

**FACULTY OF SCIENCE  
Meeting of Faculty  
Tuesday, 19 April, 2016  
Leacock Council Room - L232**

**ATTENDANCE:** As recorded in the Faculty Appendix Book

**DOCUMENTS:** S-15-27, S-15-28

Dean Lennox called the meeting to order at 3:05 p.m.

**1) ADOPTION OF AGENDA**

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

**The motion carried.**

**2) LEO YAFFE TEACHING AWARD**

**902.1** Dean Lennox introduced Prof. Edith Zorychta, Chair, Leo Yaffe Award/Principal's Prizes Committee.

**902.2** Prof. Zorychta said that the Leo Yaffe Award is given each year to recognize superior teaching at the undergraduate level in the Faculty of Science.

**902.3** The nominees for the 2015-2016 Leo Yaffe Award were:

Prof. Lauren Chapman, Biology  
Prof. Henri Darmon, Mathematics & Statistics  
Prof. Melanie Dirks, Psychology  
Prof. Samantha Gruenheid, Microbiology & Immunology  
Prof. Derek Ruths, Computer Science  
Prof. Martin Schmeing, Biochemistry  
Prof. Alvin Shrier, Physiology

**902.4** Prof. Zorychta said that the nominees for the Award were excellent, and that the choice had been very difficult. The Committee was highly impressed with the quality of teaching in the Faculty of Science. She announced that the winner of the Leo Yaffe Award for the current year was **Professor Henri Darmon** of the **Department of Mathematics & Statistics**.

**902.5** Unfortunately, due to prior commitments, Prof. Darmon was unable to attend either the April or the May Faculty of Science meeting.

**902.6** Prof. Zorychta read the citation:

“The Leo Yaffe Award is given each year to recognize a faculty member for superior teaching at the undergraduate level in the Faculty of Science. The recipient for 2016 is Professor Henri Darmon from the Department of Mathematics and Statistics. He has introduced a generation of students to the beauty of mathematics and they consistently rate him as one of the best professors they have ever known.

Professor Darmon was once a student in the classes that he now teaches, receiving a BSc from McGill prior to his PhD from Harvard. His graduate work led to a position at Princeton, but fortunately, after a few years he returned to McGill and quickly established himself as one of Canada's leading mathematicians. He is internationally recognized for his research in number theory, and his outstanding ability to communicate abstract concepts with precision and eloquence has made him a highly desirable speaker at conferences and special events. Throughout his career the exciting research, extensive travel and a long list of awards have never altered his dedication to the undergraduate classroom. Characteristically, he has expressed his philosophy of teaching with clarity and precision in the following statement: *"opening up new areas for mathematical exploration is an empty activity if there is no one to explore it. Because of this, conveying the excitement and beauty present within mathematics to new generations of students is perhaps the single most fundamental contribution to the growth and health of the subject."* The tributes from his students reflect how effective he has been in accomplishing this.

Three main themes recur in student comments about Henri's teaching. They emphasize his intelligence and depth of knowledge, demonstrated by his ability to answer any question with ease, and his skill in explaining abstract concepts in language that is so crystal clear they can understand him at a level they did not previously think was possible. Typical statements include "he knows the material inside out", "his brilliance and enthusiasm are both invigorating and addictive", "a fantastic teacher, he takes a very abstract notion of algebra and makes it accessible through patient, illuminating lectures", "the way he approaches the material gives the impression that he is rediscovering it all over again with us, which brings an element of excitement and wonder to an otherwise difficult and heavy subject." One summarized everything by saying: "He is the best teacher I have ever had. He is a stunning example of academic professionalism and passion for the field"

A second quality is Professor Darmon's astute sensitivity to the ongoing comprehension of students in each class and his ability to instantly improvise and adjust his explanations to maintain their understanding without sacrificing depth and without getting sidetracked. Students explain that "he has a perspective beyond his own and can anticipate which part of the material may be tougher", and that "he seems to genuinely believe our understanding is his responsibility". A former student, now a colleague, states that Henri Darmon has a profound ability to adjust his teaching to the mathematical maturity of the class so that students can always achieve a deep understanding of the concepts. He exposes them to the most important ideas in a way that inspires and motivates them to study and reflect, the outcome being a deeply personal appreciation of the material, and this is one of his great talents.

Last, and certainly not least, Professor Darmon has a wonderful ability to relate to his students and they describe him as humble, dedicated, patient, approachable, and always willing to help. They use terms like the nicest professor, and one who clearly loves teaching. They note that he answers questions from trivial to challenging with clear explanations and an amiable manner, and they are not afraid to ask. He is deeply valued as "an amazing teacher who wants to teach and truly cares about his students".

In summary, student evaluations are filled with gratitude for the most effective teacher that many of them have ever had and they consider it a privilege to listen to him – sometimes being sad when class ends because it is so interesting. They handle a heavy workload, difficult assignments and challenging exams with praise for his courses that are so well organized and his teaching that is so exceptional. They emphasize that he has changed their lives by introducing a clarity and level of understanding they could not have achieved without him. Former students who have become teachers consider him their role model for what a teacher should be, and they aspire to be like him. Professor Henri Darmon has an impact beyond time and place and is an ideal recipient of the Leo Yaffe Award.”

**902.7** Dean Lennox thanked Prof. Zorychta for the wonderful citation, and he thanked Prof. Zorychta and the Committee members for their diligent work in perusing the nominations. Both Dean Lennox and Prof. Zorychta thanked Josie D'Amico for her diligence in coordinating the workings of the Committee.

**902.8** Dean Lennox added that he had had several comments to the effect that the Faculty of Science's method of selecting Leo Yaffe Award winners, should be the model across the University.

**902.9** Dean Lennox said that the Leo Yaffe Award will be presented to Prof. Darmon at the **Science Convocation on June 6, 2016**. He hoped as many Faculty members as possible will attend.

**3) MINUTES OF 15 MARCH, 2016 S-15-27**

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

**The motion carried.**

**4) BUSINESS ARISING FROM THE MINUTES**

There was no business arising from the Minutes.

**5) REPORT OF COMMITTEE**

- Academic Committee

**S-15-28**

The Academic Committee approved the following on Tuesday, 22 March, 2016:

**SECTION A: NEW COURSE**

**Mathematics & Statistics**

MATH 125

Math. Techniques for Economics  
3 credits

**AC-15-57**

**905.1** Associate Dean Western said that the proposed course would provide Economics students with a background in Calculus, fulfilling this need.

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

**The motion carried.**

*Secretary's Note:* Director Nicole Allard has pointed out that the course should not be available for B.A. & Sc. and B.Sc. students. This will be reflected in the course proposal form.

## **SECTION B: COURSE AND PROGRAM REVISIONS**

(1) **Physics**  
PHYS 228

Energy and the Environment  
Changes: renumbered from [-184],  
prerequisites, restrictions

**AC-15-58**

**905.2** Associate Dean Western explained that the original number of the course had actually been PHYS 228, and that it had been renumbered to PHYS 184. With the addition of a prerequisite, the Department felt that PHYS 228 was a more appropriate number. Furthermore, the number PHYS 228 would allow the course to be included as a Complementary course in the B.A. & Sc., B.Sc. Minor in Physics, and B.A. & Sc. Major Concentration in Physics, as well as several Environment programs (see Section 1A, below).

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

**The motion carried.**

### **B.Sc. & B.A. & Sc. Program Changes:**

- B.Sc. Minor in Physics

**AC-15-59**

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

**The motion carried.**

- B.A. & Sc. Minor in Physics

**AC-15-60**

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

**The motion carried.**

- B.A. & Sc. Major Concentration in Physics

**AC-15-61**

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

**The motion carried.**

**905.3** Since the B.A. & Sc. PAC has not yet approved the above two program changes, the changes are tentative until approval by the PAC.

*Secretary's Note:* The B.A. & Sc. PAC met on Wednesday, 20 April, 2016, and approved the above two program changes.

**905.4** In addition, the following are other programs affected by the Minor in Physics:

- Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) –

Major Concentration Chemistry with Minor Physics for Teachers (135 credits)  
- Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) –  
Major Concentration Biology - Organismal with Minor Physics for Teachers  
(135 credits)  
- Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) –  
Major Concentration Biology-Cell/Molecular with Minor Physics for Teachers  
(135 credits)

**(1A) PHYS 228/Environment**

Additionally, PHYS 228 will be included in the following Environment Programs, under the **Natural Sciences and Technology Section of the Suggested Courses List**:

- Minor in Environment
- Minor Concentration in Environment
- Diploma in Environment

**905.5** In all the above three Environment programs, PHYS 228 was added as a Complementary course.

**(2) Physics and Chemistry:**

- B.Sc. Honours in Physics and Chemistry

**AC-15-62**

**905.6** Associate Dean Western said that the changes were simply housekeeping. Two courses (CHEM 253, CHEM 263, 1 credit each) had been combined into a single course (CHEM 283, 2 credits), and the changes reflect this. Also, the program had been reformatted.

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

**The motion carried.**

**(3) Microbiology & Immunology**

- Honours in Microbiology & Immunology

**AC-15-63**

**905.7** Associate Dean Western explained that the offerings were being expanded by the addition of MIMM 387 (The Business of Science) and COMP 364 (Tools for the Life Sciences) to the list of Complementary courses.

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

**The motion carried.**

- Major in Microbiology & Immunology

**AC-15-64**

**905.8** COMP 364 was being added to the list of Complementary courses.

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

**The motion carried.**

- Liberal - Core Science Component in Microbiology & Immunology

**AC-15-65**

**905.9** The addition of COMP 364 to the list of Complementary courses.

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

**The motion carried.**

**(4) Interdepartmental Honours in Immunology Program Changes AC-15-66**

**905.10** Associate Dean Western said that these were more housekeeping changes. The recent replacement of BIOC 300D1/D2 (6 credits) with BIOC 220 and BIOC 320 (3 credits each) was being reflected.

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

**The motion carried.**

**905.11** Associate Dean Western reminded members that guidelines had been put together about six years ago by the Academic Committee and the Faculty of Science, concerning appropriate levels and prerequisites for courses. These are available from Associate Dean Western or Josie D'Amico.

**905.12** Dean Lennox said that Faculty of Science meetings were not simply a rubberstamp of Academic Committee decisions, but it was a function of Faculty meetings to consider, and if necessary reject, decisions made by the Academic Committee.

**6) DEAN'S BUSINESS**

a) Announcements

**906.1** Dean Lennox announced the following items of interest to the Faculty of Science:

- Recent appointment of **Dr. Heather McShane** in a dual role as (1) Research Liaison Support Officer for the Faculty of Science, working closely with Associate Dean (Research) Doina Precup in coordinating grant applications with Faculty researchers; (2) Coordinator of the McGill Sustainability Initiative, which encompasses the entire University.
- Science Convocation will be held on the day of **6 June 2016** on the Downtown Campus, with a stellar list of luminaries on stage. Honorary Degrees will be presented to **(1) Dr. Paul T. Anastas**, founder of Green Chemistry, and **(2) Dr. Vinton Gray Cerf**, one of the founders of the Internet. Faculty of Science members should attend the Science Convocation, if at all possible.
- Two prestigious **Killam Research Fellowships** were awarded to researchers in the Faculty of Science in 2016: **Prof. Charles Gale**, Department of Physics, and **Prof. Andrew Gonzalez**, Department of Biology.
- **The Faculty of Science Excellence Award** (this year to go to a member of the M Category) will be presented at the 24 May 2016 Faculty of Science meeting in Leacock 232.
- Regarding the \$2 billion Strategic Infrastructure Fund for physical infrastructures of universities and colleges, there was a pledge from the Administration to submit by the end of the week, applications for the MicroFab Project, the Organic Chemistry Laboratory renovations in the Maass Chemistry Building, and the massive renovations to the Stewart Biological Sciences Building. The chances for receipt of large-scale funding for the Faculty of Science were very good.

b) Budget

**906.2** Dean Lennox announced the following details regarding the budget.

- The University Administration's budget process is now finalized in terms of preparation of documents, although the exact details for the Faculty of Science are not yet clear. The cut to the Faculty may be of the order of 1%. The process for departments will be changed in mid-stream, with each unit now receiving a simple numerical percentage cut to its operating costs, rather than the previous method of the Faculty attempting to incorporate retirements, resignations, etc. (i.e., department-specific) into the cuts. Much more clarity regarding the new process should evolve over the next six weeks.
- Funds (\$400,000) have recently been secured for much-needed graduate and undergraduate space. Funding has also been received for upkeep of field stations, and for security issues (\$250,000), such as the purchase of card readers.

**7) REPORTS OF DIRECTOR & ASSOCIATE DEANS**

a) Director (Advising Services) Nicole Allard

Director Allard said she had no report for this meeting.

b) Associate Dean (Graduate Education) Laura Nilson

**907.1** Associate Dean Nilson presented the Graduate Education Report.

- Recent call for letters of intent (LOI) (deadline, 16 May 2016) for the well-funded and prestigious Banting Postdoctoral Fellowships. Criteria include the candidate's excellence, leadership capacity, and the synergy between applicant, supervisor, and institution. Units will choose their top applicant(s) (preferably one) and submit an LOI to the Faculty of Science. A Faculty committee will select the top five applicants. These names will be sent to GPS which will conduct writing workshops to assist candidates to complete their applications. A final review will be conducted by the proposed supervisor, the Faculty of Science, and GPS. Further information may be found at:

<http://banting.fellowships-bourses.gc.ca/en/home-accueil.html>  
[http://banting.fellowships-bourses.gc.ca/en/rev-eval\\_overview-apercu.html](http://banting.fellowships-bourses.gc.ca/en/rev-eval_overview-apercu.html)

- An analogous process will be followed for the Vanier Fellowships.

c) Associate Dean (Research) Doina Precup

**907.2** Associate Dean Precup presented the Research Report.

- Results of the Discovery Grant Competition have been announced. The Faculty of Science had a good acceptance rate. Amounts awarded vary from year to year. Further Discovery Grants will be announced in May, with money available from August. Updates will be provided.
- CFI process is ongoing. Eight Faculty of Science submissions. Revised LOIs to be submitted by end of current week. University Committee will meet on 11 May 2016, and outcome should be known shortly afterwards. Submissions to CFI will be made in June, and calls for full proposals in October.

d) Associate Dean (Academic) Tamara Western

**907.3** Associate Dean Western presented her Report on the Canada-Wide Science Fair.

- Canada-Wide Science Fair (CWSF) to be held at McGill on Monday, 16 May to Friday, 20 May 2016. This is a great opportunity to interact with top high-school students from across Canada, and a great opportunity for recruitment. Departments have been contacted regarding setting up booths and sponsoring activities, and should pull out all the stops in an effort to impress students with what the Faculty of Science and McGill have to offer. Grateful thanks to departments and to volunteers.

**907.4** Dean Lennox said that the chaperones accompanying the students would be influential in students' choices, and that members of the Faculty of Science should not neglect to talk to the chaperones and to impress on them the benefits of attending McGill. He added that he had spoken to Prof. David Lowther, and that the Faculty would be sponsoring a Wine and Cheese event for the judges.

**8) MEMBERS' QUESTION PERIOD**

There were no members' questions.

**9) OTHER BUSINESS**

**909.1** Mr. Victor Chisholm introduced Ms. Sandra Crescenzi, Administrative Coordinator, who will be working with Associate Dean Western and Josie D'Amico.

Prof. Lydon **moved**, seconded by Prof. Mucci, that the meeting be adjourned at 3:50 p.m.

**The motion carried.**