

**FACULTY OF SCIENCE
Meeting of Faculty
20 February 2018
Leacock Council Room - L232**

ATTENDANCE: As recorded in the Faculty Appendix Book

DOCUMENTS: S-17-18 to S-17-25

Dean Lennox called the meeting to order at 3:05 p.m., and welcomed members to the Faculty of Science meeting. He mentioned that there had been an important discussion on equity, diversity and inclusion at the Faculty meeting of 5 December 2017, and that another important discussion, this time on doctoral education in Science at McGill, will take place at the current meeting. Dean Lennox said that future Faculty meetings will feature valuable discussions on different themes.

1) **ADOPTION OF AGENDA**

Prof. Damha **moved**, seconded by Prof. Roulet, that the Agenda be adopted.

The motion carried.

2) **MINUTES OF 16 JANUARY 2018** **S-17-18**

Prof. McKenzie **moved**, seconded by Prof. Roulet, that the Minutes be approved.

The motion carried.

3)

(3) Is your unit already having internal conversations about these issues?

604.3

The following points/suggestions were raised:

that communication was important, and a way of incorporating a new style of training would be by injecting more creativity into courses and course evaluation (e.g., video summary)

whether doctoral student tracking was being done at the Faculty level

a number of years ago, the Office of Graduate and Postdoctoral Studies tracked doctoral students via McGill's Ph.D. Outcome Survey. The response rate was about 20%. Most engineering doctoral students go into industry, whereas in the biomedical sciences, most students go into postdoctoral positions in the first three to five years, and after that, choose a variety of career paths. From 2008 to 2018, the University of Toronto tracked doctoral students via social media. The study showed that 25% to 40% of them got positions in higher education, depending on the discipline. Common across universities was that not all positions in higher education were tenure-track positions, but rather, administrative higher education positions. Province-wide tracking of doctoral students will be conducted in Quebec.

that one of the requirements of NSERC-funded researchers was to track students, and perhaps the Faculty of Science could be involved in tracking doctoral students

a doctoral student volunteering with the non-profit Science & Policy Exchange (SPE), a

Geography students have been running a symposium with guest speakers, which allows students to learn skills such as project management, soft skills, etc.

that about 50% of students in the School of Computer Science go into academia and students who pursue careers outside of academia get better-paying jobs faster. One of the challenges for students in Computer Science is time management because the discipline is very competitive and the deadlines for paper submissions are very tight.

that, as a student in the Department of Mathematics, the balance between working solely towards a research thesis and outside projects can be challenging, even though professional development skills are very useful for career choices.

that the Master's thesis is often two thirds the length of a doctoral thesis, and the time invested is very long

that it was very important to discuss with students their career plans at the very beginning in order to guide them towards the most appropriate research projects and network for their training. Students should not be going into careers outside of academia as a fall back.

that in Computer Science, doctoral students incorporate professional training skills within the research context – for example, supervising undergraduate students, which allows

She said she will be consulting during the review process and will provide a progress update.

604.6 Dean Lennox said that Associate Dean Nilson will convene a working group, and hoped that by Fall 2018, Faculty guidelines or policies on graduate education will be available. He thanked members for attending the meeting and taking part in a very important discussion.

5) CANDIDATES FOR DEGREES

a) Bachelor of Arts and Science

S-17-19

b) Bachelor of Science

S-17-20

605.1 Director Allard said that there were 20 candidates for the B.A. & Sc. and 182 for the B.Sc. These numbers were very similar to those of February, 2017.

605.2 Director Allard said that the honorifics cut-offs (Dean's Honour List [Top 10%]; Distinction (Next

New Course:

BIOC 219 Writing in Biomedical Sciences **AC-17-44**
1 credit

Course Revision:

BIOC 220 Lab Meth in Biochem&MolBiol 1
Change in prerequisite **AC-17-44A**

Program Revisions:

(i) Honours in Biochemistry **AC-17-45**

(ii) Major in Biochemistry **AC-17-46**

(iii) Liberal – Core Science Component in Biochemistry **AC-17-47**

606.2 Associate Dean Western described a new one-credit writing course, BIOC 219, Writing in Biomedical Sciences, intended to prepare students for laboratory report writing. BIOC 219 would be offered in the Fall term of U1 and will be a prerequisite for the laboratory course BIOC 220, which is offered in the Winter semester.

606.3 Members raised concerns about offering a writing course prior to students' doing any laboratory experiments. Other universities that had introduced writing courses in their programs were beginning to incorporate laboratory report writing into laboratory courses because students were failing the writing courses. A number of studies have shown that what students really learn in laboratory courses is not the science, but instead, how to do experiments, how to critically analyze data, how to present data, and how to write up data. The suggestions were to incorporate BIOC 219 into BIOC 220 so that students can work with data and interpret it, and if necessary, increase the course credit weight to 4.

Associate Dean Western **moved**, seconded by Prof. Kirshbaum, that BIOC 219 be adopted.

0 In favour
13 Against
7 Abstentions

The motion failed.

606.4 Since BIOC 219 was not approved, the revisions to BIOC 220, and the Honours, Major, and Liberal Programs in Biochemistry will be tabled to a future meeting.

606.5 Prof. Roulet **moved**, seconded by Prof. Fussmann, that the revisions to BIOC 220, and the Honours, Major, and Liberal Programs in Biochemistry, be tabled to a future meeting pending the outcome of BIOC 219.

The motion carried.

(3) Microbiology & Immunology

New Course:

MIMM 301 Scientific Writing Skills-MIMM **AC-17-48**
1 credit

606.6 Associate Dean Western said the proposed new course, MIMM 301, concerns a literature research project. The course is meant not only to work on research and critical thinking skills but also to allow students to work in a smaller group setting where they will have opportunities to work with professors. MIMM 301 is aimed at U2 students with the appropriate prerequisites and a sufficient Science background. MIMM 301 was designed in cooperation with the library and the McGill Writing Centre. In previous years, a similar writing course was embedded in a laboratory course, MIMM 384, but students found the workload too heavy.

Associate Dean Western **moved**, seconded by Prof. Grütter, that the course be adopted.

The motion carried.

New Courses:
MIMM 496

Microbiology Adv Res Project

AC-17-49

Changes: title, description, restrictions
3 credits

New Course:

MATH 517

Honours Linear Optimization
4 credits

AC-17-60

Course Retirement:

MATH 487

Honours Math Programming
3 credits

AC-17-57

606.11

Associate Dean Western said the changes to the above three linear optimization courses are: title, description and restriction changes for MATH 417; MATH 517, a new Honours course, will replace MATH 487 and is cross-listed with MATH 417; and MATH 487 will be retired.

Associate Dean Western **moved**, seconded by Prof. Hundemer, that the two above-mentioned courses and course retirement be approved.

The motion carried.

New Course:

MATH 228

Classical Geometry
3 credits

AC-17-58

Course Revisions:

MATH 348

Euclidean Geometry
3 credits

AC-17-68

Changes: title, description, restrictions

New Course:

MATH 398

Honours Euclidean Geometry
3 credits

AC-17-59

606.12

Associate Dean Western described the proposed changes to the above related geometry courses. In MATH 348, the title, description and restrictions were being updated. A new course,

Director Allard also reminded members that there may be students writing their examinations with the OSD.

608.2 Dean Lennox pointed out that there may be many more students writing deferred examinations because this is the first year that students are not required to submit an official note to be eligible to write a deferred examination.

b) Associate Dean (Graduate Education) Laura Nilson

608.3 Associate Dean Nilson gave a brief update about the status of the new graduate student tracking system newly renamed MyProgress, designed to be an interface where students, graduate program coordinators and graduate research supervisors can log in to see a student's progress towards their degree. What is novel about this web-based tool is that it is automated and the student will get automated reminders for events such as qualifying examinations, annual graduate supervisory meeting, etc. GPS has been meeting with all the Science graduate program coordinators to get the required elements for the individual programs, and the system is in its final phases. MyProgress will be launched at the end of the Winter 2018 term, and the first

downtown campus. One is immediately in front of the Redpath Museum, and sets a poor tone to our visitors. Rue McTHC is just 40 m from this smoking zone and I urge everyone to consider this if you hear of our petition to remove this smoking zone.

Kudos mentioned include 11 of 120 newly elected members to the Order of Canada are McGillians, 3 of 10 top Québec science discoveries for 2017 were at McGill, and Melanie Daoust will join the Canadian Women's Olympic hockey team in Peongchang.

Provost Manfredi reported from the Academic Policy Committee with minor revisions to the Principal's Prize Committee and Senate Nominating Committee. All in favour for both.

Associate Provost Campbell presented a revision to post-retirement status of contract academic staff. Namely, that a post-retirement nil salary could be designed for up to three years. All in favour.

Dean Eidelman presented that the nearly three year old Faculty of Medicine Council is operating well. This administrative reform was created as a response to the Faculty's probation in 2015 by the joint U.S. Liaison Committee for Medical Education and the Committee on Accreditation of Canadian Medical Schools. Dean Eidelman proposed the Council be made permanent and all voted in favour.

Secretary-General Rogowska presented a notice of intent to include an Associate Provost as an Ex Officio member of Senate. Although only for information, there was a lengthy discussion on procedural updates to Statues revisions.

Finally, Senator Crago presented the 2017 annual report on research and innovation. In summary, McGill has good success with CIHR, moderate success with NSERC, lower FRQ funding relative to UdeM, and very low industry support. In fact, across Canada, McGill ranks 2nd last in industry support. Whether this second place is closer to the dark or light side of the