

**FACULTY OF SCIENCE
Meeting of Faculty
Tuesday, March 18, 2014
Leacock Council Room – L232**

ATTENDANCE: As recorded in the Faculty Appendix Book.

DOCUMENTS: S-13-21, S-13-22

In the temporary absence of Dean Grant, Associate Dean Hendren called the meeting to order at 3:00 p.m.

(1) ADOPTION OF AGENDA

Prof. Grütter **moved**, seconded by Prof. Mucci, that the Agenda be adopted.

The motion carried.

(2) PRESENTATION: RESEARCH PERFORMANCE & INTERNATIONAL STRATEGY

702.1 Vice-Principal (Research & International Relations) Rosie Goldstein highlighted key points of her presentation on research performance and international strategy, which is available on the Web at

<http://www.mcgill.ca/science/about/administration/docs-agenda-faculty/2013-2014/march-18-2014>

V.-P. Goldstein said she would be pleased to answer members' questions.

702.2 Associate Dean Hendren asked whether the Research Intensity measure (research funding per eligible researcher) was normalized to take account of different levels of funding for researchers in different fields. V.-P. Goldstein said that it was not. In reply to another question from Associate Dean Hendren, V.-P. Goldstein said that her office was working to attempt to increase the amount of funding for pure research (as opposed to contract work).

702.3 In response to a member who said that a major problem related to research funding was McGill's shortage of space, and that this had had a negative impact relating to potential Regroupements Stratégiques funding, V.-P. Goldstein said that although space was a perennial problem at McGill, her office would work creatively to attempt to provide support for any space-related issues.

702.4 In reply to a member, V.-P. Goldstein said that McGill could improve its flexibility in dealing with commercial companies to increase opportunities for collaboration.

702.5 Dean Grant said, in relation to Associate Dean Hendren's point, that while it was important to measure funding levels for research, and to attempt to increase funding levels, it was also important to keep a critical eye on the type of research that would be done and its worth.

Dean Grant thanked V.-P. Goldstein for her presentation to the Faculty of Science and for her responses to questions.

(3) **MINUTES OF FEBRUARY 18, 2014**

Ms. Toccalino **moved**, seconded by Prof. Mucci, that the Minutes be approved.

The motion carried.

(4) **BUSINESS ARISING FROM THE MINUTES**

There was no business arising from the Minutes.

(5) **REPORTS OF COMMITTEES**

a) **Academic Committee** **S-13-22**

The Academic Committee approved the following on Tuesday, February 25, 2014:

(1) **Biology**
- New Course

BIOL 580 Genet Approaches to Neur Syst **AC-13-79**
3 credits

705.1 Associate Dean Hendren said that the course will expand neurobiology offerings for both graduate and senior undergraduate students.

705.2 This course will be added as a Complementary course to the following programs:
- B.Sc. Major and Honours Programs in Neuroscience
- B.Sc. Major in Biology and Mathematics (Neurosciences Stream)

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

The motion carried.

- New Course

BIOL 598 Advanced Design and Statistics **AC-13-80**
3 credits

705.3 BIOL 598 will merge BIOL 596 (Advanced Experimental Design: 1 credit) and 597 (Advanced Biostatistic: 2 credits) into a single 3-credit course.

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

The motion carried.

- Course Changes

BIOL 342 Contemp Topics in Aquatic Ecol **AC-13-81**
Title, Description
3 credits

705.4 Associate Dean Hendren said that the changes to BIOL 342 add topics in freshwater biology and ecology to the previously existing marine topics.

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

The motion carried.

Program Changes:

- Major in Biology

AC-13-82

705.5 The changes clarify the minimum and maximum number of credits, rearrange Required and Complementary course lists for greater clarity, and specify that 6 Complementary credits at the 400-level or above are required.

Associate Dean Hendren **moved**, seconded by Prof. Western, that the changes be approved.

The motion carried.

Associate Dean Hendren thanked the Department of Biology for the work involved in clarifying the program.

(2) Physiology

- Honours in Physiology

AC-13-26

- Major in Physiology

AC-13-27

- Liberal - Core Science Component in Physiology

AC-13-28

705.6 In reply to a student concerning the lack of the specific inclusion of CHEM 302 in the Major and Honours Programs in Physiology, Dean Grant said that the issue would be looked into.

Associate Dean Hendren **moved**, seconded by Prof. Hurtubise, that the above changes be approved.

The motion carried.

Associate Dean Hendren thanked the Department of Physiology for the work done in revising the programs, and for obtaining the many consultation reports from relevant units.

Secretary's Note: CHEM 302 will not be specifically listed in the Major and Honours Programs in Physiology, but Major students can take it under the Upper-Level Science Courses umbrella. The reason for not specifically listing CHEM 302 is that the course is subscribed to near capacity.

(3) Mathematics & Statistics

Proposed Changes to the Undergraduate Analysis Courses

AC-13-63

- New Course

MATH 254

Honours Analysis 1

AC-13-64

3 credits

705.7 Associate Dean Hendren said that owing to the increased enrolment in MATH 242, Analysis 1, the new course MATH 254 was being created especially for Honours students.

Associate Dean Hendren **moved**, seconded by Prof. Hurtubise, that the course be adopted.

The motion carried.

- Course Changes

MATH 242	Analysis 1 Restrictions 3 credits	AC-13-65
MATH 243	Analysis 2 Description 3 credits	AC-13-66
MATH 255	Honours Analysis 2 Prerequisites, Description 3 credits	AC-13-67
MATH 354	Honours Analysis 3 Description 3 credits	AC-13-68
MATH 355	Honours Analysis 4 Description 3 credits	AC-13-69

705.8 The restriction change for MATH 242 reflects the creation of MATH 254. The changes in the other four courses reflect current teaching practices.

Associate Dean Hendren **moved**, seconded by Prof. Hurtubise, that the above course changes be approved.

The motion carried.

MATH 356	Honours Probability Prerequisites, Corequisites 3 credits	AC-13-70
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705.9 The changes will allow students more flexibility in courses.

Associate Dean Hendren **moved**, seconded by Prof. Hurtubise, that the course changes be approved.

The motion carried.

MATH 587	Advanced Probability Theory 1 Prerequisites 4 credits	AC-13-71
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705.10 Associate Dean Hendren explained the reasons for the prerequisite changes.

Associate Dean Hendren **moved**, seconded by Prof. Hurtubise, that the course changes be approved.

The motion carried.

B.Sc. Program Changes:

- Honours in Applied Mathematics
- Honours in Mathematics

AC-13-73

AC-13-74

705.11 Allowing students to choose either MATH 242, Analysis 1, or MATH 254, Honours Analysis 1, makes a transfer between Major and Honours programs simple.

Associate Dean Hendren **moved**, seconded by Prof. Hurtubise, that the above changes be approved.

The motion carried.

- Honours in Mathematics & Physics

AC-13-75

705.12 As above, the choice of MATH 242 or MATH 254 allows for a simple transfer between Major and Honours programs.

Associate Dean Hendren **moved**, seconded by Prof. Grütter, that the changes be approved.

The motion carried.

Proposed Changes to the Undergraduate Honours Program in Probability and Statistics

- Honours in Probability and Statistics

AC-13-72

AC-13-76

705.13 After describing the proposed changes, Associate Dean Hendren **moved**, seconded by Prof. Hurtubise, that the changes be approved.

The motion carried.

- Honours in Statistics and Computer Science
- Joint Honours in Mathematics and Computer Science

AC-13-77

AC-13-78

705.14 For both programs, the choice of MATH 242 or MATH 254 allows for a simple transfer between Major and Honours programs. For the Honours in Statistics and Computer Science, MATH 587 is a more appropriate course than MATH 355.

Associate Dean Hendren **moved**, seconded by Prof. Thérien, that the above changes be approved.

The motion carried.

(4) Other (For Information)

- Participation Trends In Undergraduate Research Courses

AC-13-62

705.15 Associate Dean Hendren summarized the data in Document #AC-13-62. She said that in 2005-2006, there had been 24 students registered in the 396 undergraduate research

courses. This had climbed to 193 in 2013-2014 (not including summer). Over the last several years, around one-third of the 396 students were in U2. The Department of Human Genetics (a non-Science department) introduced a 396 course available to Science students in 2012-2013. This was enjoying a healthy enrolment. The only B.Sc. department currently without a 396 course was Pharmacology, which had recently indicated that it would create one.

705.16 Dean Grant mentioned that the Principal had been very impressed that about 50% of B.Sc. students were undertaking a research experience.

- Mathematic & Statistics B.A. Program Changes

- Honours in Probability and Statistics
- Honours in Statistics and Computer Science
- Joint Honours Component Mathematics

(6) DEAN'S BUSINESS

Report on the Tomlinson Teaching Project

706.1 Prof. David N. Harpp, Tomlinson Professor of Science Education, is currently running the Tomlinson Project in University-Level Science Education (TPULSE). Prof. Harpp said TPULSE was established by Richard Tomlinson in 2002 with an endowment of \$8.5M. The endowment provides for fellowships to graduate students to give teaching workshops. This allows these students to take a course in graduate-level education, and to give a number of workshops a year encompassing about 50-60 graduate students who intend to teach.

706.2 New features over the past year were assistance for undergraduate teaching, as well as some small research grants. Prof. Harpp said that he had invited the deans of Agriculture and Environmental Sciences, Education, Engineering, Medicine and Science to solicit applications from instructors in science in their faculties who wished to have the assistance of "undergraduate peer instructors." The idea was that the academic instructors could choose 1-3 excellent students from a course they had taught the previous year, to assist them, in any way they chose, in their teaching. Forty-nine courses and 110 students participated in the project. The courses were distributed as follows:

Science/Medicine 35
Engineering 7
Agriculture and Environmental Sciences 6
Education 1

706.3 The award to the undergraduate peer instructors was \$300 for about 25 hours of work.

706.4 Prof. Harpp said that results for the Winter term were not yet available, but of the 27 Fall term courses, all instructors responded to the project very favourably, and all wanted renewals for succeeding years.

706.5 Prof. Harpp said the project would definitely be repeated in the 2014-2015 academic year, and he anticipated being able to fund about 200 students. Letters from the deans would be sent to the relevant faculties.

706.6 In addition, 7 small research projects had been funded.

Dean Grant thanked Prof. Harpp for his work on the Tomlinson Project, and said that the project was in good hands.

(7) REPORT ON ACTIONS OF SENATE

Please note that the entire Minutes of Senate are available on the Web at <https://www.mcgill.ca/senate/senate-2013-2014/senate-meeting-documents-2013-2014>

Prof. Timothy Moore - Senate Meeting of February 19, 2014

The meeting started in an exciting manner as Senators had to run the gauntlet through students protesting about administrative changes in the Faculty of Arts. We were led by our brave, lion-hearted Dean of Science waving his Ipad like a sword.

After a memorial tribute for Emeritus Professor William H. Feindel (Medicine), the Principal commented on items such as the welcome infusion of funds to universities from the federal and provincial governments, and kudos such as the Steacie Fellowships won by Professors Abouheif in Biology and Clerk in Physics.

A question was posed by student senators on the Student Assessment Policy, in particular its application and the dependence in some courses on the final mark being based largely on the final examination (>75% of final mark). In response, Deputy Provost Dyens noted that courses “should” have more than one evaluation but, as long as the evaluation is fair and reasonable and clearly described on the course outline, one single evaluation for a course is permitted. An assessment of complaints about the application of this Policy will be presented at a later meeting.

45 minutes was devoted to an Open Discussion on ‘Breaking down silos: interdisciplinary collaborations’, focusing on the barriers and what the university could do to promote this. The discussion was wide-ranging and confusing, but some sort of agreement was reached on the need for shared intellectual spaces, the role of teaching and research in interdisciplinary studies, administrative support and good advising for students to ensure that the interdisciplinary studies potential could be met.

Senate was then hugely entertained by Provost Masi’s latest PowerPoint update on the budget, which appeared precise but involved several approximations, driven by changing policies at the provincial level. For example, ‘if you pay off your debt we shall give you money’ was changed to ‘if you make progress to pay off your debt we shall give you money’. The merits of loose and tight definitions of funding allocation was discussed and the 2013-14 deficit was likely to be about \$10 million, give or take a few million. It was stated that McGill faculty are underpaid by any standard and raising salaries would place us only in the middle five of the top 15 universities in Canada; one could hear the disappointed sighs as Senators checked their bank accounts. Senators did not realise, though, that the new policy of paying faculty and staff every 14 days will result in an extra one quarter of a day’s pay per year; that may have produced cheers.

Further mundane items were covered, such as a Report from the Academic Policy Committee, a report from the Board of Governors (notably the appointment of Michael Meighan as Chancellor from July 2014), and verbal ‘status quo’ reports on livestreaming and Senate composition.

Senators then dashed out in to the twilight to buy their Babcock McGill ties ready for the Olympics Hockey games.

(7) **MEMBERS' QUESTION PERIOD**

There were no members' questions.

(8) **OTHER BUSINESS**

There being no further business, the meeting adjourned at 4:10 p.m.