

Faculty of Engineering

Faculty Council

Meeting 2024.02

April 23, 2024 in person in CBY 707 and on Microsoft Teams

PRESENT

Officers of the Faculty

H. Anis, N. Baddour, G. Doudak, M. Fall, M. Labrosse, H. Viktor, F. Robitaille, A. Sowinski.

Professors

A. Ahmad, H. Al Osman, P. Branco, E. Dragomirescu, M. Dubé, C. Fauteux-Lefebvre, J. Foster, V. Groza, J. Haelssig, T. Jin, A. Karmouch, A. Karthikeyan, C. Kinsley, D. Knox, T. Lethbridge, H. Mouftah, L. Moura, N. Samaan, H. Schriemer, O. Seidou, S. Soleimani, H. Tezel, T. Uchida, S. Vanapalli, A. Weck.

Students

Rasha Alayash, Karim Alghoul, Ayoub Aouzal, José Barragán, Justin Brown, Tara Denaud Joseph, Zachary Flahaut, Ibrahim Gbane, Ghita Hajraoui, Laura Karlin, Aditya Maheshwari, Elam Olame Mugabo, Aashish Suresh, Eslin Ustun Karatop, Nyah Wagner.

Others including guests and non-members

D. Azzi, S. Douin, H. Howes, C. Morasse, J. Olivier.

EXCUSED

Officers of the Faculty

X. Cao, K. Hinzer.

Professors

B. Jodoin, Arya Rahgozar.

Students

Alejandra Carolina González.

ABSENT

Officers of the Faculty

Professors

M. Kavgic, Muslim Majeed, N. Zaguia.

Students

Nicholas Kuzyshyn.

24.02.01 Approval of the Agenda

The agenda was approved as presented.

24.02.02 Approval of the Minutes of the November 2023 Meeting

The minutes had been approved by email.

24.02.03 Matters arising from the minutes

The online Master's of Interdisciplinary AI will launch in May, while the online Master's of Digital Transformation and Innovation will launch in September 2024.

24.02.04 Report of the Dean

Dean Labrosse provided an update on activities since the last meeting, noting:

- Health and Safety: one near-miss incident with a pipette.
- Cybersecurity: always be on the lookout for suspicious email. Several people have received emails from me that were obviously fake.
- Budget 24-25: On April 3rd, the Board of Governors decided on an approach that entails a \$12-million cut from the budget of the academic sector (faculties). For the Faculty of Engineering, this means \$1.6 million cut from our base operating budget. Contributing to this amount are \$400k from FT professor positions not filled, \$640k from tuition fees with our current projected admission numbers (both UG and GR), and \$550k from support staff positions that have not been filled.
- More efforts on the revenue generation side are going to be asked from all faculties on campus in the next two years.
- Polaris (3-yr continuous improvement program run by Central; aims to improve effectiveness and efficiency of the University's admin services for students, faculty and staff): higher level discussions have taken place already with many stakeholders; meeting with the Faculty senior administration on May 15 to discuss next steps in an iterative approach (four meetings scheduled over the summer).
- Our Faculty will support current support staff to standardize and document operations in our five academic units and various research groups. This is aimed at making life easier for all, enabling interoperability, and facilitating on-boarding of new members. Examples of scope: TA contracts, student bursaries and stipends, on-boarding of PT and FT professors.

24.02.05 Report of the Vice-Dean Research

The Vice-Dean provided a written report.

24.02.06 Report of the Vice-Dean Programs

The Vice-Dean provided a written report, and noted at the meeting that:

- All annual reports were submitted as of April 23rd. Summary of each report was presented during Faculty Council meeting. Results for reports are described below.
- Regarding the CEAB Tandem system it was reported that data from previous visits had been loaded, and all associate chairs/directors will have access to the system soon.
- The Chair of the CEAB visit has officially been selected. He will provide a list of names of the visiting team shortly. The official date of the visit is Sunday, November 10th to Tuesday, November 12th. All materials need to be submitted 8 weeks prior to the visit.

1. CEG – Computer Engineering
 - **GA Analysis**
 - Overall Satisfactory performance of students, by the time students graduate.
 - GA 4 and 5 are somewhat lower than previous years (attributed to program modernization)
 - GA 9 has a drop due to an out of faculty course (HIS2129)
 - GA 12 is low at introductory levels.
 - **Notable Comments**
 - From the previous visit, the “limited coverage of engineering economics” was improved by tracking other courses that already had economics in its material such as GNG2101 and CEG3155.
 - Advisory Boards feedback has led to the creation of the course Applied Machine Learning for software and computer engineers.
 - Suggestion for Faculty of Engineering math courses.
2. CHG – Chemical Engineering
 - **GA Analysis**
 - Students do not seem to meet expectations for GA 1 by the end of the program (i.e., still deficient in 4th year courses at Advanced Level).
 - Major curriculum re-design in Fall 2019 seems to have helped GA 5, but did not have a sufficient impact on GA 1, 2, 3 and 12 – especially for courses at the I-level (bi-modal distribution). The identified problem persists.
 - **Advisory Committee**
 - May 2023 meeting, improvements were suggested primarily for GA 5, 6-12. March 2024 believe there has been a further regression on these GA.
 - Members do not report a technical knowledge and skill deficiency (GA 1-4); however, technical content is difficult to re-enforce when GA 6-12, and a good foundation in digital literacy GA 5, are not sufficiently achieved.
3. ELG – Electrical Engineering
 - **GA Analysis**
 - Two triggers are used to invoke action.
 - Criterion 1: A cycle-long persistent and continuous decline in the % of students who belong to the “Exceeds + Meets” categories.
 - Criterion 2: Seeing that less than 25% of students are within the “Exceeds + Meets” categories.
 - GA 1, 2, 12 has a declining trend, likely because of the effects of remote learning.
 - All other GA showed a stable trend.
 - **Advisory Committee**
 - Proposed integrating AI and machine learning into the curriculum. The ELG-CC deemed doing this may pose challenges as it would sacrifice coverage of other essential principles.
4. MCG/MGB – Mechanical and Biomedical Mechanical Engineering
 - **GA Analysis**
 - GA1 performance in out of faculty courses is low (Introductory)
 - GA8 weakness more at the introductory level.
 - GA12 weakness more at the introductory and developing levels.
 - **Other changes**
 - GA6 assessments were not adequately measured in the past. Whereas individual and teamwork tasks are found in many courses throughout the program, an evaluation scheme was missing to adequately evaluate individual and team peer assessment. New assessment technique was added.
 - Professors noted significant weakness in GA 1 and GA 2 for new students.

- The capstone project was changed from a one-term course to two-term course in 2023 from student feedback. Industry also appeared to receive this change as well.
 - Creation of GNG4930, a 100-hour practical internship course for MCG and MGB students.
5. SEG – Software Engineering
- **GA Analysis**
 - All GAs were deemed satisfactory, i.e., above the 70% threshold.
 - **Notable Comments**
 - New course (SEG2900 – Professional Communication and Responsibility) was developed from GA data analysis, specifically GA 8
 - Suggestion for Faculty of Engineering math courses.

From the discussions with the Faculty Council it was noticeable that across the programs GAs 1 and 2 as well as 12 were not performing to our overall standards. It was decided that more discussions on these GAs and their measurement should occur in the future to address the shortcomings.

Six undergraduate motions were presented to the Faculty Council for approval.

The complete document, including the resolutions of the motion, is presented in the following table.

Undergraduate

| Motion | Unit | Request number | Description | Academic Unit Approval | Effective Date | Approved |
|--------|------|--|---|------------------------|----------------|----------|
| Minor | EECS | 2024-UGRD-GENIE-CEG-01 | A new machine learning course (CEG4195) for CEG students, addressing a curriculum gap identified by CEG advisory boards and external reviewers. The course includes labs and emphasis on engineering. | 2024-03-22 | May 2025 | Yes |
| Minor | EECS | 2024-UGRD-GENIE-CEG-02 | Modify the short description of the course CEG4912 Computer Engineering Design Project to include the economic content that is covered in the course. | 2024-03-22 | May 2025 | Yes |
| Minor | EECS | 2024-UGRD-GENIE-CEG-03 | Modify the short description of the course CEG 3155 Digital Systems II to include the economic content that is covered in the course. | 2024-03-22 | May 2025 | Yes |
| Minor | EECS | 2024-UGRD-GENIE-MCG-01 | Modification in the calendar description of several courses in the ELG curriculum that cover the basics of electrical and electronic circuits. | 2024-03-22 | May 2025 | Yes |
| Minor | MCG | 2023-GRAD-GENIE-GNG-22 | Modifications to abolish MCG1100/1500 Introduction to Mechanical Engineering, the 3-unit introductory mechanical | 2024-03-22 | May 2025 | Yes |

| Motion | Unit | Request number | Description | Academic Unit Approval | Effective Date | Approved |
|--------|------|------------------------|---|------------------------|----------------|----------|
| | | | engineering course: a change from the current single-code course to a creation to two new co-requisite courses (1-unit and 2-units, respectively), to better reflect current practice. | | | |
| Minor | EECS | 2024-UGRD-GENIE-SEG-01 | A new machine learning course for SEG students, addressing a curriculum gap identified by SEG advisory boards and external reviewers. The course includes labs and emphasis on engineering. | 2024-03-22 | May 2025 | Yes |

24.02.07 Report of the Vice-Dean student affairs

The Vice-Dean provided a written report, and noted at the meeting that:

- QLess implementation is being finalized and is expected to be operational April 29 with no in-person reception. The implementation is intended to mirror what was done at the undergraduate side, which has been successful. Also, the QLess graduate QRcode is being reintroduced and separated from the undergraduate QRcode.
- There will be three queues: in-person appointments, virtual appointments, virtual immediate service, while no in-person immediate service will be provided.
- The processes with Ventus on graduate side will be aligned with process on undergraduate side. This includes systematic transfer of exams to Ventus in cases when professors do not do this in a timely manner, even when no accommodation was requested.

24.02.09 Report of the Vice-Dean EDI and Governance

The Vice-Dean provided a written report, and noted at the meeting that:

- The EDI advisory committee met for the second time on March 13th. The task groups have been active and met once before the committee meeting. Several topics were discussed including a survey, to establish a baseline for the Faculty. The committee also provided input on the EDI component of the Student Experience Survey. The outline of the EDI website was also shared with the committee and feedback and contributions were requested. The third meeting of this year will be scheduled during the third week of May.
- VD EDI and Governance joined the APUO-Employer Equity, Diversity and Inclusion Committee (EDIC), which is an advisory committee that provides input on all EDI measures affecting the APUO bargaining unit. The third meeting of this committee took place on March 26th and the discussion has mainly focussed on the topic of training.
- Members of EDI advisory committee together with communication and marketing are working on the development of the Faculty of Engineering EDI website.
- The election of undergraduate and graduate students, as well as part time professors took place in February, and 19 new members have joined the Faculty Council.

24.02.10 Other Business

There was no other business.

The meeting ended at 14:50.

Ghasan Doudak

Vice-Dean (EDI and Governance)