

**FACULTY OF SCIENCE
ACADEMIC COMMITTEE**

Minutes of the meeting held on 30 October 2018 at 3:00 p.m. in the Arts Council Room, Arts #160.

PRESENT: Associate Dean Axel Hundemer (Academic), Director Nicole Allard (Advising Services), Associate Dean (Education) Tamara Western, Professors Amy Blum, Huy Bui, Maxime Denis, Gail Chmura, Andrew Cumming, Barbara Hales, Michael Hendricks, Greg Marczynski, Timothy Merlis, Johanna Neslehova, Ana Nyzhnyk, Gillian O'Driscoll, Jeanne Paquette, Kathy Roulet, Clark Verbrugge; Natalie Waters; Riley Bowker, Karla Gonzalez, Reem Mandil, Kate Noseworthy; Lina Alvarez, Josie D'Amico.

VISITOR: Mr. Victor Chisholm, Undergraduate Research Officer

REGRETS: Dean Bruce Lennox, Michael Ogundeji, Simon Rahman

DOCUMENTS: AC-18-1 to AC-18-33

On behalf of Dean Lennox, Associate Dean Hundemer welcomed members to the second Academic Committee meeting of the year, and called the meeting to order at 3:00 p.m.

1. Adoption of Agenda

Item #14, Tomlinson Education Award for Change (TEACH), will be considered under Item #7, and Item 12, EPSC 320, will be postponed to a future meeting.

Prof. Paquette **moved**, seconded by Prof. Chmura, that the amended Agenda be adopted.

The motion carried.

2. Minutes of 25 September 2018

AC-18-8

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

The motion carried.

3. Business Arising from the Minutes

There was no business arising from the Minutes.

4. Courses on Dean's Multidisciplinary Undergraduate Research List (DMURL)AC-18-9

Mr. Victor Chisholm, Undergraduate Research Officer, said that one of the reasons for attending the AC meeting annually is to ensure that the list of courses starting on Page 9 of Document #AC-180 is complete and that there are no changes. Mr. Chisholm highlighted the requirements for placement on the DMURL for B.A. & Sc. and B.Sc. students (Page 1, Document AC-18-9). The DMURL is not open to B.A. Students.

The proposed courses to be added to the DMURL are:

- MIMM 496D1/D2 – Microbiology Advanced Research Project (6cr)
- MIMM 497D1/D2 – Immunology Advanced Research Project (6cr)

In addition, if the new course, **FSCI 396, Res Proj Sci Teaching & Learning (3 credits)**, is approved at today's meeting, Mr. Chisholm would like to add this course to the DMURL.

Mr. Chisholm asked members to review the list of courses in Document AC-18-9, and to check whether any courses should be added or deleted. He answered members' questions.

Associate Dean Hundemer thanked Mr. Chisholm for his excellent work on the DMURL.

Secretary's Note: During the discussion (below) of FSCI 396, Res Proj Sci Teaching&Learning (3 credits), the Academic Committee approved adding this course to the DMURL.

5. Chemistry

CHEM 688	Progress Assessment Change in title 3 credits	AC-18-10
CHEM 702	Progress Assessment 2 Change in title 0 credits	AC-18-11

Prof. Blum explained that, at the last Academic Committee meeting held on 25 September 2018, the AC suggested that the proposed course title for CHEM 702 (Assessment 2) be unambiguous, and to review the title of CHEM 688 (Assessment) at the same time. The Department of Chemistry is now proposing to rename CHEM 688 and CHEM 702 Progress Assessment and Progress Assessment 2, respectively.

Prof. Blum **moved**, seconded by Prof. Chmura, that the above changes be approved.

The motion carried.

- Minor Program in Chemistry **AC-18-33**

Prof. Blum said the proposed changes to the Minor in Chemistry are that (i) CHEM 253, a legacy one-credit laboratory course, has been removed since the content is not really needed, (ii) the current Minor is organic-chemistry-intensive, (iii) the program revisions explicitly state that courses cannot be double-counted with the student's primary major, meaning that 18 new credits are required for the Minor, and (iv) students will have more Complementary courses to choose from.

Prof. Blum **moved**, seconded by Prof. Hendricks, that the changes be approved.

The motion carried.

Associate Dean Hundemer added that he was pleased with the proposed Minor in Chemistry which gives students more course choices.

6. Computer Science

- B. Eng.; Minor Program in Computer Science **AC-18-12**

Prof. Verbrugge said that some of the changes were small and bookkeeping in nature due to course retirements and course redesign. Additional changes are that MATH 240, a corequisite for a Complementary course (COMP 251), has been added to the program, and that students will no longer be allowed to replace 12 credits of COMP-type courses

with courses from other departments. Moreover, there is a maximum of 6 allowable overlap credits.

Prof. Verbrugge **moved**, seconded by Prof. Neslehova, that the changes be approved.

The motion carried.

7. Faculty of Science Office of Science Education

New Course:

FSCI 396 Res Proj Sci Teaching&Learning
3 credits

AC-18-13

Associate Dean Western said that FSCI 396 is another opportunity to bring undergraduate students into the teaching and learning process beyond the Tomlinson Engagement Award for Mentoring (TEAM) program. FSCI 396 will give students an opportunity to develop a research project that encompasses pedagogy, educational assessment, and/or resource design in university-level science education. Some examples of research topics include assessment of course activity effectiveness, research into topic-related misconceptions, and research into, and application of, innovative teaching and learning strategies. The course contains a significant research and design component. FSCI 396 is an elective course, and is open to all students in the B.Sc. degree. Associate Dean Western will be acting as the Course Coordinator/Co-supervisor. Some of the biomedical units are also interested in taking on an undergraduate student. If FSCI 396 is approved, it will be an eligible course for the DMURL designation. Lastly, the T-PULSE fellows will be offering training workshops for FSCI 396 undergraduate students.

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

The motion carried.

8. Geography

B.A. & Sc. Program and *Option Name* Changes

– Major Concentration in Geography; *Urban Studies Option*

AC-18-14

The Option name change from Urban Systems to Urban Studies was also being revised in both the Major and Minor Concentrations in Geography; Urban Studies Option (Note the name change had previously been approved by the Academic Committee and Faculty of Science meeting in 2014).

Prof. Chmura described the changes in the Major Concentration in Geography; Urban Studies Option. The proposed changes involve the additions of three Required/Complementary Geography courses (GEOG 425, 420, 503), and one Sociology Complementary course (SOCI 366).

Prof. Chmura **moved**, seconded by Associate Dean Western, that the above program changes be approved.

The motion carried.

– Minor Concentration in Geography; *Urban Studies Option*

AC-18-15

Prof. Chmura explained that two appropriate Geography courses (GEOG 417, GEOG 420) were added to the Minor as Required or Complementary courses. SOCI 366 was added to the list of Complementary courses, and GEOG 494 was removed from the Minor due to increased enrolment in the Major where it is a Required course. Moreover,

Geography courses have been moved from Group B to Group A to provide breadth in Group B.

Prof. Chmura **moved**, seconded by Associate Dean Western, that the above program changes be approved.

The motion carried.

For information – Documents Avail. Upon Request:

B.A. Program Changes

- Honours in Geography; Urban Studies Option

- Major Concentration in Geography; Urban Studies Option

- Minor Concentration in Geography; Urban Studies Option

9. Mathematics & Statistics

MATH 240	Discrete Structures Changes: title, description 3 credits	AC-18-16
MATH 340	Discrete Mathematics Changes: title, description, restrictions 3 credits (Changes: title, description, restrictions)	AC-18-17
MATH 350	Honours Discrete Mathematics Changes: title, description, restrictions 3 credits	AC-18-18

Prof. Neslehova described the above course changes. The reason for the change in course titles for MATH 240 (Discrete Structures 1) and MATH 340 (Discrete Structures 2) is to clarify that MATH 240 is not a prerequisite to MATH 340. MATH 350 is the Honours version of MATH 340; therefore, the title is being changed to reflect this. The course descriptions for MATH 240, 340 and 350, have been updated to bring them in line with the current course content.

Prof. Neslehova **moved**, seconded by Prof. Verbrugge, that the above changes be approved.

The motion carried.

MATH 357	Honours Statistics Change in co-requisites 3 credits	AC-18-19
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Prof. Neslehova explained that the current corequisite to MATH 357 is being removed due to a previous change in prerequisites for MATH 356, which was approved in 2017-18.

Prof. Neslehova **moved**, seconded by Prof. Chmura, that the change be approved.

The motion carried.

The following new course was postponed to a future Academic Committee.

MATH 682	Intro to Probability and Stats 4 credits	AC-18-20
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There was some discussion about the proposed course, MATH 682, which was mainly created for graduate students in the Quantitative Life Sciences (QLS) Ph.D. program at

McGill, and about the fact that MATH 682 essentially combines the core components of two 300-level Mathematics courses (MATH 323 and MATH 324) into a single graduate course. The AC expressed some concerns and questions: (i) that it seemed problematic to include an introductory Complementary course at the graduate level, and that using the word “introductory” in a course title suggests that it is not really a graduate course; (ii) whether MATH 682 is meant to be a course outside of the QLS field?; and (iii) whether there were other similar graduate courses/programs in the Faculty of Science?

During the discussion, several suggestions were made, as follows: (i) that graduate students without the appropriate background could take an undergraduate course but that an additional project suitable for graduate students would be required; and (ii) that the Associate Dean (Graduate Education) Laura Nilson be consulted, given her background serving in the Office of Graduate & Postdoctoral Studies. Given the concerns and questions of the Academic Committee, it was decided to postpone approval of MATH 682 to a future meeting.

10. McGill School of Environment (MSE)

B.Sc. Program Changes:

- Minor Program in Environment
- Diploma in Environment

AC-18-21

AC-18-22

Ms. Roulet gave some background about the Suggested Course List (SCL) residing in the three different Environment program requirements (Diploma in Environment, Minor in Environment, and Minor Concentration in Environment [the latter not for AC approval]). As a result of the introduction of the eCalendar, and over time, the SCL is no longer identical, and therefore, it would be preferable to remove the SCL from the respective programs' course requirements, and to maintain it in one place.

The proposed revisions to the SCL include adding new courses, removing retired courses, removing courses because students lack the prerequisites, etc. In addition, some sections were moved from outside of the program information to inside the program information, or within the program information section. Ms. Roulet answered members' questions.

Suggestions made concerning the SCL were (i) the addition of GEOG 550, Historical Ecology Techniques, and/or GEOG 505, Global Biogeochemistry, and (ii) that a note be added that students may take EPSC 201 or EPSC 233, but not both.

Ms. Roulet **moved**, seconded by Prof. O'Driscoll, that the changes be approved with the above recommendations.

The motion carried.

Secretary's Notes: (1) Following consultation with the Departments of Geography, and of Sociology, the following courses SOCI 307, SOCI 365, SOCI 366, and GEOG 550, were added to the SCL. (2) Confirmation received from Enrolment Services that the SCLs will need to be maintained in all three Environment program requirements.

For Information - Documents Available Upon Request

Program Changes for B.A. & Other Students
- Minor Concentration in Environment

11. Physics

B. Eng.; Minor Program in Physics

AC-18-23

Prof. Cumming said that the proposed revisions in the Minor in Physics clearly specifies that the Minor is restricted to students in Honours Engineering programs (i.e., Honours in Electrical Engineering and Honours in Mechanical Engineering) to avoid confusion for the units involved. Also, the reference to PHYS 357 and PHYS 457 is being removed since these two courses are no longer part of the Honours Program in Electrical Engineering.

Prof. Cumming **moved**, seconded by Prof. Hendricks, that the changes be approved.

The motion carried.

12. Earth & Planetary Sciences

EPSC 231	Field School 1	
	Changes: prerequisites, supplementary information	AC-18-24
	3 credits	

Prof. Paquette explained that the reason for changes in prerequisite courses for EPSC 231 is to reflect the course sequence in the programs in Earth & Planetary Sciences.

The projected amount of the additional fee for 2019 should be updated in two places in the course revision form for EPSC 231.

Prof. Paquette **moved**, seconded by Prof. Roulet, that the changes be approved.

The motion carried.

Secretary's Note: The projected amount of the fee for 2019 is projected to be \$594.10, pending approval by the Fee Advisory Committee.

EPSC 519	Isotopes in Earth & Env Sci	
	Changes: title, description, prerequisites	AC-18-28
	3 credits	

Prof. Paquette described the changes in EPSC 519. She said that, because a new instructor was teaching the course, the course description has been broadened to reflect this instructor's expertise. Also, the prerequisites and title have been updated accordingly.

After some discussion about the 200-level prerequisites for a 500-level course, it was decided that the prerequisites should be reworded to explicitly state that the course is intended for U2 and U3 students.

Prof. Paquette **moved**, seconded by Prof. Roulet, that the changes be approved.

The motion carried.

Secretary's Note: The prerequisites for EPSC 519 have been modified to "CHEM 120 or EPSC 220, and registration in U2 or higher in a B.Sc. program, or permission of the instructor."

The following course was postponed to a future Academic Committee meeting:

EPSC 320	(Changes: course activities, supplementary information)	AC-18-26
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13. Biology

BIOL 495	Quantitative Biology Seminar 2	AC-18-30
	Course retirement	

1 credit

Prof. Hendricks said that BIOL 495, Quantitative Biology Seminar 2, is being retired because BIOL 395, Quantitative Biology Seminar 1, is now the integrative seminar course for the joint and interdisciplinary programs (i.e., Major and Honours Programs in Computer Science and Biology).

Prof. Hendricks **moved**, seconded by Prof. Chmura, that the retirement be approved.

The motion carried.

14. **Associate Dean (Education) Tamara Western**

(i) Proposed Course Evaluation Questions

AC-18-31

Associate Dean Western said that several years ago, the Academic Committee formed a small Subcommittee on Course Evaluation Questions to look at possibly standardizing course evaluation questions. The Subcommittee found that most departments asked essentially the same questions but often had very different wording. In order to simplify questions for students, the Subcommittee recommended a set of questions in Document AC-18-31. Associate Dean Western pointed out that the questions are geared towards lecture courses only, rather than laboratory or field courses. Departments could include additional questions, and professors have the option to add three course-specific questions. For questions that may not be relevant to all courses or students, "Not Applicable" will be added. Furthermore, each question will include a comment section if students wish to explain their numerical ratings.

The following changes were suggested for the questions in Document AC-18-31:

(i) Under the first heading "Instructor Questions (will be repeated for each instructor)" a scale was suggested, Never to Always, as opposed to Disagree to Agree.

(ii) Remove "I felt that" from Questions 1,2,3,4,6,7, and 9, from the beginning of the questions.

One member commented that some of their courses involve a large number of instructors teaching a course, and that the Department was aiming to reduce the number of instructor-specific questions because it could decrease the response rate.

Associate Dean Western **moved**, seconded by Prof. Hendricks, that the Faculty of Science Proposed Shared Course Evaluation Questions (Document AC-18-31) be adopted with the above revision.

The motion carried.

The above proposal (Document AC-18-31 [REV]) will be considered at the next Faculty of Science meeting to take place on Tuesday, 13 November 2018.

(ii) Tomlinson Education Award for Change (TEACH)

AC-18-32

Associate Dean Western introduced a new undergraduate award/opportunity for teaching and learning that has recently been created with T-PULSE and the new Office of Science Education (OSE). The OSE consists of Associate Dean (Education) Tamara Western, Director Marcy Slapcoff and Dr. Anita Parmar, and the office is located in Wilson Hall at McGill. The TEACH award mirrors the Tomlinson Engagement Award for Mentoring (TEAM) program. Similar to the undergraduate TEAM program, the TEACH awardees

will have the opportunity to work on course design and development, course assessment, course improvement, and testing and designing new activities that could be used in new courses. The creation of the TEACH was partly to formalize what was already happening and to inform students and professors of an opportunity open to them and that it is being acknowledged as a separate type of award. The goal of the University is to help people learn and, since students are the ones who are learning, they know best how to learn. Student input will be useful for everybody.

Associate Dean Western said that the TEACH was announced at a Chairs' meeting and at the Faculty of Science meeting, both held in October 2018. In addition, the T-PULSE will be announcing the TEACH award.

15. SUS Activities

Ms. Mandil, President of the SUS, reminded members of the AC that the Graduate and Professional Schools Fair will take place on Tuesday, 6 November 2018 in the New Residence Hall.

16. Other Business

There being no further business, Associate Dean Western **moved**, seconded by Prof. Denis, that the meeting be adjourned.

The motion carried.

Next meeting: 20 November 2018