Students

F. Jaheen, R. Ferdousi, A. Bezerra, A. Fellah Jahromi, S. Kateel, N. Castro, H.Y. Wang, V.Jidkov, S. Li, M. Lynds, R. Ebrahim, P. Kennedy, K.Bondy

Others including guests and non-members

S. Gandolfini, F. Bouchard, H. Howes, M. Kimberley

REGRETS

Professors

E. Dragomirescu, M. Noël, B. Dhillon

Students

S. Knysh

ABSENT

Students

E. Leblanc

21.04.01 Approval of the Agenda

The Agenda was approved.

21.04.02 Approval of the Minutes of the May Meeting

The minutes had been approved by email and there was no business arising.

21.04.03 Update on Accreditation

Vice Dean QATI, David Taylor, reported on the status of accreditation. The visiting team will be coming at the beginning of November. The programs have submitted their self-assessment reports. The next steps are to arrange details of the visit itself. This will include online visits with professors and students.

He mentioned that professors need to be aware of the implications of the graduate attributes, including the measurement indicators being used.

The Vice Dean pointed out the tremendous job Aneta Traikova has been doing regarding preparation for accreditation.

21.04.04 Report of the Dean

The Dean indicated that we can handle up to 15 people in-person in CBY A707 during the pandemic.

He indicated he is super-happy to welcome everybody and to meet some students.

Health and Safety

There have been two accidents. A student hit their head on the sharp metal edge of a piece of lab equipment; it is not clear what we could correct in that case, other than that everybody needs to be aware of sharp edges. In another accident, a technician was splashed with a chemical in their eyes.

Cybersecurity

There are thousands of attacks on the university every day. In particular, there are attacks on our research servers, with attempts to obtain confidential information. The most obvious are the phishing scams. The Dean emphasized that scammers regularly use his name fraudulently to try to get at people.

October is cybersecurity month: There will be events with industry partners.

Planning

We are now preparing our next 3-year plan. We have seen an improvement in the proportion of women and first choice applications.

We have revitalized our Master of Engineering programs. The international version of our Master of Engineering Management program has been extremely successful. During this summer we invested considerable resources in these programs, but we are obtaining considerable net revenue. We will be using this, among other things, to replenish our student international mobility program.

We had eight priorities for the last 3-year plan. Research, recruitment, and EDI are our current priorities.

The Dean indicated that the Faculty of Engineering has gone from almost nowhere to being leaders on online education.

Several major research partnerships have been established, some of which have been announced and some will be announced soon.

Guiding principles of the plan are Partnerships, EDI (equity, diversity and inclusion), sustainability, leadership training for our students, and flexibility.

Objectives of the plan focus on research, recruitment and EDI. In the research area a key is to strategically highlight the research we are conducting in order to increase recognition. With regard to recruitment, we need to improve first-choice recognition and to be a prime destination in the context of lifelong learning, which also fosters long-term relationships. With regard to EDI, we have a very different appearance than almost every other university in Ontario: We have a very different

diversity profile, but we need to do better. The ESS (Engineering Student Society) are also making EDI a very prominent focus.

21.04.05 Report of the Vice-Dean Research

The Vice-Dean circulated a report, covering the last few months.

She indicated that we are now in phase 4 of the return process following the peak of the pandemic. Capacity limits have been lifted including in grad student offices, but people are encouraged to work from home when able to do so. University-wide rules (such as for travelling) can be found on the main UOttawa page.

We are working on new rounds for CFI; these include internal competitions.

As of April 2021 you can match NSERC Alliance grants with Mitacs grants. The Vice-Dean noted that 1/3 of Mitacs fund can be used for research purposes other than the targeted HQP.

The Vice-Dean discussed various other funding issues. She highlighted the UROP program, which provides \$1000 for the student and \$500 to the professor for part-time research.

For this year's Discovery grants the deadlines are coming up at the end of October.

We have had successful applications for funding related to our collaboration with Tec de Monterrey. We have been working on this since 2018.

21.04.06 Report of the Vice-Dean Undergraduate Studies

The Vice-Dean circulated a report.

He highlighted the various options for students to reach the Undergraduate Office. There are many options. Students can make an appointment online for an online or in-person appointment. There are two rotating teams for in-person consultation on campus.

The admission numbers are quite good, while maintaining high standards regarding admission averages. We are going to have 5000 undergraduate students soon. We are at 24% women students. The proportion of international students is 31%, with many coming from Francophone countries.

The Dean pointed out that several years ago a report had said we need 30 extra professors if we are to offer all our courses in both languages. There would be a huge impact on workload and accreditation if we were to make all courses available in both languages. The increase in francophone students is great, but we still are still constrained by the number of professors.

Changes to Undergraduate programs

On a motion duly moved and seconded, Faculty Council approved 2021-UGRD-GENIE-CHG-02. This is to eliminate the biomedical option in CHG, since there have not been students for some time.

On a motion duly moved and seconded, Faculty Council approved 2021-UGRD-GENIE-CHG-03. This is the creation of course codes for 11 courses in French, and adjustment of one prerequisite.

On a motion duly moved and seconded, Faculty Council approved 2021_UGRD_GENIE_CHG_04. In the new program of Chemical Engineering, GNG 1106 was eliminated and replaced by a compulsory chemical engineering course CHG 1371 and students in

the computing technology must also take it. This is the source of the addition of a technical elective course. This proposal of minor modifications aims at correcting this discrepancy

On a motion duly moved and seconded, Faculty Council approved 2021-UGRD-GENIE-CVG-01. This involves the creation of various courses; we had been offering them previously with a generic course codes.

There was discussion of cases where a graduate course is being cross-listed as an undergrad course. Vice-Dean Graduate Studies Liam Peyton pointed out that the university is generally allowing students to count grad courses both in their undergraduate and graduate program. There may be a move towards adding annotations to some graduate courses indicating that the course is available to undergraduates.

Wassim El Ahmar pointed out that he raises awareness of graduate studies among the undergraduate students he is teaching.

The ministry says that 2/3rds of graduate courses taken by a graduate student must involve a 'graduate experience', hence this results in some cross-coded courses having extra or different work for the grad students.

Proposal for new EDTI program: Bachelor of Multidisciplinary Design

Undergraduate programs are doing well, but the Vice-Dean indicated that we need to think about the future. We must also be aware of what our competitors are doing. We have challenges regarding graduation rates as well as inclusiveness. The new Bachelor of Multidisciplinary Design program is intended to address these issues. The creation of the program involved a wide variety of consultation. This is not an Engineering, nor a Computer Science program. It also will not compete with 3-year technology programs.

Hanan Anis, interim director of SEDTI presented the program in more detail.

The proposal is to create a 3-year 90cr multidisciplinary design degree. It has multiple spines including engineering design, digital and data fluency, professional skills, experiential learning and impact of technology.

She indicated that the program is targeted at a variety of groups, including those who want some grounding in technology, but are also interested in other fields (e.g. engineering and theatre, which would not need a full engineering degree), students who might want go to law or medicine after obtaining a background in technology, those who do not have the pre-requisites for our discipline-specific programs, those who would like to leave one of our accredited programs but still obtain a degree from our faculty, those who do not know what program they want to take in our faculty when they apply, and those who would like to take an engineering minor.

Guiding principles of the program include EDI (equity, diversity and inclusion), Sustainability, Flexibility, Leadership and Partnerships.

The intent is to re-evaluate the program based on market needs every three years.

She indicated that there is particular demand for UX design, but people in industry need specific skills for this. She presented a learning path for this topic in the program.

Tim Lethbridge raised some issues regarding the targeted careers and the prerequisite paths.

Xudong Cao discussed possible pathways to jump to other programs. He also discussed the possibility of competition with Algonquin College.

Hanan Anis indicated they would encourage students to switch programs only after first year. She suggested the program might be similar to a common first year. She said that the professional spine could perhaps be implemented in some of the other programs in the Faculty, allowing students to switch into engineering and/or computer science more easily. She pointed out that this is an independent program from those of the other departments and school. She said that our focus is not 3-year or 4-year, but is multidisciplinary design, which is not a focus of Algonquin.

Carlisle Adams indicated that certain profs in software engineering and computer science have some concerns particularly regarding pre-requisite paths leading to second-year and third-year EECS courses in the sample pathways, and also the use of graduate courses at the third year level.

Hanan Anis talked about the DTI program connections relating to these graduate courses.

The Dean indicated that there is a meeting planned among various stakeholders to make some improvements. A finalized document would then be circulated for electronic approval next week.

The Dean indicated that there have been innumerable discussions with industry leaders. What is coming will be very disruptive. He said it would be good to have an exploratory program like this on the books.

21.04.07 Report of the Vice-Dean Graduate Studies

The Vice-Dean circulated a report. He highlighted some details orally.

The Vice-Dean indicated that like the undergraduate office, technology has been leveraged well. The Graduate Office is open for online and in-person consultation. With current demand they do not need queue management software yet.

Scholarship season is upon us. Students will receive emails about applying.

We are now admitting graduate students starting in each of the three semesters.

We have 150 students in the Egypt-based Master's program. The number of students registering in thesis-based programs is down a little.

There was discussion about students who received an admission scholarship. The new admission scholarship only starts this semester. Students who have started in recent semesters with an admission GPA greater than 8.0 should receive a \$3000 credit.

The Vice-Dean congratulated Agnes Bezerra and commended the involvement of students.

21.04.08 Other Business

The Dean concluded by indicating that it will be another challenging, but positive year.

The meeting ended at 11:05

A vote on the following motion was held online between Sept 23 and 28. **To approve the SEDTI Bachelor of Multidisciplinary Design, as circulated to Faculty Council members on September 23rd. / Approuver le Baccalauréat en conception multidisciplinaire de l'ÉCIPG, tel que distribué aux membres du Conseil de la faculté le 23 septembre.** The vote passed 32 in favor, 1 against and 6 abstentions.

Vice-Dean (Governance)