### FACULTY OF SCIENCE MEETING OF FACULTY Tuesday, October 21, 2014 3:00 p.m. Leacock Council Room - L232

### AGENDA

# Please note that before the meeting, new professors, recently tenured professors and recently promoted full professors will be introduced to the Faculty.

- 1. Adoption of Agenda 2. Resolution on the Death of Emeritus Professor Joachim (Jim) Lambek, Department of Mathematics & Statistics - Presented by Prof. Henri Darmon 3. Seating of Student Members S-14-1 On Web Candidates for Degrees 4. Director (Advising Services) Nicole Allard a) Bachelor of Arts and Science S-14-2 To be Tabled b) Bachelor of Science S-14-3 To be Tabled c) Diploma in Environment S-14-4 To be Tabled d) Diploma in Meteorology S-14-5 To be Tabled 5. Minutes of May 22, 2014 S-13-35 On Web 6. Business Arising from the Minutes - Minutes 906.14 to 906.16, GEOG 205 (AC-13-96) 7. **Reports of Committees** a) Nominating Committee S-14-6 On Web b) Scholarships Committee - Associate Dean Victoria Kaspi S-13-36 To Be Tabled c) Academic Committee - Associate Dean Tamara Western S-14-7 On Web d) Committee on Student Standing - Director Nicole Allard S-14-8 To Be Tabled 8. Dean's Business a) Enrolment - Associate Dean Tamara Western S-14-9 To Be Circulated b) Announcements 9. Report on Actions of Senate - Prof. John Gyakum: Senate Meeting of September 17, 2014 10. Members' Question Period
- 11. Other Business

Next Meeting: 11 November 2014 at 3:00 p.m.

#### FACULTY OF SCIENCE Meeting of Faculty Thursday, May 22, 2014 Leacock Council Room – L232

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

#### DOCUMENTS: S-13-23 to S-13-34

Dean Grant called the meeting to order at 3:00 p.m.

Dean Grant said that the Anthony Kiang Recognition Event had been endowed by Prof. James Prentice, an alumnus of McGill and a professor at the University of Toronto, and his wife Alison, in recognition of the excellent work of Anthony Kiang, a technician in particle physics research at U. of T. The event recognizes the outstanding and indispensable work carried out by support staff, and is to be an annual event at the time of the last Faculty of Science meeting of the year. For the current year, the Event had been an outdoor barbeque get-together before the Faculty meeting.

### (1) ADOPTION OF AGENDA

Prof. Western moved, seconded by Prof. Gyakum, that the Agenda be adopted.

The motion carried.

#### (2) <u>REPORTS OF COMMITTEES</u>

#### a) Faculty of Science Excellence Award

- **902.1** Prof. Richard Koestner, Chair, Faculty of Science Excellence Award said for the 2013-2014 year, the Science Excellence Award was given to a member in the "C" Category.
- **902.2** Prof. Koestner thanked Josie D'Amico for all her work, and said that he very much appreciated the work of the members of the Science Excellence Award Committee. The Committee members were:

Ann Jack, School of Computer Science (C Category) Lisa Maggio, Faculty of Science Dean's Office (C Category) Grace Koryszko, Department of Chemistry (T Category) Richard Talbot, Department of Physics (T Category) Anne Kosowski, Department of Earth & Planetary Sciences (M Category)

- **902.3** Four outstanding administrative staff were nominated for the Faculty of Science Excellence Award:
  - Afrodite Anastasopoulos, School of Computer Science
  - Seyissa Pinheiro, Science Development Office
  - Luciana Scigliano, Department of Biology
  - Paula Domingues, Department of Atmospheric and Oceanic Sciences
- **902.4** The Committee selected **Paula Domingues** as the 2013-2014 winner of the award. Ms. Domingues's record in over twenty years at McGill is marked by high levels of initiative, excellent problem-solving, and outstanding interpersonal relations.

The Committee provided the following quotes from letters of support to highlight Ms. Domingues's contributions:

A PhD student noted that, "Paula is often the first person a student goes to whenever a problem arises. She not only does excellent work, but she does so with a smile and a type of concern that makes a student feel like she is truly looking out for you."

A faculty member noted that, "she juggles countless essential daily administrative tasks with grace and efficiency, all the while maintaining a human touch that puts the department at ease."

The committee agreed with the referee who wrote: "There would be no better way for the university to recognize administrative excellence than to award Paula Domingues this honor."

~

902.5

- **902.6** On behalf of the Faculty of Science, Dean Grant congratulated Ms. Domingues and presented her with a framed certificate commemorating her receipt of the Faculty of Science Excellence Award (C)
- **902.7** Ms. Domingues said she appreciated the award very much, and thanked Prof. Gyakum, Chair of the Department, Prof. Jaime Palter, Mr. Kevin Bowley, Ph.D. candidate, and Ms. Raffaella Bruno, Administrative Officer.

#### b) Leo Yaffe Teaching Award

- **902.8** Prof. Edith Zorychta, Chair, Leo Yaffe Award/Principal's Prizes Committee, thanked Josie D'Amico and the Committee for all their work in enabling the award.
  - The members of the Committee were: Prof. Eyal Goren, Mathematics & Statistics Prof. Richard Koestner, Psychology Prof. Martin Lechowicz, Biology Prof. Bernhard Lehner, Geography Prof. Alvin Shrier, Physiology Prof. Denis Thérien, Computer Science
  - Prof. Man K. Yau, Atmospheric & Oceanic Sciences
- 902.9 The nominees for 2013-2014 were: Prof. Karine Auclair, Chemistry Prof. Yogita Chudasama, Psychology Prof. David Green, Redpath Museum Prof. Carlos Morales, Anatomy & Cell Biology Prof. Joelle Pineau, Computer Science Prof. Sarah Turner, Geography Prof. Tamara Western, Biology
- **902.10** Despite the excellent quality of all the candidates, there had been a clear winner for the current year.

**902.11** The winner of the Leo Yaffe Teaching Award was **Prof. Karine Auclair** from the Department of Chemistry.

Prof. Zorychta read the citation for Prof. Auclair:

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 2014 is **Professor Karine Auclair** from the Department of Chemistry – an innovative and creative educator who has inspired thousands of McGill students to become critical thinkers and to appreciate the relevance of chemistry in everyday life. Student evaluations are filled with glowing testimonials to her dedication, clarity of presentation, organizational skills, and enthusiasm, and her overall impact is frequently summarized by statements like "best Prof I have had at McGill - made me love organic chemistry"

Karine received her PhD in Chemistry from the University of Alberta, followed by postdoctoral studies in Pharmaceutical Chemistry at the University of California at San Francisco, and in 2001 she joined the academic staff at McGill. Already a talented public speaker, she focused on methods of teaching, since she believes that "Chemistry is challenging for students because it requires a combination of memory, understanding, puzzle-solving and manual abilities. Students need multiple tools and techniques to get the right perspective on chemical problems." She consequently developed a unique combination of classroom techniques to accomplish these goals and she quickly became one of the most effective and respected teachers in our Faculty of Science.

Professor Auclair teaches in four of the large undergraduate Chemistry courses, and is the sole professor for Introductory Organic Chemistry with an enrollment of over 600 students. They frequently comment that organic chemistry is a required course and they approach it with considerable anxiety, but thanks to Professor Auclair, they have an unexpected and very rewarding experience. She links context to theory, her passion for science is contagious, and her classes are among the most memorable and most important in developing their skills in critical thinking. To promote engagement in the classroom she expands the classic procedure of blackboard and chalk using modern software. Starting with slides containing minimal information she fills them in on a tablet computer as she works through the material with the class, simultaneously recording everything for subsequent review. Karine has also developed an ingenious method to maintain attention span and link the classroom to the rest of life, through her "Science Capsules" - five to ten minutes set aside in the middle of class to discuss controversial topics in science. Interaction is promoted as she and her students critically examine some of the myths and falsehoods being propagated in the current media. These debates not only enhance learning and enjoyment in a large undergraduate science class, they change the outlook of many of the participants. Students remark that beyond the goal of succeeding in exams, this experience reinforces in a tangible way that the purpose of a university education is to become a lifelong learner, critical thinker, and contributing member of society. It also highlights the intersection of physics, chemistry, biology, and physiology and the relevance of an interdisciplinary approach to understanding the world around us. One student described the impact by stating: "Her science capsules drive me to trek to class during a snow storm at 8:30 in the morning", a tribute well appreciated by all of us who experience winter in Montreal.

In summary, Karine Auclair is an exceptionally gifted and innovative professor, with a distinctive teaching style that leaves a positive impact on her students for the rest of their lives. She is an outstanding educator and it is a pleasure to announce her as the 2014 recipient of the Leo Yaffe Award.

- **902.12** Unfortunately, Prof. Auclair was unable to attend the meeting.
- **902.13** Dean Grant thanked Prof. Zorychta for her excellent work over the years on the Leo Yaffe Award/Principal's Prizes Committee. In her absence, he congratulated Prof. Auclair to thunderous applause.

### (3) <u>CANDIDATES FOR DEGREES</u>

**903.1** Director (Advising Services) Nicole Allard thanked everyone involved in preparing the degree lists.

a)	Bachelor of Arts and Science	S-13-24
b)	Bachelor of Science	S-13-25

**903.2** Director Allard said that there were 86 graduands for the B.A. & Sc. degree, and 817 for the B.Sc. degree. The corresponding figures for 2013 were 94, and 782.

Director Allard **moved**, seconded by Mr. Barry, that the above degree lists be recommended to the Senate Steering Committee for their respective degrees.

#### The motion carried.

c)	Diploma in Environment	S-13-26
d)	Diploma in Meteorology	S-13-27

**903.3** Director Allard said that there were two candidates for Diploma in Environment and one candidate for the Diploma in Meteorology.

Director Allard **moved**, seconded by Prof. Crepeau, that the above diploma lists be recommended to the Senate Steering Committee for their respective diplomas.

Director Allard further **moved**, seconded by Mr. Barry, that the Dean be given discretionary power to make such changes in the degree list as would be necessary to prevent injustice.

### (4) <u>MINUTES OF MARCH 18, 2014</u>

Prof. Moore **moved**, seconded by Prof. Gyakum, that the Minutes be approved.

#### The motion carried.

#### (5) <u>BUSINESS ARISING FROM THE MINUTES</u>

There was no business arising from the Minutes

#### (6) <u>REPORTS OF COMMITTEES</u> (continued)

#### c) Committee on Student Standing S-13-28

There being no meeting of the Committee on Student Standing, there was no report.

d) Scholarships Committee S-13-29

**906.1** On behalf of Associate Dean Victoria Kaspi, Prof. Tamara Western announced that the Moyse Travelling Scholarship was awarded to **Mr. Aryeh Isaac Feinberg**, First Class Honours in Chemistry with a Minor in Mathematics. She also announced that **Mr. Tristan Labelle**, First Class Honours in Computer Science, had been awarded one of the two Governor General's Silver Medals allocated to McGill. In the past 26 years, Science has received 25 of these medals. The medal will be presented at the Faculty of Science Convocation ceremony on June 4, 2014. Prof. Western drew members' attention to the Scholarships Report.

### e) Academic Committee S-13-30

The Academic Committee approved the following on Tuesday, March 25, 2014 and on Tuesday, April 29, 2014.

- (1) PHARMACOLOGY & THERAPEUTICS - New Course PHAR 396 Pharmacology Research Project AC-13-94 3 credits AC-13-94
- **906.2** Associate Dean Laurie Hendren said that with the introduction of PHAR 396, all the teaching units offering the B.Sc. degree now had 396 undergraduate research courses.

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

#### The motion carried.

Secretary's Note: Since the above course title for PHAR 396 already exists for PHAR 599, a new title has been proposed, Undergraduate Research Project.

### (2) CHEMISTRY/ATMOSPHERIC & OCEANIC SCIENCES

- Course Changes

CHEM 519/ATOC 519	Advances in Chem of Atmosphere	AC-13-87/AC-13-89
	Changes in restrictions; renumbering [from -41	9]
	3 credits	
Course retirement:		
CHEM 619/ATOC 619	Advanced Atmospheric Chemistry 3 credits	AC-13-88/AC-13-90

**906.3** Associate Dean Hendren said that the Departments of Chemistry and of Atmospheric & Oceanic Sciences jointly offered the above double-prefix courses. The purpose of the changes was to simplify the course offerings by replacing the 400- and 600-level courses with one at the 500-level (CHEM 519/ATOC 519), so that both senior undergraduate students and graduate students could take the course.

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

The motion carried.

(3) ATMOSPHERIC & OCEANIC SCIENCES Program Changes:

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FACULTYMINUTES22MAY2014

- Honours in Atmospheric Science - Major in Atmospheric Science
- 906.4 Associate Dean Hendren said that the changes divided the two programs into core required courses and four different streams. She said that this would be a good idea for other departments as well.

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

### The motion carried.

#### **COMPUTER SCIENCE** (4)

#### **Program Changes:**

- B.Sc. Major in Computer Science

906.5 Associate Dean Hendren said that the change would now explicitly require students to take at least six credits at the 400-level or above.

> Associate Dean Hendren moved, seconded by Prof. Crepeau, that the change be approved.

The motion carried.

#### PHYSIOLOGY AND PHYSICS (5) **Program Changes:**

- Joint Major in Physiology and Physics

906.6 Associate Dean Hendren said that these were housekeeping changes. However, she mentioned that at 80 credits, the credit count was too high.

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

#### The motion carried.

#### **MATHEMATICS & STATISTICS** (6) **Program Changes:** - Ph.D. in Mathematics & Statistics (Thesis)

906.7 Associate Dean Hendren said that the above changes simply formalized what was already the practice in the program.

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

The motion carried.

#### (7) **GEOGRAPHY**

(i) Proposal to Allow B.A. & Sc. Students to Take Geography Major Concentrations in BOTH Arts and Science

#### AC-13-91 AC-13-92

AC-13-85

AC-13-84

AC-13-86

AC-13-95

**906.8** Associate Dean Hendren said that currently B.A. & Sc. students could select either their Arts component or their Science component from Geography, but not both. However, the Major Concentration in Geography (Urban Studies) (Arts component), and the Major Concentration in Geography (Physical Geography) (Science component) actually contain very little overlap. The proposal would allow students to take both Major Concentrations as their Arts and Science components of the B.A. & Sc. She added that the proposal had originally come from the students.

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

#### The motion carried.

- (ii) GEOG 205 Proposal to Include on List of Approved Freshman Science Courses AC-13-96
- **906.9** Associate Dean Hendren explained that in the Freshman program, students had the option of doing a course from a list of Complementary courses. The proposal would add GEOG 205 to that list. Since GEOG 205 was not a required course for any Geography program, there would be no issue of "double-counting."
- **906.10** Associate Dean Hendren **moved**, seconded by Prof. Moore, that GEOG 205 be included on the list of Approved Freshman Science courses.
- **906.11** Prof. Mucci said he objected to the proposal because it went against the idea of having ESYS 104 in the list of Approved Freshman Science courses, namely, that ESYS 104 would provide an introduction to material from the Departments of Atmospheric & Oceanic Sciences, Earth & Planetary Sciences, and Geography. He said that there was overlap between ESYS 104 and GEOG 205, and that there had been insufficient consultation on the proposal. He said he would like to table the proposal pending further consultation.
- **906.12** In response, Prof. Moore said that there had been consultation, and that Associate Dean Hendren had visited the three Departments concerned, and invited them to individually submit courses for inclusion on the list of Approved Freshman Science courses. Only Geography had taken up that initiative. Earth System Science was not reflective of all of geography, which has a prominent human component. Inclusion of GEOG 205 in the Freshman Program would allow exposure of students to multiple aspects of geography.
- **906.13** Prof. Gyakum pointed out that neither he nor Prof. Mucci had been Chair when the Departments had been invited to submit courses for the Freshman program, and hence were unaware of the issue. He agreed that the inclusion of GEOG 205 went against the spirit of ESYS 104.
- **906.14** Prof. Mucci **moved**, seconded by Prof. Paquette, that the proposal be tabled to a future meeting.

#### 906.15 The vote to table the above item was:

10 In favour 4 Against

#### 906.16 The motion to table the above item carried.

### (7) <u>DEAN'S BUSINESS</u>

### (a) Dean's Multidisciplinary Undergraduate Research List (DMURL) S-13-31

- **907.1** Director Allard thanked Mr. Victor Chisholm for his work on the DMURL. She said that there were 48 B.Sc. students and 3 B.A. & Sc. students that would be named on the DMURL the largest number ever. She noted that many of the students had completed more than 9 credits, and had taken courses from various departments.
- **907.2** Dean Grant said it gave him great pleasure that the majority of students completing a B.Sc. had done at least one research course.

#### (b) Faculty of Science Academic Mission

S-13-32

Associate Dean Hendren **moved**, seconded by Prof. Moore, that the Faculty of Science Academic Mission be adopted.

#### The motion carried.

#### (c) Trottier Institute for Science and Public Policy

S-13-33

**907.3** Dean Grant said that the Trottier Institute had been founded as a result of a donation from Lorne Trottier. Document S-13-33 described the mission of the Trottier Institute for Science and Public Policy.

Associate Dean Hendren **moved**, seconded by Prof. Zuroff, that the Trottier Institute for Science and Public Policy be approved.

### The motion carried.

### (d) Announcements

Dean Grant announced the following:

- **907.4** Prof. David Zuroff, Psychology, will be stepping down as Chair. Dean Grant said he enjoyed and appreciated working with Prof. Zuroff. Prof. Zuroff thanked Dean Grant.
- **907.5** Dean Grant said that Prof. David Lydon will be the next Chair of the Department of Psychology, effective June 1, 2014.
- **907.6** Prof. Tim Moore, Geography, will also be stepping down as Chair, at the end of August 2014. Dean Grant said that Prof. Moore was the Dean of Chairs, having been Chair for three full terms. It was a tough role being Chair of Geography, involving as it did both physical and social geography.
- **907.7** Prof. Nigel Roulet, former Director of the MSE, will be the new Chair of Geography, effective September 1, 2014.
- **907.8** Dean Grant said that he would also like to add his thanks to Prof. Peter Grütter, who had stepped down as Associate Dean (Research & Graduate Education) a year previously to take up the position of Chair in the Department of Physics. He said he admired Prof.

Grütter's multitasking ability that had been on prominent display during his tenure as Associate Dean.

- 907.9 Prof. Grütter had been replaced as Associate Dean (RAGE) by Prof. Victoria Kaspi.
- **907.10** Dean Grant said that one of the points of pride of being Dean of the Faculty of Science was the large number of extremely able academic administrators in the Faculty. Prominent among these is Associate Dean (Academic) Laurie Hendren, who has been in the job since September 2005. During her tenure, Associate Dean Hendren presided over some memorable accomplishments including revamping the Freshman Program, and the introduction of the B.Sc. (Liberal) and the B.Sc./M.Sc. Programs, as well as the Undergraduate Research Program, which has been extensively imitated. He said that he would like to profoundly thank Associate Dean Hendren for all her extensive hard work on behalf of the Faculty.
- **907.11** Prof. Tamara Western, Department of Biology, will be the new Associate Dean (Academic), effective September 1, 2014.

#### (8) <u>RESULTS OF SCIENCE ELECTION FOR SENATE</u>

#### S-13-34

- **908.1** Dean Grant announced that in the recent Call for Nominations to elect four Science Senators, four new representatives had been elected by acclamation. The new Senators, listed below, will begin their terms on September 1, 2014. The terms will end on August 31, 2017.
  - Professor Masad Damha (Chemistry)
  - Professor Peter Grütter (Physics)
  - Professor John Gyakum (Atmospheric & Oceanic Sciences)
  - Professor Alfonso Mucci (Earth & Planetary Sciences)
- **908.2** The continuing Faculty representatives on Senate, and the number of years they have yet to serve are:

Professor Graham Bell (Biology)	- one year
Professor Gregory Dudek (Computer Science)	- two years
Professor David Harpp (Chemistry)	- one year
Professor Jacques Hurtubise (Mathematics & Statistics)	- two years
Professor Timothy Moore (Geography)	- two years

Congratulations to the four new Senators, and a big thank you to the continuing Senators.

#### (9) <u>REPORT ON ACTIONS OF SENATE</u>

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

### - Senate Meeting of March 19, 2014 - Prof. Timothy Moore

The well-attended Senate meeting started with Memorial Tributes to John Moxley (Faculty of Agricultural and Environmental Sciences), John Osler (Engineering) and Hervé de Fontenay (Continuing Studies).

The Principal's Remarks included her imminent visits to alumni in North America, the financial uncertainties and other hiccups created by the provincial election and the continued success of McGill's hockey teams.

Unusually, there were no questions posed, perhaps a function of the stonewalling Administration wearing down the inquisitiveness of Senators.

The main item on the Agenda was an Open Discussion of the Principal's vision of the future of McGill, forthrightly entitled in McGill red 'Open, Connected, Purposeful' supported by a 40-slide Powerpoint presentation, which thankfully was not shown. Her attention focused on the unique character of McGill and how it should evolve over the next 5 to 10 years, given the uncertainties. One is reminded of the Dean of Science's blog of February 26 on 'On preparing for the coming zombie apocalypse', which said 'In a world where the future is uncertain, we need a place that creates new knowledge and new innovation indiscriminately'. Discussion of the vision was wide-ranging and constructive (though there were the usual personal gripes and grand-standing) and one sensed a welcome change of not trying to do everything all at the same time with topdown management. Issues included using appropriate metrics to assess performance, the need for strong advising and mentoring of students and the opportunities for research and international experiences, with alumni and DAR being tapped to ensure these. Ensuring that technological changes, such as BANNER, uApply etc., actually work before they are implemented was also emphasized, as well addressing 'downloading' of tasks and the dysfunctional nature of the university. There was some jingo-ism such as McGill becoming 'A Triple A Learning Organization: Agile, Aspirational, Accountable', which evokes visions of senior faculty doing calisthenics while meditating and checking one's conscience. There was an open-ness to the discussion and the details will be worked out in the next two years, in the context of the continual financial uncertainties.

Not so open and friendly was the 454<sup>th</sup> Report of the APC, which included issues of recording of lectures (optional) and a discussion of 'anonymous marking' which featured grand-standing by students and a pugilistic Provost. Anonymous marking is to avoid bias and is practiced in McGill's Faculty of Law and similar bodies. The outcome was a stand-off, with the Provost admitting that introduction of such techniques could be envisioned in very specific circumstances, whereas some students, based on inaccurate information, wanted a more widespread application.

Also somewhat contentious was the Deputy Provost's presentation of the Strategic Enrolment Management Plan, involving student access from Continuing Studies to services available to regular students and other issues, accompanied by further student grand-standing and not quite as pugilistic a response from the Deputy Provost.

It was reported that the general application of McGill's International Policy does not violate University's obligations under the Charter of Students' Rights, but there needs to be a review of procedures allowing students to travel to zones of insecurity.

Penultimately, the Deputy Provost reported on follow-up to the Joint Board-Senate Meeting on mental health within the McGill community, with initiatives such as better advising and mentoring of students, reduced wait-listing for access to professional help and a program to help identify and treat student dependence on alcohol and drug abuse, given that 39% of undergraduate students and 28% of graduate students are concerned about this. There appeared to be little attention to mental health of faculty and staff, although counseling services are available.

Finally, and appropriately, Senator Wolfson reported briefly on the actions of the Committee to Enhance Senate. Food, booze and toga wearing during Senate would certainly enhance things, though just wishful thinking, and a fuller report will be presented at the next Senate.

### - Senate Meeting of April 23, 2014 - Prof. David Zuroff

1. Principal Fortier's remarks

a. Commenting very shortly after the provincial election - implications of the Liberal victory are unknown yet presumably favorable. Several prominent liberals, including the new Premier, have ties of some kind to McGill.

2. Next, during question period, there was a question about research ethics and policies when a McGill researcher collaborates with external partners, e.g., industrial partners

a. Vice Principal Goldstein says that a working group has been formed, that it will report before end of 2015 academic year, and there will be a policy document about collaborations and partnerships with entities outside McGill.

3. University staffing report from Provost Masi & VP Di Grappa.

a. Tenure track staff essentially constant over last year, slight increase over 5 years.

b. Admin and support staff increased by 8% over last 5 years, although the increase have markedly slowed over last 2 years. Administrative units have grown by 13%, but that has now been slowed or reversed.

c. Ratio of support staff to faculty has declined slightly, and will continue to do so because of voluntary retirements.

4. McGill Budget for 2015 - Masi's presentation.

a. Many uncertainties, but we are on track to meet the proposed deficit target of 10.4 million this year.

b. Very frank recognition that academic staff are in bottom 3 or 4 of comparator universities for pay - addressing this gap is the main priority for next year's budget

c. Other priorities include: providing matching funds as needed for grants; also increased student assistance

d. Proposing a 7 million deficit for next year. That may qualify us for some additional funding from the government.

e. Rate of tenure track recruitment will be slow - may be close to replacement

f. Modest growth in enrolment, capacity permitting.

g. Tricouncil research dollars are increasing, but indirect costs paid to the university are completely flat.

h. With the recovery of the stock market, the endowment is back over a billion.

5. Comments and questions about budget

a. McGill would get 70 million a year more in tuition if in Ontario.

b. Excellent comment by Senator Dudek defending seeking top people for faculty positions- not just a chase for prestige or a weighting of research over teaching.

c. RVH? Fortier & Di Grappa underline that taking over the RVH and converting it for McGill's use would be very, very expensive requiring multiple partners. Current planning is extremely preliminary and if there is a real possibility of going ahead, it will be brought to Senate. Financial, legal, zoning, renovation, on-going operating expenses would have to be agreed to. They promise that expansion into the RVH will not be allowed to create a problem for the university long-term.

d. Looking at professional masters and 1-year programs as ways to make more money. New masters programs may be brought in.

6. Report of Academic Policy Committee

a. Revised course evaluation policy. Faculty members can opt out rather than having to opt in. Evaluations to be kept on file for 5 years rather than 3 years. Each department can opt out of allowing students to extend evaluation until after final exams, and that opt out is permanent.

b. There is no evidence of gender bias in grading at McGill, at UG or grad level.

7. Report of Senate Nominating Committee.

a. Search committee for new Provost has been formed. Senate representatives will include Bruce Lennox from Science

b. There will be public consultations about the role of the Provost. The committee will also seek written contributions.

c. Masi stated that he is NOT seeking another term in office.

8. Report on Vision 2020 - sustainability strategy for McGill

a. Very well received by the Senate

b. Money for research and projects will be available - jointly contributed to by students and administration. 840K/year

c. Some discussion of "holistic" sustainability in which equity and social justice issues are linked to traditional environmental issues. Some criticism that there wasn't more of that in the report.

9. Progress report on Quartier de L'Innovation by VP Goldstein

a. Over 20 concrete initiatives with active involvement of eight McGill Faculties, over 34 professors, approximately 30 students, as well as over 700 participants in its varied projects, initiatives and events.

**909.1** Dean Grant mentioned that he would like to encourage members of the Faculty to express their opinions in writing to the Committee charged with searching for a new Provost.

### - Senate Meeting of May 14, 2014 - Prof. Graham Bell

There will be no written Report on the Senate Meeting of May 14, 2014.

- **909.1** In reply to Prof. Dudek, Director, School of Computer Science, who had expressed concern that the recent name change from Library and Information Studies to School of Information Studies, and mandate modification, risked confusion with the School of Computer Science, Dean Grant said that the Academic Committee should pay attention to issues such as these.
- **909.2** Dean Grant said that the Board of Governors was finalizing the Senate representation on the Committee to select a new Dean of Science. When that was accomplished, Josie D'Amico would send out a Call for Nominations for members of the Faculty to serve on the Committee. He asked members to think about people who would make a good Dean of Science, and about good people to serve on the Committee.
- **909.3** Dean Grant said that as soon as he received notice on tenure decisions, he would inform chairs/directors who would then inform members of their department.

#### (10) <u>MEMBERS' QUESTION PERIOD</u>

There were no members' questions.

#### (11) OTHER BUSINESS

There being no further business, the meeting adjourned at 4:20 p.m.

### FACULTY OF SCIENCE NOMINATING COMMITTEE REPORT 2014-2015

### (1) SCIENCE NOMINATING COMMITTEE - For Information

Chair:Dean Martin GrantConvenor:Prof. Peter Grütter (Physics) [August 2017]Prof. Graham Bell (Biology) [August 2015]Prof. Masad Damha (Chemistry) [August 2017]Prof. Gregory Dudek (Computer Science) [August 2016]Prof. John Gyakum (Atmospheric & Oceanic Sciences) [August 2017]Prof. David Harpp (Chemistry) [August 2015]Prof. Jacques Hurtubise (Mathematics & Statistics) [August 2016]Prof. Timothy Moore (Geography) [August 2016]Prof. Alfonso Mucci (Earth & Planetary Sciences) [August 2017]

### (2) SCIENCE CHAIRS' COUNCIL - For Information

### Chair: Dean Martin Grant

Associate Dean (Academic) Tamara Western [September 2014 – May 2019] Associate Dean (Research & Graduate Education) Victoria Kaspi [June 2013 – May 2015] Director (Advising Services) Nicole Allard [June 2007 – ]

Prof. John Gyakum ((Atmospheric & Oceanic Sciences) [September 2013 – August 2016]

Prof. Graham Bell (Biology) [June 2011 – May 2016]

Prof. Masad Damha (Chemistry) [June 2013 – May 2018]

Prof. Gregory Dudek (School of Computer Science) [September 2013 – August 2016]

Prof. Alfonso Mucci (Earth & Planetary Sciences) [June 2013 - May 2016]

Prof. Nigel Roulet (Geography) [September 2014 – August 2019]

Prof. Jacques Hurtubise (Mathematics & Statistics) [January 2009 - May 2015]

Prof. Nancy Ross (McGill School of Environment) [September 2013 –August 2018] (Replaced by Prof. Sylvie de Blois until December 2014)

Prof. Peter Grütter (Physics) [June 2013 – May 2018]

Prof. John Lydon (Psychology) [June 2014 – May 2017]

Prof. David Green (Redpath Museum) [June 2010 – May 2015]

## (3) <u>TENURE COMMITTEE</u> - For Information

Chair:Dean Martin GrantAlternate Chair:Peter Yau (Atmospheric & Oceanic Sciences) [2015]Prof. Scott Bohle (Chemistry) [2015]

Prof. Mark Goldberg (Medicine, Medicine)

Prof. Frank Mucciardi (Mining, Engineering)

Prof. Marina Klein (Medicine, Medicine)

### (4) <u>COMMITTEE ON STUDENT STANDING</u> – For approval

Chair: Prof. Eric Galbraith (Earth & Planetary Sciences)
Prof. Andreas Zuend (Atmospheric & Oceanic Sciences)
Prof. Rodrigo Reyes-Lamothe (Biology)
Prof. Martin Robillard (Computer Science)
Prof. Benjamin Forest (Geography)
Prof. Jean-Christophe Nave (Mathematics & Statistics)
Prof. William Coish (Physics)
Prof. Rhonda Amsel (Psychology)
Prof. Hans Larsson (Redpath)
Four Student Representatives:
Mary Smith (Biochemistry)
Halyea Nisbet (Earth & Planetary Sciences)
Charbel El-Kefraoui (Neuroscience)
Ziyaan Harji (Psychology)

### (5) ACADEMIC COMMITTEE – For approval

Chair: Dean Martin Grant Vice-Chair: Associate Dean (Academic) Tamara Western Director (Academic Advisors) Nicole Allard Prof. Craig Mandato (Anatomy & Cell Biology) Prof. Daniel Kirshbaum (Atmospheric & Oceanic Sciences) Prof. Julie St-Pierre (Biochemistry) Prof. Thomas Bureau (Biology) Prof. Amy Szuchmacher Blum (Chemistry) Prof. Clark Verbrugge (School of Computer Science) Prof. Anthony Williams-Jones (Earth & Planetary Sciences) Prof. Michel Lapointe (Geography) Prof. Vojkan Jaksic (Mathematics & Statistics) Ms. Kathy Roulet (McGill School of Environment) Prof. Greg Marczynski (Microbiology & Immunology) Prof. Barbara Hales (Pharmacology) Prof. Guy Moore (Physics) Prof. Ana Nyzhnyk (Physiology) Prof. Blaine Ditto (Psychology) Ms. Sara Holder (Schulich Library of Science & Engineering) Seven Undergraduate Student Representatives: Ms. Rose Rutherford-Stone (Earth and Planetary Sciences) Ms. Laura Lyon (Geography) Mr. Kai Hong (Mathematics) Ms. Jessica Quaggin-Smith (Microbiology & Immunology) Mr. Jeremy Goh (Pharmacology) Ms. Vivian Ku (Pharmacology) Mr. Simon Bilodeau (Physics)

### One Graduate Student: TBA

### (6) <u>SCHOLARSHIPS COMMITTEE</u> – For approval

Chair: Associate Dean (Research & Graduate Education) Victoria Kaspi Prof. Craig Mandato (Anatomy & Cell Biology) Prof. Yi Huang (Atmospheric & Oceanic Sciences) Prof. José Teodoro (Biochemistry) Prof. Melania Cristescu (Biology) Prof. Mark Andrews (Chemistry) Prof. Luc Devroye (School of Computer Science) Prof. Olivia Jensen (Earth & Planetary Sciences) Prof. Dani Wise (Mathematics & Statistics) Prof. Brian Leung (McGill School of Environment) Prof. Greg Matlashewski (Microbiology & Immunology) Prof. Kenneth Ragan (Physics) Prof. Ana Nyzhnyk (Physiology) Prof. Heungsun Hwang (Psychology)

### (7) LEO YAFFE & PRINCIPAL'S PRIZES COMMITTEE – For approval

Chair: Prof. Edith Zorychta [August 2015] Prof. Gary Brouhard (Biology) [August 2015] Prof. Dmitrii Perepichka (Chemistry) [August 2015] Prof. Paul Wiseman (Chemistry & Physics) [August 2015] Prof. Denis Thérien (Computer Science) [August 2015] Prof. Boswell Wing (Earth & Planetary Sciences) [August 2017] Prof. Bernhard Lehner (Geography) [August 2016] Prof. Eyal Goren (Mathematics & Statistics) [August 2016] Prof. Alvin Shrier (Physiology) [August 2016] Prof. Richard Koestner (Psychology) [August 2016] **Two Student Representatives:** Mr. Mae Yin (Biochemistry) Mr. Simon Bilodeau (Physics) Plus Six Alternates Nominated by SUS Christine Audi (Anatomy and Cell Biology) Carine Zhang (Biology) Marvin Wu (Biochemistry) Emily Boytinck (Environment) Victoria Yang (Physiology) Osama Haque (Pharmacology)

### (8) <u>COUNCIL OF GRADUATE AND POSTDOCTORAL STUDIES</u> – For approval

Prof. Sébastien Breau (Geography) [May 2017] Prof. Gregory Brown (Biology) [May 2015] Prof. David Wolfson (Mathematics & Statistics) [May 2015]

### Note: Only Science Membership is for Approval: (9) <u>B.A. & Sc. PROGRAM ADMINISTRATION COMMITTEE</u>

Chair: Associate Dean (Academic) Gillian Lane-Mercier [August 2015]

### **Science Members:**

Associate Dean (Academic) Tamara Western [August 2019] Prof. Hans Larsson (Redpath) [August 2017] Prof. Brian Robinson (Geography) [August 2017]

Advisor: Director Nicole Allard (SOUSA)

**Program Director:** Prof. Gabriella Coleman (Art History and Communication Studies) [August 2015]

### **Arts Members:**

Prof. Tobias Rees (Social Studies of Medicine) [August 2015] Prof. Stéfan Sinclair (Languages, Literatures and Cultures) [August 2015]

### **Two Student Representatives:**

Matthew Satterthwaite [President] (Cognitive Science) Esther Vinarov, V.-P. [Academic] (Cognitive Science)

### FACULTY OF SCIENCE ACADEMIC COMMITTEE

### Report to Faculty of Science Meeting of 21 October 2014

### The Academic Committee approved the following on Tuesday, 23 September 2014:

### SECTION A: New Courses

1)	Redpath Museum REDM 511	Advanced Museum-Based Science 3 credits	AC-14-1
2)	<b>Medical Physics</b> MDPH 396	Undergraduate Research Project 3 credits	AC-14-3
<u>SECT</u>	ION B: (For Informati	<u>on)</u>	
1)	<b>Computer Science</b> - Cotutelle Program (P	h.D. Program)	AC-14-4
2)	Courses on Dean's Multidisciplinary Undergraduate Research List (DMURL) AC-14-2		
3)	B.Sc. Global Designation AC-14		

ACReportToFacultyMtg21October2014

## **New Course**

Proposal Reference Number: 8959PRN Alias: 14-15#182Version No: 3Submitted By: Ms Marie La RiccaEdited By: Ms Marie La Ricca

Display Printable PDF

	New Data		
Program Affected?	Ν		
Program Change Form Submitted?			
Subject/Course/Term	REDM 511		
	• one term		
Credit Weight or CEU's	3 credits		
Course Activities	Schedule Type	Hours per week	
	A - Lecture	2	
	M - Seminar	1	
		Total Hours per Week : 3 Total Number of Weeks : 13	
Course Title	Official Course Title :	Advanced Museum-Based Science	
	Course Title in Calendar :	Advanced Museum-Based Science	
Rationale	The course integrates th seminar series with in-de persentations to allow se graduate students to dev understanding of Museu Redpath Museum does advanced level seminar upper level lab-based co and Museums) and RED in Natural History). RED foster a broader knowled provide comprehensive approaches used in natu science, systematics, ar year the course will emp subject area, such as "To "Paleo-ecological recons distribution modeling." In focus on testing the role evolutionary process, wi students how to distingu	alendar : Science e course integrates the long-standing Redpath ninar series with in-depth discussion and student sentations to allow senior undergraduate and duate students to develop an advanced derstanding of Museum-based science. The dpath Museum does not currently offer and vanced level seminar course, and together with ber level lab-based courses REDM 400 (Science d Museums) and REDM 500 (Comparative Methods Natural History). REDM 511 will help the Museum ter a broader knowledge of the natural world and wide comprehensive training in hypothesis testing proaches used in natural history, biodiversity ence, systematics, and evolutional ecology. Each ar the course will emphasize a particular topic in the oject area, such as "Testing adaptive hypotheses." aleo-ecological reconstruction," and "Species tribution modeling." In it's first year, the course will us on testing the role of adaptation in the olutionary process, with the goal of teaching dents how to distinguish between adaptive and	

	non-adaptive explanations of natural history phenomena.
Responsible Instructor	
Course Description	The course will allow senior undergraduates and graduate students to become intimately acquainted with key primary literature in museum-based science and the major issues challenging the field. Course components will include the weekly Redpath seminar series, and also a 2-hour weekly lecture, presentation, and discussion session.
Teaching Dept.	0054 : Redpath Museum
Administering Faculty/Unit	SC : Faculty of Science
Prerequisites	Science and Museums (REDM 400) and/or permission of instructor. Web Registration Blocked? : N
Corequisites	
Restrictions	
Supplementary Calendar Info	
Additional Course Charges	
Campus	Downtown
Projected Enrollment	12
Requires Resources Not Currently Available	Ν
Explanation for Required Resources	
Required Text/Resources Sent To Library?	
Library Consulted About Availability of Resources?	
Consultation Reports Attached?	
Effective Term of Implementation	201501
File Attachments	REDM 511 syllabus.docx View
To be completed by the Faculty	
For Continuing Studies Use	

Approvals Summary

### Show all comments

Version No.	Departmental Curriculum Committee	Departmental Meeting	Departmental Chair	Other Faculty	Curric/Academic Committee	Faculty	SCTP	Version Status
3								Approved by Curric/Academic Committee Edited by: Marie La Ricca on: Oct 3 2014
2					Approved Geralda Bacaj Meeting Date: Sep 23 2014 Approval Date: Sep 25 2014 <u>View Comments</u>			Approved by Curric/Academic Committee Edited by: Marie La Ricca on: Sep 25 2014
1								Submitted to Curriculum/Academic Committee for approval Created on: Sep 16 2014

### Advanced Museum-Based Science: Testing Adaptive Hypotheses REDM 511 - Course Syllabus

#### Instructor:

Rowan D H Barrett (Course Coordinator) rowan.barrett@mcgill.ca Office: Redpath 303A; Phone: 398-4086

#### Workload:

3 credits: 1-hr seminar and 2-hr lecture, presentation, and discussion

#### Class time and room number:

Winter Term 2015 (offered in alternate years) Lectures, presentations and discussion: Wed 14:00-16:00, Hodgson room, Redpath Museum Seminar: Fr 11:30-12:30, Teaching lab, Redpath Museum

#### Prerequisites:

Evolution (BIOL 304), Science and Museums (REDM 400), or approval from instructor

### Reading:

Selected research articles.

#### Maximum enrolment:

12 students

#### **Course Description:**

"The main task of any theory of evolution is to explain adaptive complexity" (Maynard Smith, 1969, p.82).

Adaptation is at the core of modern science in natural history, evolution, and biodiversity. It can be studied as either a pattern or as a process, and some of the most satisfying explanations of anomalous biological phenomena show them either to *be* adaptations or to have been produced as by-products of the adaptive process. This course will review major concepts and theories of adaptation, empirical methods for studying adaptation, and the diversity of adaptive processes. Course components will include the weekly Redpath seminar series, and also a 2-hour weekly lecture, presentation, and discussion session.

#### Objectives:

This course is designed to allow senior undergraduate and graduate students to have an advanced understanding of the role of adaptation in the evolutionary process, and teach them how to distinguish between adaptive and non-adaptive explanations of biological phenomena.

#### **Evaluation:**

Grades will be based on oral presentations (25%) and leading of discussion sessions (10%), a research project (35%), weekly assignments (20%), and participation in class discussions (10%).

<u>Student presentations</u>: Each week, one student will select a recent research paper that is loosely aligned with the paper assigned for reading that week (in consultation with the instructor). Both papers will be distributed to the class for reading. Following a 30 minute lecture by the instructor, the student will give a 1 hour seminar based on the papers, and will guide the related discussion (with help from the instructor). Evaluation of the seminar will be based on clarity, sufficient background information, appropriate description and understanding of quantitative methods and results, and sufficient explanation of the significance of the work. Evaluation of the leading of discussion sessions will be based on general knowledgeability about the topic and the quality of prepared discussion points. The readings for the week represent an entry point to the topic but should not be the only sources used to address it.

<u>Research Project</u>: Students will write an article in the style of a "Brief Communications Arising" in *Nature* (http://www.nature.com/nature/authors/gta/commsarising.html) that critiques any primary research article read by the class during the course. This project will not be due until the end of the term.

<u>Assignments</u>: Students will choose 3 Redpath seminars over the semester to write assignments about. Assignments will use the style of a "Summary Paragraph" in *Nature* (http://www.nature.com/nature/authors/gta/2c\_Summary\_para.pdf) to summarize the key points of the seminar within the context of a general research problem related to adaptation.

<u>Participation in seminar question period and discussions</u>: Students will be graded on both questions asked to the speaker in the Redpath seminar and on participation in class discussion periods.

In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded.

Week	Date	Lecture, presentation, and discussion topic	Date	Redpath seminar
1	Jan 07	Introduction – course structure	Jan 09	ТВА
Section	1: Major co	ncepts and theories of adaptation		
2	Jan 14	Historical development of the concept of adaptation	Jan 16	ТВА
3	Jan 21	The argument from design	Jan 23	ТВА
4	Jan 28	The genetic basis of adaptation	Jan 30	ТВА
Section	2: Empirica	I methods for studying adaptation		
5	Feb 04	Testing adaptation using phenotypic manipulation	Feb 06	ТВА
6	Feb 11	Phylogenetic systematics of adaptation	Feb 13	ТВА
7	Feb 18	Laboratory experimental evolution	Feb 20	ТВА
8	Feb 25	Empirical study of adaptation in natural populations	Feb 27	ТВА
9	Mar 04	Reading week	Mar 06	Reading week
10	Mar 11	Molecular population genetics of adaptation	Mar 13	ТВА
11	Mar 18	Paleontological data and the study of adaptation	Mar 20	ТВА
Section	3: The dive	rsity of adaptive processes		
12	Mar 25	Adaptation of clades	Mar 27	ТВА
13	April 01	Adaptation in subdivided populations	April 03	ТВА
14	April 08	Adaptation of parasites	April 10	ТВА

#### Schedule:

### Statement Regarding Academic Integrity:

McGill University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedure (see <a href="https://www.mcgill.ca/students/srr/honest/">www.mcgill.ca/students/str/honest/</a>) for more Information.

### Geralda Bacaj, Miss

From:	Geralda Bacaj, Miss
Sent:	Friday, September 19, 2014 3:31 PM
То:	Geralda Bacaj, Miss
Subject:	RE:

-----Original Message-----From: Marie LaRicca Sent: September-16-14 4:02 PM To: Josie D'Amico Subject:

Josie We asked the following departments for consultation: biology Geography Natural Resource Centre MSE Anthropology

Geography replied & MSE - I have not heard back from the others

Marie Passalalpi La Ricca

Administrative Officer

McGill University 514-398-4086 ext. 3188 514-398-3185 fax

www.mcgill.ca/redpath

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### Josie D'Amico

From:Michel F. Lapointe, Prof.Sent:September-09-14 2:25 PMTo:Marie LaRiccaSubject:RE: REDM 511 from Redpath Museum.

Ms La Ricca

Having inspected the proposed course form, the geography department has no objections and indeed encourages its creation .

Prof. Michel Lapointe Chair of Undergraduate Affairs Committee of McGill Geog

-----Original Message-----From: Marie LaRicca [mailto:marie.laricca@mcgill.ca] Sent: Tuesday, September 09, 2014 2:19 PM To: LAPOINTE@GEOG.MCGILL.CA Cc: Rowan Barrett Subject:

Dear Prof. Lapointe,

Enclosed is a course proposal REDM 511 from Redpath Museum. This is being sent to you for course consultation. Could you please send us feedback before September 23rd. The Faculty of Science will be presented this course at this date.

Thank you for your time and your feedback. Sincerely

Marie Passalalpi La Ricca Administrative Officer

McGill University 514-398-4086 ext. 3188 514-398-3185 fax www.mcgill.ca/redpath CONFIDENTIALITY NOTICE : This email may contain information that is privileged and confidential. Please delete immediately if you are not the intended recipient. Ce courriel peut contenir de l'information privilégiée et confidentielle. Nous vous demandons de le détruire immédiatement si vous n'êtes pas le destinataire.

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### Josie D'Amico

From: Sent: To: Subject: George McCourt September-10-14 8:21 PM Marie LaRicca RE:

Hi Marie,

The MSE has no objections to this new course proposal (REDM 511).

Thanks!

George

Senior Faculty Lecturer, McGill School of Environment Associate Director Undergraduate Affairs, McGill School of Environment

McGill School of Environment Rowles House, Macdonald Campus of McGill University 21, 111 Lakeshore Road, Ste-Anne-de-Bellevue, QC, H9X 3V9

Tel: 514-398-7550 E-mail: george.mccourt@mcgill.ca

-----Original Message-----From: Marie LaRicca Sent: Wednesday, September 10, 2014 9:17 AM To: George McCourt Cc: Rowan Barrett Subject:

Dear Prof. McCourt,

Enclosed is a course proposal REDM 511 from Redpath Museum. This is being sent to you for course consultation. Could you please send us feedback before September 23rd. The Faculty of Science will be presented this course at this date.

Thank you for your time and your feedback. Sincerely

Marie Passalalpi La Ricca Administrative Officer McGill University 514-398-4086 ext. 3188 514-398-3185 fax www.mcgill.ca/redpath CONFIDENTIALITY NOTICE : This email may contain information that is privileged and confidential. Please delete immediately if you are not the intended recipient. Ce courriel peut contenir de l'information privilégiée et confidentielle. Nous vous demandons de le détruire immédiatement si vous n'êtes pas le destinataire. P Before printing, think about the Environment.

Avant l'impression, il faut penser à l'Environnement.

### Geralda Bacaj, Miss

From:	Geralda Bacaj, Miss	
Sent:	Friday, September 19, 2014 3:18 PM	
То:	Geralda Bacaj, Miss	
Subject:	RE: EPS support for REDM 511	

From: Jeanne Paquette, Dr.
Sent: Friday, September 19, 2014 1:26 PM
To: Marie LaRicca
Cc: Rowan Barrett; Alfonso Mucci, Dr.; Anthony Williams-Jones, Dr.
Subject: EPS support for REDM 511

Dear colleagues,

As Director of undergraduate Studies, I consulted departmental colleagues and especially those closest to the theme of this proposal. Here is the outcome:

The department of Earth & Planetary Sciences supports the proposal for the course REDM 511. Our participation in the Minor in Natural History shows our commitment to broader interdisciplinary training in natural sciences. We appreciate the positive impact of REDM 400 where our faculty members are welcome to supervise collection-based projects or give an invited lecture. The research of some of our faculty members involves testing hypotheses for physical events (e.g. late Permian volcanism, oxygenation of the early Earth's ocean and atmosphere) that impacted, locally or globally, the evolution of life. The teaching team of REDM 511 is welcome to invite them to bring their perspective to this new course.

Regards,

Jeanne Paquette Associate Professor Director of Undergraduate Studies in Earth & Planetary Sciences

### Geralda Bacaj, Miss

From:	Geralda Bacaj, Miss
Sent:	Tuesday, September 30, 2014 10:07 AM
То:	Geralda Bacaj, Miss
Subject:	RE: Feedback Request RE: Course Proposal REDM 511

-----Original Message-----From: Marie LaRicca Sent: September-29-14 1:39 PM To: Josie D'Amico Cc: David M. Green, Dr.; Rowan Barrett Subject: FW: Feedback Request RE: Course Proposal REDM 511

Josie, Here are the comments from Prof. Savelle in the Anthropology dept. Marie

Marie Passalalpi La Ricca Administrative Officer

McGill University 514-398-4086 ext. 3188 514-398-3185 fax www.mcgill.ca/redpath CONFIDENTIALITY NOTICE : This email may contain information that is privileged and confidential. Please delete immediately if you are not the intended recipient. Ce courriel peut contenir de l'information privilégiée et confidentielle. Nous vous demandons de le détruire immédiatement si vous n'êtes pas le destinataire. Before printing, think about the Environment. Avant l' impression, il faut penser à l'Environnement.

-----Original Message-----From: James Savelle, Prof. Sent: Monday, September 29, 2014 10:29 AM To: Connie Di Giuseppe; Marie LaRicca Cc: Rowan Barrett Subject: RE: Feedback Request RE: Course Proposal REDM 511

Dear Marie;

The course looks to be very interesting, and there is certainly no overlap with anthropology/archaeology.

I assume this is what the consultation request is about?

Regards, James Savelle

-----Original Message-----From: Connie Di Giuseppe Sent: Monday, September 29, 2014 8:41 AM To: Marie LaRicca Cc: Rowan Barrett; James Savelle, Prof. Subject: Feedback Request RE: Course Proposal REDM 511

Dear Marie,

Sorry for not responding to your email earlier. I am copying Prof. James Savelle, Undergraduate Program Director for the Department of Anthropology, who will get back to you regarding your request below.

Please don't hesitate to contact if you have any questions.

Best regards,

Connie

\*\*\*

Connie Di Giuseppe | Manager - Student Affairs | Administrative Service Centre - Leacock 2 | Departments of Anthropology / History and Classical Studies / Jewish Studies / Sociology | Leacock Building, 7th Floor |855 Sherbrooke St. West, room 713, Montreal, Quebec, H3A 2T7 | tel: 514-398-4285 | fax: 514-398-7476 | <u>connie.digiuseppe@mcgill.ca</u>

-----Original Message-----From: Marie LaRicca Sent: Tuesday, September 09, 2014 1:51 PM Cc: Rowan Barrett Subject:

Please forward the following email to the Chair of your Curriculum Committee - thank you

Enclosed is a course proposal REDM 511 from Redpath Museum. This is being sent to you for course consultation. Could you please send us feedback before September 23rd. The Faculty of Science will be presented this course at this date.

Thank you for your time and your feedback. Sincerely

Marie Passalalpi La Ricca Administrative Officer

McGill University 514-398-4086 ext. 3188 514-398-3185 fax

www.mcgill.ca/redpath

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Proposal Reference Number	: 8893
PRN Alias	: 14-15
Version No	: 5
Submitted By	: Miss C
Edited By	: Ms Jo

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5	ŏ	У	3	

- #116
- Geralda Bacaj
- sie D'Amico

	New Data		
Program Affected?	Ν		
Program Change Form Submitted?			
Subject/Course/Term	MDPH 396		
	one term		
Credit Weight or CEU's	3 credits		
Course Activities	Schedule Type	Hours per week	
	PW - Project	9	
		Total Hours per Week : 9 Total Number of Weeks : 13	
Course Title	Official Course Title :	Undergraduate Research Project	
	Course Title in Calendar :	Undergraduate Research Project	
Rationale	This new course coordinated by the Medical Physics Unit is an undergraduate research project course. This course will provide B.Sc. students with research opportunity to work with Medical Physics researchers on a broad range of projects. It will expand the current options available to students and thus further enhance the interdisciplinary nature of the undergraduate program. The course also matches the curriculum goals of the Medical Physics Research Training Network (MPRTN), an NSERC-funded CREATE program in medical physics research training (mprtn.com). This course will be added to the roster of 396 series of Undergraduate Research Projects Courses currently available to Science students		
Responsible Instructor			
Course Description	Independent research project oral presentation.	with a final written report and an	
Teaching Dept.	0224 : Medical Physics Unit		
Administering Faculty/Unit	SC : Faculty of Science		
Prerequisites	Completion of at least one undergraduate term with CGPA of 3.0 Web Registration Blocked? : N		
Corequisites			
Restrictions	This course cannot be taken	under the S/U option. Students	

	cannot be supervised by the same instructor for two 396 Science courses. Open to students in programs offered by the Faculty of Science. Since this course takes place within a clinical department and may require access to confidential data, the proposed research project needs departmental approval and may need research ethics board approval.
Supplementary Calendar Info	
Additional Course Charges	
Campus	Downtown
Projected Enrollment	5
Requires Resources Not Currently Available	Ν
Explanation for Required Resources	
Required Text/Resources Sent To Library?	
Library Consulted About Availability of Resources?	
Consultation Reports Attached?	
Effective Term of Implementation	201501
File Attachments	No attachments have been saved yet.
To be completed by the Faculty	
For Continuing Studies Use	

# Approvals Summary

### Show all comments

Version No.	Departmental Curriculum Committee	Departmental Meeting	Departmental Chair	Other Faculty	Curric/Academic Committee	Faculty	SCTP	Version Status
5					Approved David S Ragsdale Meeting Date: Sep 08 2014 Approval Date: Oct 1 2014 <u>View Comments</u>	Approved David S Ragsdale Meeting Date: Sep 08 2014 Approval Date: Oct 1 2014 <u>View Comments</u>		Approved by Faculty Meeting Edited by: Josie D'Amico on: Oct 1 2014
4								Submitted to Department Chair for approval Edited by: Josie D'Amico on: Sep 22 2014
3								Submitted to Department Chair for approval Edited by: Jan Peter Frans

				Seuntjens on: Sep 9 2014
2				Submitted to Department Chair for approval Edited by: Jan Peter Frans Seuntjens on: Aug 1 2014
1				Submitted to Department Chair for approval Created on: Jul 31 2014

Ac-14-4

# **Request for Approval of Cotutelle Program**

Date: December 1,	2013	
Student Name:		McGill ID Number:
Department Name: <u>Com</u>	puter Science	
Effective Term: Fall 2	2013	Admission Level:PhD
Cotutelle-France	Cotutelle-U21	
Name of Partner Institution:	École Polytechnique	
·		

**Program of Study:** 

### Required Courses:

(Total credits required and Course Numbers, Titles & Credit Values if available)

		and the second
BINF 621	Bioinformatics: Molecular Biology	
COMP 561	Computational Biology Methods & Research	3
COMP 616D1	Bioinformatics Seminar	1 5
COMP 616D2	Bioinformatics Seminar	1.5
COMP 618	Bloinformatics: Functional Genomics	3
COMP 766	An Introduction to Crowdsourcing and Human-Computation Techniques	4
BTEC 555	Structural Bioinformatics	3

### Required Examinations:

(Comprehensive, Language, etc.)

COMP 700 "Comprehensive examination"	McGill, Montréai
COMP 701 Thesis proposal and area examination	McGill, Montréal
Thesis Defense	École Polytechnique, France

### $\triangleright$ Other:

(Thesis, etc.)

### ويهيها والمحمد المحد والمحطولة والكرية

Research and writing of a thesis titled "Quantification et prédiction des structures secondaires et tertiaires des ARN associées à des informations non-codantes ».

HC-14-4

Research work includes: literature review of state-of-the-art research and knowledge, design and programming of algorithms, running computational experiments, writing a scientific articles (with minimum of 2 published papers and 1 submitted at the time of the thesis defense).

The thesis will be approximately 150-200 pages long, written in French with a english abstract.

### Approvals sign-off:

-----

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Student			216/07/10
Supervisor	Jérôme Waldispühl		2014/06/41
Department GPD	PRAKASH PANANGADEN	Pralast Tawayolu	17 June 2014
Department Chair	G Dudik	booke	21,7/14
Faculty (curriculum committee)	LAURIE HENDREN	Jam Mr_	Aug 13 / 14

# Please forward this form, together with a copy of the corresponding Memorandum of Agreement, to Maggie Do Couto (maggie.docouto@mcgill.ca) at Graduate and Postdoctoral Studies

Approval Refusal (Reasons)		
Approval Refusal (Reasons)		
Approval Refusal (Reasons)		
Approval	Refusal (Reasons)	
Approval		
	Approval	

### QUALIFYING COURSES FOR THE DEAN'S MULTIDISCIPLINARY UNDERGRADUATE RESEARCH LIST

Members of the Academic Committee are invited to consider the list of courses that qualify for the Dean's Multidisciplinary Undergraduate Research List:

- For your reference, please review the additions from the last year.
- Please review the proposed addition.
- Are there any other new research courses currently being created or pending final approval?
- Considering the main list below of currently approved courses, are there any that ought to be removed?

### Background: What is the Dean's Multidisciplinary Undergraduate Research List

This following information is provided to students both on the Office for Undergraduate Research in Science website at <u>www.mcgill.ca/science/research/ours/dmurl</u> and also in the Calendar at <u>www.mcgill.ca/study/2014-</u>

<u>2015/university\_regulations\_and\_resources/undergraduate/ug\_gi\_graduation\_honours\_faculty\_of\_science\_deans\_multidisc\_ug\_research\_list</u>. It was revised in Spring/Summer 2013 when the DMURL was extended to B.A. & Sc. students

The Faculty of Science Dean's Multidisciplinary Undergraduate Research List recognizes Bachelor of Science (B.Sc.) and *(effective as of October 2013 graduation)* Bachelor of Arts and Science (B.A. & Sc.) students who have participated in substantial and broad undergraduate science research.

### Eligibility

To be placed on the Faculty of Science Dean's Multidisciplinary Undergraduate Research List at graduation time, a student must:

- complete at least 9 credits of research-based courses, taken for a letter grade,
- where qualifying courses are either specified in the list of approved science research courses (<u>http://www.mcgill.ca/science/research/ours/researchcourses</u> and reproduced below),
- or are pre-approved by the Faculty of Science, for other undergraduate science research courses.

Furthermore, considering all qualifying science research-based courses on your transcript at graduation time:

- at least one course, worth at least 3 credits, must be from a different unit than the other research-based courses; and
- every qualifying course must have been completed with a grade of C or above; and
- the average GPA over all qualifying courses must be 3.0 or above.

If these requirements are met, the mention "Dean's Multidisciplinary Undergraduate Research List" will be recorded on the student's transcript at graduation time.

### Application

No application is necessary for students who have taken courses from the approved list; all B.Sc. and B.A. & Sc. graduating students' records are considered by the Office for Undergraduate Research in Science.

**In exceptional circumstances,** if students have taken a science research course *not* already on the approved list, and wish for this course to be counted toward the Dean's Multidisciplinary Undergraduate Research List, they must apply. A qualifying course involves a science research project as its primary focus, culminating in a substantive written report. **Ineligible** courses include: reading courses; BASC 396 and BASC 449; and courses offered by the Faculty of Arts. For information on how to apply, students should contact the Office for Undergraduate Research in Science at least 4 months prior to graduation (e.g., February 1, for June graduation; July 1, for November graduation; August 1, for February graduation).

### What is the list of approved research-based courses? How was it created and revised?

In 2005, members of the academic committee were asked to propose courses from their units which should be on this list. All courses involve a significant research component and a final written report or thesis. Reading courses were excluded. The list was reviewed and approved at the Academic Committee meeting of December 13, 2005. Since 2005, courses have been added by OURS in consultation with the Associate Dean (Academic), reflecting new course offerings (including three such courses added in 2012-13). The list was also reviewed with the Academic Committee in September 2009, September 2011, September 2012, and September 2013. The current list is given below.

### Additions or modifications?

#### For consideration:

- GEOG 460 (Research in Sustainability). Requested by a student. Please see Annex 1.
- Are there any other courses that should be added to this list, as a result of courses created or modified? Or deletions?

#### **Recent changes, for reference:**

- EPSC 470: Added 2014-01
- GEOG 489: Added 2014-01
- PHAR 396: Added 2014-09
- PHAR 598: Added 2014-01

Note that future 396 courses (e.g. possible Medical Physics 396) will be added to this list.

### About this list:

- In the event of *course name changes* since inception, this is noted in the comments field.
- Some courses have been removed from this list at the recommendation of the Associate Dean (Academic). They are listed in a separate table below. They have not been offered for several years, or they are currently offered as reading courses but have not been offered as research courses in several years.

- Multi-semester courses (suffix D1/D2, N1/N2) are denoted by "Span course" in the comments field.
- Independent studies: research or reading? Courses in which some students are given reading courses and other students are given research projects (i.e., <u>EPSC 482</u>). When OURS reviews dossiers of candidates for graduation to determine their eligibility for DMURL, departmental validation is required to determine whether the course was taken as a reading project or a research project. These courses are labeled with an asterisk (\*) in the table below. (<u>GEOG 490</u> was reading-or-research, and is now reading-only, but remains on the list for students who took it as research in recent years.)

				Research
Course	Title	Cr	Comment	reading?
AGRI 519	Sustainable Development Plans	6	Added 2010/01/15	
ANAT 396	Undergraduate Research Project	3		
ANAT 432	Honours Research Project	9	Span course	
ATOC 396	Undergraduate Research Project	3		
ATOC 480	Honours Research Project	3		
BIOC 396	Undergraduate Research Project	3	(Not on very first list ye	ars ago)
BIOC 462	Research Lab in Biochemistry	6	Added 2011/09	
BIOC 491	Independent Research	6		
BIOL 396	Undergraduate Research Project	3		
BIOL 451	Research in Ecology and Development in Africa	3	Added 2011/09	
BIOL 466	Independent Research Project 1	3		
BIOL 467	Independent Research Project 2	3		
BIOL 468	Independent Research Project 3	6		
BIOL 469	Independent Research Project 4	9		
BIOL 479	Honours Research Project 1	9	Span course	
BIOL 480	Honours Research Project 2	12	Span course	
CHEM 396	Undergraduate Research Project	3		
CHEM 470	Research Project 1	6		
CHEM 480	Research Project 2	3		
CHEM 490	Research Project 3	3	Span course	
COGS 396	Undergraduate Research Project	3		
COGS 401	Research Cognitive Science 1	6		
COGS 402	Research Cognitive Science 2	6	Retired 2014/01	
COGS 444	Honours Research	6	Added 2013/07	
COMP 396	Undergraduate Research Project	3		
COMP 400	Technical Project & Report	3		
COMP 401	Project in Biol. & Comp. Sci.	3	(Not on very first list ye	ars ago)
ENVR 396	Undergraduate Research Project	3		
ENVR 401	Environmental Research	3		
ENVR 451	Research in Panama	6		
ENVR 490	Independ. Study in Environment	3		

ENVR 495	Honours Research	3	Span course
EPSC 396	Undergraduate Research Project	3	
EPSC 470	Undergraduate Thesis Research	3	Span course (Added 2014/01)
EPSC 480	Honours Research Project	3	Span course
EPSC 482	Independent Studies 1	3	*
		•	Span course. Added
ESYS 480	Honours Research Project	6	2013/07.
GEOG 396	Undergraduate Research Project Research in Society and Development in	3	
GEOG 451	Africa	3	Added 2011/09
GEOG 489	Independent Research in Geog	3	Added 2014/01 (Was Geography: Independent Studies. Not on very
GEOG 490	Independent readings in Geog	3	first list years ago) *
GEOG 491	Honours Research	3	Span course
GEOG 492	Joint Honours Research	3	Span course
HGEN 396	Human Genetic Research Project	3	Added 2013/01
MATH 396	Undergraduate Research Project	3	
MATH 410	Majors Project	3	
MATH 470	Honours Research Project	3	
MIMM 396	Ugrad Research Proj-Microbiol	3	
MIMM 397	Ugrad Research Proj - Immunol	3	(Not on very first list years ago)
MIMM 501	Hons Research Proj - Immunol	12	list years ago)
MIMM 502	Hons Research Proj - Microbiol	12	Span course
NSCI 396	Undergraduate Research Project	3	(Not on very first list years ago)
NSCI 410	Independent Research 1	6	(Not on very first list years ago) BOTH span course AND 1-term course. (Not on very first list
NSCI 420	Independent Research 2	9	years ago) Span course Added
NSCI 430	Honours Research Project	9	2013/07.
PHAR 396	Undergraduate Research Project	3	2014/09
PHAR 598	Honours Pharmacology Research Project	6	2014/01 BOTH span course AND one-
PHAR 599	Res Projects in Pharmacology	6	term course. Added 2009/09.
PHGY 396	Undergraduate Research Project	3	
PHGY 419	Project&Seminar in Immunology	9	Span course
PHGY 461	Experimental Physiology	9	Span course
PHYS 396	Undergraduate Research Project	3	
PHYS 449	Majors Research Project	3	
PHYS 459	Honours Research Thesis	3	Span course
PHYS 479	Honours Research Project	3	

PHYS 489	Special Project	3	
PSYC 380	Honours Research Project Sem	9	Span course
PSYC 395	Psychology Research Project 1	6	
PSYC 396	Undergraduate Research Project	3	(Not on very first list years ago)
PSYC 450	Research Project & Seminar	9	Span course
PSYC 494	Psychology Research Project	9	Span course
PSYC 495	Psychology Research Project 2	6	
PSYC 496	Senior Honours Research 1	6	
PSYC 497	Senior Honours Research 2	6	
PSYC 498	Senior Honours Research	9	Span course
			Span course. Added
PSYT 400	Research Project in Psychiatry	6	2013/01.
REDM 396	Undergraduate Research Project	3	

### Courses removed from this list

Course	Credits	When removed	Why removed; Notes	
BIOC 460 Advanced Lab in Biochemistry	6	2011-09	Course retired; last offered in academic year 2008/09. (However, see new course BIOC 462, included on the list above.)	
BIOL 377 Independent Reading Project (Was "Independent Studies 1")	3	2011-09	Formerly, this course was offered as either a reading or research courses. BIOL 377 is now only a reading course. (There are many other Biology research courses; see list above.)	
BIOL 471 Independent Studies 3	6		BIOL 471/477/478 were last offered in academic year	
BIOL 477 Independent Studies 4	3	2011-09	2006/2007. They were offered as either reading or research courses. ( <i>There are many other Biology</i>	
BIOL 478 Independent Studies 5	3		research course; see list above.)	

## B.Sc. Global Designation – Student Information Faculty of Science, McGill University

September 23, 2014

**Note:** The B.Sc. Global Designation was approved by the Faculty of Science on December 4, 2012. This document and the associated lists of suggested approved courses and draft application form have been prepared as steps in the implementation process.

### 1. Introduction – What is the B.Sc. Global Designation?

The Faculty of Science B.Sc. Global Designation recognizes Bachelor of Science (B.Sc.) students who have gone beyond a typical B.Sc. experience by broadening their horizons through participation in language classes, the performance of independent research and including the "real-world" (global-related study and/or non-McGill study or work experience) in their program.

### 2. Eligibility

To receive the designation of B.Sc. Global at graduation, a student must achieve the following requirements (including two required and one complementary element):

### 2.1 Required Elements

**Language Course:** At least 3 credits of a McGill language course, studying any language that is not the student's first language.

**Research Course:** At least 3 credits of research from any research course which is on the approved research courses for the McGill Faculty of Science's Dean's Multidisciplinary Undergraduate Research List (DMURL) (see <a href="http://www.mcgill.ca/science/research/ours/researchcourses">http://www.mcgill.ca/science/research/ours/researchcourses</a>).

### 2.2 Complementary Element

In addition to the required elements, students must complete at least one of the following complementary elements.

**Field Studies:** Completion of an approved field studies course. Any course which is designated as a field studies course, is open to Science students, and which involves a significant non-local element. (An informal definition of "non-locality" is a field study that requires traveling and staying for a period of time outside of Montreal.) A list of pre-approved courses is provided on the Global Designation web site [See Appendix 1]. To apply for a course not currently found on the pre-approved list to be added to the list, please contact the Global Designation Coordinator.

**Internship:** Completion of an Industrial Practicum Course or the Internship Year in Science (see <a href="http://www.mcgill.ca/science/programs/internships">http://www.mcgill.ca/science/programs/internships</a> ).

**Exchange:** At least one term as an exchange student at a university outside of Montreal (see <a href="http://www.mcgill.ca/students/international/goabroad/exchange">http://www.mcgill.ca/students/international/goabroad/exchange</a> ).

**"Global" courses offered within Science or from other faculties:** At least three credits from a McGill course with a substantial Global component. Such courses must be at the 200-level or above, and may not be a "General Interest" type of course. Courses from both within Science and in other faculties may be used to satisfy this requirement. A list of pre-approved courses is listed on the Global Designation web site [see Appendix 2]. To apply for a course not currently found on the pre-approved list to be added to the list, please contact the Global Designation Coordinator.

### 2.3 Other Requirements

Furthermore, considering all qualifying B.Sc. Global Designation courses on your transcript at graduation time:

- Every qualifying course must have been completed with a grade of C or above; and
- The average GPA over all qualifying courses must be 3.0 or above.

### 3. Application

To apply for the B.Sc. Global Designation, students must submit the web form found at [the Global Designation website] in which they detail how they have satisfied the two required and one complementary requirements. This form should be completed before the student's last term of studies. [Appendix 3]

### 4. Contact Information

The Global Designation will be administered by the Global Designation Coordinator, Martine Dolmière.

### **Appendix 1: Suggested Pre-Approved Field Courses**

### **Field Study Semesters:**

Canadian Field Studies in Africa (CFSIA) Panama Field Study Semester (PFSS) Barbados Field Study Semester (BFSS) Barbados Interdisciplinary Tropical Studies (BITS)

### **Courses:**

Note: Where applicable, course restrictions are noted according to the list of "Restricted courses outside the Faculty of Science".

BIOL 240 (3) Monteregian Flora (at Mont St. Hilaire)
BIOL 331 (3) Ecology/Behaviour Field Course (at Mont St. Hilaire)
BIOL 334 (3) Applied Tropical Ecology (in Barbados)
BIOL 335 (3) Marine Mammals (taught at the Huntsman Marine Science Centre, Bay of Fundy, N.B.)
BIOL 432 (3) Limnology
BIOL 573 (3) Vertebrate Palaeontology Field Course (in Alberta and/or Saskatchewan)
EPSC 231 (3) Field School I
EPSC 331 (3) Field School 2
EPSC 341 (3) Field School 3
GEOG 495 (3) Field Studies – Physical Geography (in southern Quebec)
GEOG 496 (3) Geographical Excursion (in Barbados)
GEOG 499 (3) Subarctic Field Studies (in Schefferville)
GEOG 555 (3) Ecological Restoration
PLNT 358 (3) Flowering Plant Diversity - on Approved list
WILD 401 (4) – Fisheries and Wildlife Management - on neither the Approved nor Not Approved list

WILD 475 (3) Desert Ecology (Arizona, Colorado, Utah) - on neither the Approved nor Not Approved list

### Appendix 2: Suggested Pre-Approved "Global" Courses

Note: Updated from a list compiled in 2012, with feedback from the McGill School of Environment at the time.

AGEC 442 (3) - Economics of International Agricultural Development AGRI 411 (3) - Global Issues on Development, Food and Agriculture ANTH 318 (3) - Globalization and Religion BUSA 356 (3) - Management in Global Context BUSA 493 (3) - Global Economic Competitiveness ECON 313 (3) - Economic Development 1 ECON 314 (3) - Economic Development 2 ECON 347 (3) - Economics of Climate Change ENVR 200 (3) - The Global Environment ENVR 201 (3) - Society, Environment and Sustainability ENVR 519 (3) - Global Environmental Politics FINE 480 (3) - Global Investments GEOG 200 (3) - Geographical Perspectives: World Environmental Problems GEOG 205 (3) - Global Change: Past, Present and Future GEOG 216 (3) – Geography of the World Economy GEOG 210 (3) - Global Places and People GEOG 310 (3) - Development and Livelihoods GEOG 311 (3) - Economic Geography GEOG 316 (3) - Political Geography GEOG 360 (3) - Analyzing Sustainability GEOG 403 (3) - Global Health and Environmental Change GEOG 530 (3) - Global Land and Water Resources INDR 492 (3) - Globalization and Labour Policy INTD 200 (3) - Introduction to International Development INTD 397 (3) - International Development MGCR 360 (3) - Social Context of Business MGPO 469 (3) - Managing Globalization MGPO 475 (3) - Strategies for Developing Countries NRSC 340 (3) - Global Perspectives on Food NUTR 341 (3) - Global Food Security NUTR 501 (3) - Nutrition in Developing Countries POLI 342 (3) - Canadian Foreign Policy POLI 345 (3) - International Organizations POLI 362 (3) - Political Theory and International Relations SOCI 307 (3) - Sociology of Globalization SOCI 519 (3) - Gender and Globalization SOCI 560 (3) - Labour and Globalization URBP 201 (3) - Planning the 21st Century City

## Appendix 3: Draft Application Form for B.Sc. Global Designation

To receive the designation of B.Sc. (Global) at graduation, a student must achieve the following requirements (including two required and one complementary element):

### **Student Information**

Last Name McGill ID	First Name McGill Email		
Required Element 1: Language Cou	urse – Minimum 3 cre	edits	
Course (e.g. GERM XXX	.) Term	(e.g. Fall 2014)	
Required Element 2: Research Cou	rse – Minimum 3 cree	dits	
Course (e.g. BIOL XXX) See <u>http://www.mcgill.ca/science/researc</u> Multidisciplinary Undergraduate Research	Term <u>ch/ours/researchcourses</u> List (DMURL).	(e.g. Fall 2014) for courses approved for	the Dean's
Complementary Element			
Element Claiming [Drop down box]: Fig	eld Study / Internship / J	Exchange / "Global" Co	urse
<b>1. If Field Study – Minimum 3 credits:</b> [Drop down box]: Field Semester / Field	Course – Minimum 3 cre	dits	
If Field Semester: [Drop down box]: CFSIA / PFSS / BFSS If Other, describe:	/ BITS / Other	Term	_ (e.g. Fall 2014)
If Field Course – Minimum 3 credits: Course (e.g. ENVR XXX) See [URL] for a list of pre-approved field	) Term semesters and study cour	(e.g. Fall 2014 ses.	)
<b>2. If Internship:</b> Name of Employer	_ Term _	(e.g. Fall 20	14)
<b>3. If Exchange:</b> Name of Host Institution	Term	(e.g. Fall 20	14)
<b>4. If "Global" Course – Minimum 3 cre</b> Course (e.g. POLI XXX) See [URL] for a list of pre-approved globa	e <b>dits:</b> Term 1l courses.	(e.g. Fall 2014)	

### Annex A - GEOG 460 Research in Sustainability (3 credits)

Here is the course description from http://www.mcgill.ca/study/2014-2015/courses/GEOG-460

### Overview

Geography: Through engaging in real-world sustainability challenges through hands-on research, learn to critically analyze problems that arise at the interface of multiple disciplines including the scientific-technological, socio-economic, political-institutional, ethical, and human behavioural. Develop an understanding of the leverages and road blocks in achieving a sustainability transition.

Terms: Fall 2014

Instructors: Brian Robinson (Fall)

Fall Prerequisite: GEOG 360

### Please see attached for a detailed course outline.

Inclusion on the DMURL was requested by a student to Victor Chisholm, Undergraduate Research Officer.