

**FACULTY OF SCIENCE
ACADEMIC COMMITTEE**

Minutes of the meeting held on December 11, 2012, at 2:30 p.m. in Arts Council Room, Arts 160.

PRESENT: Associate Dean Laurie Hendren (Acting Chair), Director Nicole Allard, Professors Lea Berrang Ford, Barbara Hales, Galen Halverson, Axel Hundemer, Sangyong Jeon (in place of Kenneth Ragan), Daniel Kirshbaum, Craig Mandato, Ana Nyzhnyk, Linda Reven, Julie St-Pierre, Jaclyn Vogel (in place of Frédéric Guichard); Louis Houle; Esther Bogorov, Eugene Kang, Kate Zhang; Malek Yalaoui and Josie D'Amico.

GUESTS: Ms. Wendy Brett, Prof. Parisa Ariya, Prof. Frédéric Fabry, Prof. Jaclyn Vogel.

REGRETS: Martin Grant, Professors Bettina Kemme, Greg Marczynski, Gillian O'Driscoll, Kathy Roulet; Chandra Curry, Kelsi Lix, Pinkal Patel, Melissa Xie.

DOCUMENTS: AC-12-37 to AC-12-54

Associate Dean Hendren called the meeting to order at 2:30 p.m.

(1) ADOPTION OF AGENDA

401.1 Item #9, BIOL 319, will be postponed to a future meeting, at which time PHYS 319 (double-prefix course) will be considered simultaneously. Also, item #9, Major in Biology: Quantitative Biology Option (AC-12-52) will be considered after Item #5 on the Agenda.

Prof. Berrang Ford **moved**, seconded by Prof. Hales, that the amended Agenda be adopted.

The motion carried.

(2) MINUTES OF NOVEMBER 20, 2012 AC-12-37

Director Allard **moved**, seconded by Mr. Houle, that the Minutes be approved.

The motion carried.

(3) BUSINESS ARISING FROM THE MINUTES

There was no business arising from the Minutes.

(4) REPORT ON MINOR COURSE CHANGES AC-12-38

Associate Dean Hendren said that the change in prerequisites for the two BASC research courses in Document AC-12-38 was to encourage students to take the prerequisite course (BASC 201) early on in their program.

(5) COGNITIVE SCIENCE (B.A. & Sc.)

Program Revisions:

- Interfaculty Program in Cognitive Science

AC-12-39

405.1 Ms. Wendy Brett, Interdisciplinary Programs Advisor, said that on top of structural changes to the program, the biggest change was the removal of one capstone course, PSYC 532, and its replacement with a list of capstone courses. The sub-headings Lists A and B were removed from the various components in order to allow flexibility. Since COGS 401 and COGS 402 were identical research courses, COGS 402 was removed. Also, additional courses relevant to cognitive science were added to the program.

405.2 Associate Dean Hendren said she had had a meeting for the first time with the Interfaculty Program Committee in Cognitive Science, and that the meeting had been very productive.

Associate Dean Hendren **moved**, seconded by Director Allard, that the above changes be approved.

The motion carried.

- Honours Program in Cognitive Science **AC-12-40**

405.3 Ms. Brett said that in addition to fulfilling the requirements in the Interfaculty Program in Cognitive Science, students in the Honours in Cognitive Science must complete a six-credit research course.

Associate Dean Hendren **moved**, seconded by Director Allard, that the above changes be approved.

The motion carried.

(6) B.A. & Sc. PROGRAM REVISIONS AC-12-41

406.1 Associate Dean Hendren gave some background information concerning BASC 201. She said that initially BASC 201 had been a required integrative course for students taking the B.A. & Sc. degree. She said BASC 201 had been taught by different instructors from different disciplines, and did not achieve what it was intended to, making both students and teachers unhappy with the course. Associate Dean Hendren said that the B.A. & Sc. PAC had removed BASC 201 as a required course, and had transferred it to the list of Complementary Integrative Courses. However, now that Prof. Gabriella Coleman, Wolfe Chair in Scientific and Technological Literacy, had been hired, part of her mandate was to teach BASC 201; the course was currently going well. BASC 201 was now being reinstated as a Required Course for the B.A. & Sc. degree, in the hope of bringing together students across a variety of disciplines, and helping them make choices about their studies and careers. Additionally, the list of Complementary Integrative Courses was being removed entirely.

406.2 Associate Dean Hendren cautioned against attempting to create a lower-level integrative course with instructors from a number of different disciplines. It was very difficult to achieve integration under these conditions.

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

The motion carried.

(7) PSYCHOLOGY

PSYC 506 Cognitive Neuroscience of Attn **AC-12-42**
Changes: course activities, restriction
3 credits

407.1 Associate Dean Hendren said that the proposed changes to PSYC 506 will allow students in Neuroscience Programs to take the course. Previously, it had been restricted to Psychology and Cognitive Science students.

Associate Dean Hendren **moved**, seconded by Director Allard, that the changes be approved.

The motion carried.

(8) ATMOSPHERIC & OCEANIC SCIENCE

ATOC 312 Rotating Fluid Dynamics **AC-12-43**
Changes: number [from 412], title, description,
prerequisites and restrictions
3 credits

408.1 Prof. Kirshbaum said that students were having trouble with the mathematics in ATOC 412, and that changing the number to ATOC 312 and reducing the complexity of the course would provide a more accessible introduction to the topic.

Prof. Kirshbaum **moved**, seconded by Director Allard, that the changes be approved.

The motion carried.

New Course:

ATOC 357 Atmospheric & Oceanic Sci Lab **AC-12-44**
3 credits

408.2 Prof. Fabry said that the course would allow students to receive training in atmospheric and oceanic laboratory and field work.

Prof. Kirshbaum **moved**, seconded by Director Allard, that the course be adopted.

The motion carried.

Program Revisions:

- Minor in Atmospheric Science **AC-12-45**

408.3 Prof. Kirshbaum said that the changes to the Minor simply reflect the renumbered ATOC 312 and the new course ATOC 357.

Prof. Kirshbaum **moved**, seconded by Director Allard, that the changes be approved.

The motion carried.

- Liberal Program: Core Science Component in Atmospheric &
Oceanic Sciences **AC-12-46**

408.4 Prof. Kirshbaum explained the changes, and said they were analogous to the changes in the Major and Honours programs.

408.5 The asterisk referring to CHEM 419 should be removed, since CHEM 419 no longer exists.

Prof. Kirshbaum **moved**, seconded by Prof. Mandato, that the changes be approved.

The motion carried.

- Major in Atmospheric Science **AC-12-47**

408.6 Prof. Kirshbaum explained that the changes to the program incorporated the new course ATOC 357, and introduced ATOC 312 at the U2 rather than U3 level. The changes would strengthen the foundation of the students' education and provide more flexibility.

408.7 Associate Dean Hendren pointed out that under Complementary courses, in the choices between PHYS 230 and PHYS 251, and PHYS 232 and PHYS 253, it should be made clear in the course titles which were Majors Physics courses and which were Honours Physics courses.

408.8 Prof. Kirshbaum said that the list of Complementary courses had been expanded greatly, with courses from the previously Required list and with new courses, including chemistry courses. The chemistry courses will serve to accommodate the retirements of the Atmospheric Chemistry Options in the Major and Honours programs in Atmospheric Science.

408.9 Additionally, PHYS 333 (Thermal and statistical physics) should be added to the list of Complementary courses.

Prof. Kirshbaum **moved**, seconded by Prof. Mandato, that the changes be approved.

The motion carried.

- Honours in Atmospheric Science **AC-12-48**

408.10 Prof. Kirshbaum said that relative to the Major program, the Required courses contained an Honours research project (ATOC 480). The list of Complementary courses had been expanded, with courses from the previously Required list and with new courses.

408.11 Several changes were made:

- PHYS 333 (Thermal and statistical physics) should be added to the list of Complementary courses "under 9-12 credits selected from".
- Under Complementary, under 18-19 credits at 400-to-500-level, selected from, should be added "at least 12 credits from ATOC".
- The asterisk referring to CHEM 419 should be removed, since CHEM 419 no longer exists.
- Rather than referring to MATH 555 via an asterisk, MATH 555 should be included in the list as an alternative to PHYS 432.

408.12 A member suggested that students should be advised to take a course in probability prior to taking PHYS 333.

Prof. Kirshbaum **moved**, seconded by Mr. Houle, that the changes be approved.

The motion carried.

Program Retirements:

- Major in Atmospheric Science – Atmospheric Chemistry Option **AC-12-50**
- Honours in Atmospheric Science – Atmospheric Chemistry Option **AC-12-54**

Prof. Kirshbaum said that with the increased flexibility in the Major and Honours programs, the Atmospheric Chemistry Options were no longer needed and could be retired.

Prof. Kirshbaum **moved**, seconded by Mr. Houle, that the above two program retirements be approved.

The motion carried.

- 408.13** Director Allard congratulated the Department of Atmospheric & Oceanic Sciences on a very impressive cleanup of their programs. The introduction of informal "streams" would greatly simplify advising.

(9) BIOLOGY/PHYSICS

The following course will be tabled until the next Academic Committee meeting, at which time both BIOL 319 and PHYS 319 (double-prefix course) will be considered simultaneously.

BIOL 319	Introduction to Biophysics	AC-12-51
	Changes: description, prerequisites	

Program Revisions:

-Major in Biology: Quantitative Biology Option **AC-12-52**

- 409.1** Prof. Jaclyn Vogel, coordinator of the Quantitative Biology Option, gave a brief history of the Option within the Biology Program. She said that there were currently 15 students registered in the Option. The purpose of the Option was to give students a firm grounding in concepts in the biological sciences, and to provide physical tools with which to examine these concepts. Among the changes were the addition of MATH 323 (Probability) and PHYS 232 (Heat and waves) to the Core requirements, and PHYS 333 (Thermal and statistics physics) to the required courses for the Physical Biology stream. As well, additional courses were added to the two streams and to the Complementary course list. She mentioned that the Quantitative Biology Committee consisted of representatives from Biology, Chemistry, Computer Science and Physics.
- 409.2** The Department of Biology will discuss its general requirement that students who have taken the equivalent of CHEM 212 (Introductory organic chemistry 1) must take a *chemistry* course in place of CHEM 212.
- 409.3** In addition to the changes listed in Document AC-12-52, **COMP 250 (Introduction to Computer Science)** will be added to the list of Complementary courses for the two streams.
- 409.4** Prof. Mandato **moved**, seconded by Director Allard, that the above changes (including the addition of COMP 250 to the Complementary course list) be approved.

The motion carried.

(10) McGILL SCHOOL OF ENVIRONMENT

New Course for Information Only:

ENVR 204

Quant Thinking in Environment
3 credits

AC-12-53

410.1 Associate Dean Hendren said that although the course was for information only, Academic Committee members might have comments on the course which would be beneficial to the Faculty of Arts.

410.2 Prof. Fabry, a member of the McGill School of Environment, said that the current calculus requirement for Arts students in the MSE was not working well for them. ENVR 204 had been put together to attempt to create a familiarity with numeracy for MSE Arts students. He said both Arts and Science students took the MSE core courses together. This created a problem because of the lack of proficiency of Arts students in mathematics; Science students had to be taught at a mathematical level well below their ability in order to accommodate the Arts students. ENVR 204 was an attempt to respond to this problem.

410.3 However, the Committee felt:

- That this course could not possibly cover a sufficient depth of calculus, statistics and computer programming suitable for the Environment program.
- That the Departments of Mathematics & Statistics and Computer Science had not been consulted on this course, and it was important that they should be consulted.
- It strongly disagreed with the following: In the course outline, #3, Course content and intended audience, it is stated "Arts students enrolled in the MSE BA degree and taking the course in Autumn 2012 may use it to satisfy their calculus requirement."

410.4 In summary, the Committee felt that there should be a very serious examination of this course, whether it is appropriate for B.A. students in the Environment programs, and there needs to be a detailed consultation with the Department of Mathematics & Statistics and the School of Computer Science.

(11) TEACHING EVALUATIONS

411.1 Associate Dean Hendren said that course evaluations were not made public without the instructor's permission. While many instructors gave permission, some did not. However, she had combined evaluations to produce aggregate values for the Faculty of Science, which did not entail privacy issues. For the Winter 2012 session, the overall average for the Faculty of Science was 4.1. The averages for 500-, 600- and 700-level courses ranged from 4.2 to 4.4. The averages for 200-, 300- and 400-level courses ranged from 3.7 to 4.0. The average for 18X courses was 4.2, and that for the other 100-level courses was 3.6.

411.2 Associate Dean Hendren said that she would show the values to the Science chairs, and that in future, she would provide overall averages of teaching evaluations to the Academic Committee on a routine basis. She said she found the results of the teaching evaluations very encouraging.

- 411.3** In response to a question about the students' response rate (with the use of online evaluations, as opposed to evaluations in the classroom), Associate Dean Hendren said she would like it to be higher, but that the results had been analyzed and were statistically useful.

(12) SUS ACTIVITIES

- 412.1** Ms. Zhang said that the SUS had been making great efforts to increase awareness of the importance of teaching evaluations, such as promoting teaching evaluations on the SUS website, asking departmental student associations to urge students to fill out evaluations and to encourage students to talk to professors and to departmental chairs, attempting to extend the deadline for filling out evaluations, and stressing the importance of evaluations at the SUS's recent free donut day. At the donut day, students were also asked to fill out a short questionnaire on advising - both SOUSA and departmental advising. As well, with the Minerva system update, the SUS provided new links to submit evaluations and to view previous years' results, if released.
- 412.2** Several members stressed how important it was for students to fill out teaching evaluations. Instructors use the results of teaching evaluations to monitor and improve their teaching. Instructors do want to do a good job.
- 412.3** A member said that his department's student association had suggested that time (about 10 minutes, at some point during the last week of classes) be made available in class for students to fill out the online evaluation. Virtually all students had laptops, and this would be easy to implement.
- 412.4** Associate Dean Hendren said the teaching evaluation forms should definitely be simplified. She will be working with the students on this.

(13) OTHER BUSINESS

- 413.1** Director Allard said that, due to construction, the April 2013 final examinations will not be able to be held in the Arthur Currie Gymnasium, and that the university was looking into renting space.
- 413.2** Associate Dean Hendren thanked everyone for the hard work done during the fall semester. She said she would like to point out the importance of submitting documents well in advance of meetings. A large number of documents are submitted for AC meetings, and documents are prescreened before meetings. This involves a lot of "back and forth" between the office of the Associate Dean (Academic) and units, which takes time. It is desirable to send out documents to AC members in good time in advance of meetings, and early submission would greatly aid in this.

There being no further business, the meeting adjourned at 4:02 p.m.