

FACULTY OF SCIENCE ACADEMIC COMMITTEE
Report to Faculty of Science Meeting

The Academic Committee approved the following on Tuesday, 28 April 2015:

(1) MCGILL SCHOOL OF ENVIRONMENT

New Course:

| | | |
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| ENVR 421 | Mtl Envr Hist & Sustainability 3 credits | AC-14-75 |
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New Course:

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| ENVR 422 | Mtl Urban Sustainability Anal 3 credits | AC-14-76 |
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Courses Added to MSE Programs

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| ENVR 421/ENVR 422 | | AC-14-77 |
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(2) GEOGRAPHY

New Course:

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| GEOG 384 | Principles of Geospatial Web 3 credits | AC-14-78 |
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(3) CHEMISTRY

- B.A. & Sc. and B.Sc. Program Revisions:

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|---|-----------------|
| B.A. & Sc. Major Concentration in Chemistry | AC-14-81 |
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| B.Sc. Liberal – Core Science Component Chemistry – Biological | AC-14-82 |
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| B.Sc. Liberal – Core Science Component Chemistry – General | AC-14-83 |
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| B.Sc. Minor in Chemistry | AC-14-84 |
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- B.Sc. Program Retirement:

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| B.Sc. Liberal – Core Science Component Chemistry – Physical | AC-14-85 |
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(4) EARTH & PLANETARY SCIENCES

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|----------|--|-----------------|
| EPSC 549 | Hydrogeology Change in course activities 3 credits | AC-14-79 |
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(5) BIOLOGY

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| BIOL 352 | Vert Evol: Dinosaurs & Mammals Changes: title, description, prerequisites 3 credits | AC-14-80 |
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(6) BIOCHEMISTRY

| | | |
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| BIOC 404 | Biophysical Methods in Biochem Changes: title, description, restriction 3 credits | AC-14-86 |
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New Course

Proposal Reference Number : 9118
 PRN Alias : 14-15#341
 Version No : 4
 Submitted By : Dr Julia Freeman
 Edited By : Dr Julia Freeman

| | New Data | | | | | |
|--------------------------------|--|--|-------------------------|--------------------------------|----------------------------|--|
| Program Affected? | N | | | | | |
| Program Change Form Submitted? | | | | | | |
| Subject/Course/Term | ENVR 421 • one term | | | | | |
| Credit Weight or CEU's | 3 credits | | | | | |
| Course Activities | <table border="1"> <thead> <tr> <th>Schedule Type</th> <th>Hours per week</th> </tr> </thead> <tbody> <tr> <td>E - Research Course</td> <td>10</td> </tr> </tbody> </table> <div> Total Hours per Week : 10 Total Number of Weeks : 4 </div> | | Schedule Type | Hours per week | E - Research Course | 10 |
| Schedule Type | Hours per week | | | | | |
| E - Research Course | 10 | | | | | |
| Course Title | <table border="1"> <tbody> <tr> <td>Official Course Title :</td> <td>Mtl Envr Hist & Sustainability</td> </tr> <tr> <td>Course Title in Calendar :</td> <td>Montreal: Environmental History and Sustainability</td> </tr> </tbody> </table> | | Official Course Title : | Mtl Envr Hist & Sustainability | Course Title in Calendar : | Montreal: Environmental History and Sustainability |
| Official Course Title : | Mtl Envr Hist & Sustainability | | | | | |
| Course Title in Calendar : | Montreal: Environmental History and Sustainability | | | | | |
| Rationale | Unearthing Montreal focuses on the study of urban sustainability through the reconstruction of historic, ecological and social landscapes, an approach that has not previously been offered by the School of Environment. It also meets the growing demand for applied research and experience-based learning opportunities at McGill. The course is at the core of MUSE (Montreal Urban Sustainability Experience) as it is being developed and vetted for approval. Moreover, being set in Montreal, this course complements the current field courses that require travel abroad. | | | | | |
| Responsible Instructor | Sylvie de Blois | | | | | |
| Course Description | This course will focus on the role of place and history in the cities in which we live and in our understanding of sustainability. Each year, students will work to develop a historical reconstruction of the natural environment of Montreal and of its links to the cultural landscape, building on the work of previous cohorts of students. | | | | | |
| Teaching Dept. | 0408 : McGill School of Environment | | | | | |
| Administering Faculty/Unit | SC : Faculty of Science | | | | | |
| Prerequisites | ENVR 301 or equivalent, or permission from the instructor. Web Registration Blocked? : N | | | | | |
| Corequisites | ENVR 422 Montreal Urban Sustainability Analysis Web Registration Blocked? : Y | | | | | |

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| Restrictions | |
| Supplementary Calendar Info | 1. Each year focuses on making a specific and unique contribution to The Hochelaga Project; topics vary as required. |
| Additional Course Charges | |
| Campus | Downtown |
| Projected Enrollment | 20 |
| Requires Resources Not Currently Available | N |
| Explanation for Required Resources | |
| Required Text/Resources Sent To Library? | Y |
| Library Consulted About Availability of Resources? | Y |
| Consultation Reports Attached? | Y <ul style="list-style-type: none"> • Consultation - ANTH - Complete.pdf • Consultation - GEOG - Complete.pdf • Consultation - HIST - Complete.pdf • Consultation - URBP - Complete.pdf |
| Effective Term of Implementation | 201505 |
| File Attachments | <ul style="list-style-type: none"> • ENVR 421 Syllabus Montreal ENV HIST 2015.docx |
| 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 |
|-------------|-----------------------------------|----------------------|--------------------|---------------|---|---------|------|---|
| 4 | | | | | Approved Gerald Bacaj Meeting Date: Apr 28 2015 Approval Date: Apr 30 2015 | | | Approved by Curric/Academic Committee Edited by: Julia Freeman on: Apr 29 2015 |

| | | | | | | | | |
|---|--|--|---|--|-------------------------------|--|--|--|
| | | | | | View Comments | | | |
| 3 | | | | | | | | Approved by Departmental Chair Edited by: Josie D'Amico on: Apr 9 2015 |
| 2 | | | | | | | | Approved by Departmental Chair Edited by: Julia Freeman on: Apr 5 2015 |
| 1 | Approved George McCourt Meeting Date: Jan 23 2015 Approval Date: Jan 26 2015 View Comments | | Approved Sylvie de Blois Meeting Date: Feb 23 2015 Approval Date: Feb 11 2015 View Comments | | | | | Approved by Departmental Chair Created on: Jan 26 2015 |

ENVR 480 (421)
Unearthing Montreal: Reconstructing the Ecological and Social Landscapes of the City
Burnside 308 (AM), Burnside 511 (PM)
10am – 3pm

Elena Bennett
Elena.bennett@mcgill.ca
Office hours: by appointment

Sylvie de Blois
Sylvie.deblois@mcgill.ca
Office hours: by appointment

Course Description:

This course will focus on the role of place and history in the creation of the environment in which we currently live. Students will develop a strong understanding of the repercussions of human activity on the environment and how the environment affects our own activities. Montreal's history, and the natural history of the Island, will be heavily emphasized as the case study for the students' research project. Students will become versed in Montreal's history and that of the aboriginal people who were on the island before European settlers; they will develop a strong understanding of how Montreal came to be as they know it.

Each year, students will work to develop a historical reconstruction of Montreal; this will be part of a project to be completed over the course of several years. Students will achieve their projects through the exploration of different methods and approaches for reconstructing past environments and tracing environmental, cultural, and geographical changes. Presentation, critique and group organization skills will be developed as well as an understanding of the benefits of skill and knowledge sharing amongst fellow peers. They will develop an appreciation for mapping both history and place in order to inform their present and future.

Learning Objectives:

By the end of this course, students will be able to:

1. Understand and appreciate the interconnectivity between history, place, and its social, political, and natural components and processes.
2. Be able to identify and use creative methods of obtaining and sharing information, drawing from diverse perspectives in order to attain a more comprehensive/diverse base of knowledge.
3. Be aware of the underlying historical processes that have led to current situations and circumstances in Montreal; both our activities and constructs influencing nature, and nature influencing us.
4. Learn through undertaking a substantial project about the historical ecology of Montreal.

Evaluation and Grading:

This course is designed to be an intensely participatory, student led experience. Your professors are here to guide you, but not to 'teach' in the sense of standing in front of you

telling you facts. You will learn in proportion to the energy and attention you put into the class.

- 10% Field journal
- 15% In-class assignments and presentations
- 25% Final project presentation
- 30% Final project write-up
- 10% Road map for future class participants
- 10% Class participation

There will not be a final examination in this course, but strict adherence to submission deadlines will be enforced. **Late assignments will not be accepted and will receive a grade of zero.** Unless stated otherwise, assignments are due at the start of class (10am) on the day that they are due.

Required readings/books

Eric Sanderson. Mannahatta.

Tentative Schedule (Subject to Change)

| Date | Activity | Readings - comments | Assignments |
|---------------|--|--------------------------------------|------------------------------------|
| Week 1 | <i>At the end of week 1, students should: be familiar with the Mannahatta project; be familiar with the natural history of New York, know about sources of information for historical reconstruction; be familiar with the evolution of the Hochelaga project and begin to develop ideas about a long-term Mannahatta-like project in Montreal, along with key resources for such a project.</i> | | |
| 4 | Introduction to MUSE | Sanderson, "Conservation City", 2011 | |
| 5 | Mountain to River Walk with Les Amis de la Montagne | | Come prepared for a long walk |
| 6 | AM: <i>Mannahatta</i> : Introduction, objectives, outcomes; challenges and opportunities http://blog.ted.com/2009/10/12/new_york_citys/ PM: Lost Rivers movie (and app) | Mannahatta: Chapters 1, 2, 3 | Students reports on their readings |
| 7 | | | |

| | | | |
|---------------|--|--|---|
| 8 | <p>AM: <i>Mannahatta</i>: Approach to environmental history; inspiration. Identifying and accessing resources about historical landscapes, a case study near Montreal</p> <p>PM: Towards Hochelaga: Getting familiar with past projects, discuss what we've done and key gaps remaining.</p> | <p>Mannahatta: Chapters 4, 5, 6</p> <p>Bouchard 1989, Bouchard 1996.</p> | <p>Students report on their readings</p> <p>Review past projects, in pairs/small groups, prepare a presentation synthesizing key findings</p> <p>Field Journal due</p> |
| | | | |
| Week 2 | <p><i>At the end of week 2, students should: be familiar with some aspects of the history of Montreal; develop short-term objectives for the primary project for this class; identify key resources for completing the project</i></p> | | |
| 11 | <p>AM: Historical timeline of Montreal</p> <p>PM: Towards '<i>Hochelaga</i>': Coming up with a vision for Montreal (Concept map of our long-term project; identify components/structure of this project; plan for this year)</p> | | <p>Identify ~10 events or moments to mark on our historical timeline of Montreal</p> <p>Bring the citation for at least one source of info about Montreal's history</p> |
| 13 | <p>AM: Developing your project plan</p> <p>PM: In class activities (Presentations from all groups)</p> | | <p>Prepare a brief, informal presentation about your project ideas</p> <p>Field journal due</p> |
| 15 | Bioblitz with the Redpath Museum | | Come prepared for a day outside |
| | | | |
| Week 3 | <p><i>At the end of week 3, students should: locate useful sources of information for their projects, and be underway with the final project for the class</i></p> | | |
| 18 | <i>Holiday: Journée nationale des patriotes</i> | | |
| 20 | AM-PM: In class activities | | Prepare a brief presentation about your progress |

| | | | |
|---------------|---|--|--|
| | | | Field Journal due |
| | | | |
| Week 4 | <i>At the end of week 4, students should: have completed their final project; be able to explain how their project will be of use to the long-term Hochelaga project; be able to explain the role of history in current urban sustainability.</i> | | |
| 25 | AM-PM: In class activities | | Prepare a brief presentation about your progress |
| 27 | AM-PM: In class activities | | Road map for future classes Field journal due |
| 29 | Final presentation symposium | | Final presentations |

Other Readings

On Montreal

- Bryan Demchinsky and Elaine Kalman Naves. *Storyed Streets: Montreal in the Literary Imagination*.
- Bryan Demchinsky. *Montreal: Then and Now: the photographic record of a changing city*
- Simon, Sherry. *Translating Montreal*, MQUP, 2006.
- Sherry Olson. *Peopling the North American City*, 2012.
- Stéphane Castonguay and Michèle Dagenais. *Environmental Histories of Montreal*.

On Environmental/Ecological History

- Eric Sanderson. *The Mannahatta Project: a natural history of New York City*.
- Dave Egan. *The Historical Ecology Handbook*
- Tom Wessels . *Reading the Forested Landscape: the Natural History of New England*
- Oliver Rackham. *The Illustrated History of the Countryside*
- Gary Paul Nabhan. *Cultures of Habitat: On Nature, Culture, and Story*
- William Cronon. *Nature's metropolis: Chicago and the Great West*.
- William Cronon. *Changes in the Land*.
- D. Foster and J. Aber. 2006. *Forests in time: the environmental consequences of 1,000 years of change in New England*. New Haven: Yale University Press.
- D Foster, F Swanson, J Aber, I Burke, N Brokaw, D Tilman, and A Knapp. 2003. *The importance of land-use legacies to ecology and conservation*. *BioScience*, 53:77-88, 2003.

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.

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 Procedures (see www.mcgill.ca/students/srr/honest/ for more information).

L'université McGill attache une haute importance à l'honnêteté académique. Il incombe par conséquent à tous les étudiants de comprendre ce que l'on entend par tricherie, plagiat et autres infractions académiques, ainsi que les conséquences que peuvent avoir de telles actions, selon le Code de conduite de l'étudiant et des procédures disciplinaires (pour de plus amples renseignements, veuillez consulter le site www.mcgill.ca/students/srr/honest/).

More on Evaluation and Grading:

Field journal – integrating knowledge and experience

During the week, each student will keep a journal documenting their progress, learning experience, findings, ideas, etc. in sufficient detail to reflect their level of engagement with the two courses in the program. This is not meant to be your notes from the course; instead, it should contain your deeper thinking and pondering about the course and reflect your ability to integrate information, to synthesize ideas, to go beyond the course material, to formulate insights about broader issues related to sustainability, etc. We encourage you to think deeply and to write freely. We are not looking for perfect grammar and technical writing or simple reports of events. The journal will be handed in at the end of each week. You will also be required to keep a journal for ENVR490 -- keep them together in a single document/book for easy reference and cross pollination. We hope that this will help you see connections between the two courses and encourage you to reflect on this as you write.

In-class assignments and presentations

During the course, the students will have to identify and share sources of information. These could be maps, historical documents, artwork, books, articles, databases, websites, people, etc. Teams will be given in class assignments and evaluated on their efforts to locate, organize, and interpret these sources. Students will also be asked to present this information in class.

Final project presentation

Teams of 4-5 students are expected to present their overall findings in the last week of class. The presentations will be done in front of a diverse audience at a symposium organised by the MSE. Details about the presentations will be provided in class and the rubric used for assessment of the presentation will be posted to My Courses.

Final project write-up

A final document integrating all the findings will be prepared by the different teams. While the topics investigated by different groups will vary from year to year, the final report should present the objectives, the methodology, and the findings for different components of the project. Additional details will be provided in class.

Road map for future class participants

A very important assignment for this course will be to prepare a road map for future class participants so that the project will build on knowledge from previous years. The students as a group will need to identify ways in which information will be not only collected and organized but also transmitted in the most efficient way possible to future cohorts.

Class participation

Students are expected to be pro-active in this course and learn from each other. Individual participation in all class activities will be assessed by the instructors. In addition, project team members will contribute an assessment of their own and their peers' contributions (this evaluation form will be made available on My Courses)

| MUSE Presentation Rubric: | | | | | |
|--|---|--|---|--|--|
| | | | | | |
| Presentation Component | Unacceptable | Acceptable | Good | Excellent | |
| | 0-4 Points | 5-6 Points | 7-8 Points | 9-10 Points | |
| Style: use effective verbal and nonverbal communication skills (e.g., voice volume, inflection, eye contact, etc.) | poor style (long pauses, reading speech, "Umm..." and other mannerisms, poor eye contact, monotone, etc.) | Either fluent delivery but reading, or awkward delivery but spontaneous | generally good delivery and spontaneity but could improve | Excellent style involving matching verbal and nonverbal style, good projection with inflection, spontaneous speaking | |
| Overview: introduction of presenters, topic and background described, agenda described | no introduction or overview, background or agenda described | introduction of presenters but awkward, sketchy or unclear overview/agenda and background | confident and fluent introduction; clear overview/agenda and background, but could be more complete or polished | confident introduction of roles and contribution; clear purpose, overview, and agenda; relevant & clear background | |
| Context: appropriate background for the research | little or no context for the provided | limited scientific context for the work. May result from incomplete sourcing of other related work | Good context for research, explaining how this study fits into related work | Excellent context for research. Introduces the topic in a way that provides clear new information to those to the topic, while advancing the knowledge who already had that information. | |
| Vocabulary: appropriate and fluent use of terms and concepts | little or no attempt to include terms, concepts, authors | use of terms but not well related, sporadic, misused or mispronounced | good use of terms but still uses jargon, or is awkward or uncertain of the proper use of terms | confident and clear use of relevant vocabulary, in the context of the course | |
| Research Design: appropriate and insightful application of procedures | little or no discussion of techniques and their application | inaccurate or incomplete explanation of techniques | Good but missing something that extends our knowledge, for example a contrast with other designs. | clear explanation with good fit, rationale, fluency, and originality. Substantially extends or deepens our understanding of research design. Contrasts the chosen research design with others in the course or with others that may have been possible for the study in question | |
| Sampling and data collection | little or no explanation of sampling choices and data collection | correct summary of sampling/data but with little reflection | correct summary of sampling/data with some reflection on choices made | contrast of sampling/data collection choices with other approaches that might have been used. Explanation that deepens our understanding | |
| Coverage: thorough and balanced in treatment of topic | very incomplete, significant gaps, or biased treatment of topic | either thorough but biased, or incomplete and balanced | generally well balanced and planned, but perhaps incorrect at some point | thorough coverage of topic per assignment with balanced treatment of important facts, approaches, and themes | |
| Graphics: attractive & balanced layout, legible font | no graphics (may be appropriate in some cases) | graphics present but poor quality (illegible, inconsistent, , etc.) | well done graphics | well-designed and attractive graphics that simplify or summarize key ideas; original graphics rather than fuzzy scans | |
| Team Roles: team members have equally weighted roles | unclear team roles | clear team roles but unequal contribution | clear roles, equal contribution | clear roles, balanced contribution, practiced transitions between presenters, cross reference each other | |
| Discussion: team is prepared to facilitate discussion and is receptive to feedback | little or no discussion | discussion but without clear organization or purpose | Prepared discussion questions. Members not fully prepared for necessary depth of discussion. | prepared questions on key areas, and responsive to and elicit participant reaction and questions | |
| | | | | | |

Course Participation Rubric

Adapted from L. Herzl 2009 Class Participation Rubric at Slideshare.com

| | VERY GOOD (1 mark each) | ADEQUATE - with room for improvement (0.5) | DEFICIENT - Needs much improvement (0) |
|-----------------------------------|---|---|--|
| LISTENING | Actively and respectfully listens to peers and instructors. | Sometimes displays lack of interest in comments of others | Projects lack of interest or disrespect for others |
| PREPARATION | Arrives fully prepared with all assignments completed, and notes on reading, observations, or with questions. | Sometimes arrives unprepared or with only superficial preparation. | Exhibits little evidence of having read or thought a bout assigned material. |
| QUALITY OF CONTRIBUTIONS | Comments are relevant and reflect understanding of assigned text(s); previous remarks of other students and insights about assigned material. | Comments sometimes irrelevant, betray lack of preparation, or indicate lack of attention to previous remarks of other students. | Comments reflect little understanding of either the assignment or previous remarks in class. |
| IMPACT ON CLASS | Comments frequently help move class discussion forward | Comments sometimes advance the conversation, but sometimes do little to move it forward. | Comments do not advance the conversation or are actively harmful to it |
| FREQUENCY OF PARTICIPATION | Actively participates at appropriate times | Sometimes participates but at other times is "tuned out". | Seldom participates and is generally not engaged |
| TOTAL: (out of 5) | | | |

ENVR 421 & 422 GROUP MEMBER EVALUATION FORM (Modified from Felder, R. (2004). *Journal of Student-centered Learning*, 2(1), p.29-30) and from PARA 410, taught by M. Scott).

Your NAME: _____

Group: _____

The following evaluation of yourself and of your team members allows you to reflect on who in your group has been active and cooperative and also to identify who did not participate in the various group activities throughout the course. Please be consistent and fair when evaluating each group member's performance, using the guidelines below.

1 – never 2 – rarely 3 – sometimes 4 – usually 5 – always

| | | | | | |
|---|--|--|--|--|--|
| Insert Student Names across TOP: | | | | | |
| ASSESSMENT OF ACTIVITIES: | | | | | |
| Made serious effort at assigned work before meeting (1-5) | | | | | |
| Attempted to make contributions during meetings (1-5) | | | | | |
| Listens to ideas respectfully (1-5) | | | | | |
| Cooperates with group effort (1-5) | | | | | |
| | | | | | |
| Overall Rating; Select a word from rubric below | | | | | |
| Few Comments: | | | | | |

RUBRIC

Excellent: Consistently carried more than his/her fair share of workload
 Very good: Consistently did what he/she was supposed to do; very well prepared and cooperative
 Satisfactory: Usually did what he/she was supposed to do; acceptably prepared and cooperative
 Adequate: Often did what was supposed to do; minimally prepared and cooperative
 Marginal: Sometimes failed to show up or complete assignments; rarely prepared
 Deficient: Often failed to show up or complete assignments; rarely prepared
 Unsatisfactory: Consistently failed to show up or complete assignments; rarely prepared

Subject: RE: MUSE new course proposal consultation
Date: Tuesday, March 17, 2015 at 6:27:31 PM GMT-04:00
From: James Savelle, Prof.
To: Julia Freeman, Dr.
CC: Daniela Caucci, Ms., John Galaty, Prof.

Dear Julia;
I have read through the course proposals and see no objections from Anthropology.
Regards,
James Savelle

From: Julia Freeman, Dr.
Sent: Monday, March 16, 2015 11:53 AM
To: James Savelle, Prof.
Cc: Daniela Caucci, Ms.; John Galaty, Prof.
Subject: Re: MUSE new course proposal consultation

Dear James Savelle,
I am writing to follow up on the Anthropology Department's response to the MUSE course proposal I circulated last Fall. John Galaty informed me at that time that the anthro website information is incorrect, and in fact you're the current Department Chair, so I'd like to ask for your assistance with this. Our course number application is due this Friday, and I need a formal response from your Dept in order to demonstrate that there aren't any possible conflicts with the courses.
I will be in my office this afternoon or available by email, if you have any questions. Otherwise, if you could return the attached forms to me as soon as possible, it would be much appreciated.
Thanks!
Julia

Julia Freeman
Faculty Lecturer, McGill School of Environment
& Montreal Urban Sustainability Experience
(MUSE) Coordinator
Room 34, 3534 University St.
Montreal, Quebec, H3A 2A7
Tel: (514) 398-6997
<http://www.mcgill.ca/mse/>

From: "<John Galaty>", "Prof." <john.galaty@mcgill.ca>
Date: Sunday, August 31, 2014 at 8:59 PM
To: "James Savelle, Prof." <james.savelle@mcgill.ca>, Julia Freeman <julia.freeman@mcgill.ca>
Subject: FW: MUSE new course proposal consultation

This message has been archived. [View the original item](#)
Dear Julia,

What a pleasure to hear from you. I'm glad to hear about your further studies at UBC and your post here at McGill. I'll look forward to catching up at some point soon.

I'm copying

Attachments:

[new course proposal form ENVR421.pdf](#)

(153 KB)

[new_course_proposal_form_ENVR422.pdf](#)

(157 KB)

[Consultation with ANTH Report Form.docx](#)

(61 KB)

Date: September 7, 2014

March 27, 2015

Date: **March 19, 2015**

Subject: RE: Montreal Urban Sustainability Analysis course fee \$117
Date: Friday, October 3, 2014 at 1:17:54 PM GMT-04:00
From: Mary Jo McCullogh
To: Julia Freeman, Dr.

Hello Julia,

Thanks for this. Based on the fact that this is an elective course, the committee was willing to approve the new amount of \$117.

Note that I cannot implement this until the new course number has been approved and set up in the student records system.

Please let me know when the approvals are done so that we can continue the work to set up this new charge.

The description that was originally on your request said "A fee of \$117 supports the costs of field trips for this class and a research symposium that concludes the Montreal Urban Sustainability Experience (MUSE)."

Can you please provide the French version of this in preparation for posting on our website?

The foapal to be credited will be: 151601 00408 500101 1000 009972 000000

The detail code associated with this new fee will be: ENV4 – the short description (we are limited to 30 characters) is presently ENVB 422 MUSE Fee. If you wish to change that, please feel free to suggest, but we should keep the ENVB 422 at the beginning (assuming that the course number doesn't change).

Thank you.

Mary Jo

Mary Jo McCullogh | Director | Student Accounts | McGill University | 3415 McTavish St. McLennan Library Bldg. |
mary.mccullogh@mcgill.ca
Tel: (514) 398-2315 | Fax: (514) 398-2656 | <http://www.mcgill.ca/student-accounts/>

From: Julia Freeman, Dr.
Sent: Friday, October 03, 2014 11:15 AM
To: Mary Jo McCullogh
Subject: Re: Montreal Urban Sustainability Analysis course fee \$117

New Course

Proposal Reference Number : 9119
 PRN Alias : 14-15#342
 Version No : 2
 Submitted By : Dr Julia Freeman
 Edited By : Dr Julia Freeman

| | New Data | | | | | | | | | |
|--------------------------------|--|--|-------------------------|-------------------------------|----------------------------|--|-------------|---|--------------------------|---|
| Program Affected? | N | | | | | | | | | |
| Program Change Form Submitted? | | | | | | | | | | |
| Subject/Course/Term | ENVR 422 <ul style="list-style-type: none"> one term | | | | | | | | | |
| Credit Weight or CEU's | 3 credits | | | | | | | | | |
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| Schedule Type | Hours per week | | | | | | | | | |
| A - Lecture | 3 | | | | | | | | | |
| M - Seminar | 3 | | | | | | | | | |
| DF - Field Course (DEPT) | 4 | | | | | | | | | |
| Course Title | <table border="1"> <tr> <td>Official Course Title :</td><td>Mtl Urban Sustainability Anal</td></tr> <tr> <td>Course Title in Calendar :</td><td>Montreal Urban Sustainability Analysis</td></tr> </table> | | Official Course Title : | Mtl Urban Sustainability Anal | Course Title in Calendar : | Montreal Urban Sustainability Analysis | | | | |
| Official Course Title : | Mtl Urban Sustainability Anal | | | | | | | | | |
| Course Title in Calendar : | Montreal Urban Sustainability Analysis | | | | | | | | | |
| Rationale | <p>Opportunities for experiential learning in non-traditional settings have been identified as a priority for McGill undergraduates. Specifically, this field study based course offers experiential learning with a focus on urban environment, which has not previously been offered by the MSE. The course is a core component of MUSE (Montreal Urban Sustainability Experience) as it is being developed and vetted for approval. Moreover, being based in Montreal, this course complements the current set of field based courses that require travel abroad.</p> | | | | | | | | | |
| Responsible Instructor | Julia Freeman | | | | | | | | | |
| Course Description | <p>Applied and experience-based learning opportunities are employed to critically assess Montreal as a sustainable city through research, discussion, and field trips. The urban environment is considered through various specific dimensions, ranging from: waste, energy, urban agriculture, green spaces and design, or transportation.</p> | | | | | | | | | |
| Teaching Dept. | 0408 : McGill School of Environment | | | | | | | | | |
| Administering Faculty/Unit | SC : Faculty of Science | | | | | | | | | |
| Prerequisites | ENVR 301 or equivalent, or permission from the instructor. | | | | | | | | | |

| | | |
|--|--|------------------------------|
| | Web Registration Blocked? : N | |
| Corequisites | ENVR 421 Unearthing Montreal Web Registration Blocked? : Y | |
| Restrictions | | |
| Supplementary Calendar Info | | |
| Additional Course Charges | Description | Field trips & MUSE symposium |
| | Amount | \$117 |
| Campus | Downtown | |
| Projected Enrollment | 20 | |
| Requires Resources Not Currently Available | N | |
| Explanation for Required Resources | Please see the attached letter of explanation regarding a new course fee (to cover field trip and some symposium expenses) and the additional costs associated with this course. | |
| Required Text/Resources Sent To Library? | N | |
| Library Consulted About Availability of Resources? | Y | |
| Consultation Reports Attached? | Y <ul style="list-style-type: none"> • Consultation - ANTH - Complete.pdf • Consultation - GEOG - Complete.pdf • Consultation - HIST - Complete.pdf • Consultation - URBP - Complete.pdf | |
| Effective Term of Implementation | 201505 | |
| File Attachments | <ul style="list-style-type: none"> • ENVR 422 Course Fee Approval Email copy.pdf | |
| 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 |
|-------------|-----------------------------------|----------------------|--------------------|---------------|---|---------|------|--|
| 2 | | | | | Approved Geralda Bacaj Meeting Date: Apr 28 | | | Approved by Curric/Academic Committee |

| | | | | | | | |
|---|--|--|---|--|---|--|--|
| | | | | | 2015 Approval Date: Apr 30 2015 View Comments | | Edited by: Julia Freeman on: Apr 5 2015 |
| 1 | Approved George McCourt Meeting Date: Jan 23 2015 Approval Date: Jan 26 2015 View Comments | | Approved Sylvie de Blois Meeting Date: Jan 23 2015 Approval Date: Feb 11 2015 View Comments | | | | Approved by Departmental Chair Created on: Jan 26 2015 |

ENVR 490 (422)
Montreal Urban Sustainability Analysis
May 4th to 29th, 2015
Burnside 308

Dr. Julia Freeman
Email: julia.freeman@mcgill.ca
Office Hours: by appointment

Dr. Kevin Manaugh
Email: kevin.manaugh@mcgill.ca
Office Hours: by appointment

Emergency contact – for if you can't find the group during field trips: (514) 578-9398
(Dr. Freeman's mobile)

Course Description

This course focuses on critically assessing Montreal as a sustainable city through research, discussions, and field trips. Topics such as waste, urban agriculture, and transportation will be addressed as part of our assessment of how Montreal is progressing towards its goal of becoming a sustainable city. Local experts and practitioners will share their insights on working towards sustainability, and highlight the ups and downs of initiating sustainable urban projects. Students will gain hands-on experience analyzing urban sustainability and develop skills required for investigating local sustainability challenges in Montreal.

Learning Objectives:

By the end of this course, students will:

1. Be able to define and investigate key concepts regarding socio-economic and environmental sustainability. Be adaptive in their definition of urban sustainability.
2. Develop foundational knowledge of sustainable initiatives in Montreal (particularly those related to waste management, urban agriculture, and transportation).
3. Critically assess the city's efforts towards sustainability, recognizing the complexity behind what leads to (un)successful initiatives.
4. Identify and articulate sustainability challenges in Montreal, using written and verbal modes of expression.
5. Apply course concepts and generate a clear, coherent research question.

Evaluation and Grading:

A variety of learning assessments will be used to evaluate students, under both collective and independent working conditions. These are described in detail below, under "Course Requirements/Assignment Guidelines". There will not be a final examination for this course, but strict adherence to submission deadlines will be enforced. **Late assignments will not be accepted and will receive a grade of zero.** Unless stated otherwise, assignments are due at the beginning of class on the day that they are due.

| | |
|---|-----|
| Sustainability Field Journal | 20% |
| Policy Memo | 30% |
| Debate Outline and Annotated Bibliography | 20% |
| Town Hall Debate | 20% |
| Active Course Participation | 10% |

Required readings/books:

A collection of readings will be made available to students.

Course Requirements/Assignment Guidelines:

Sustainability Field Journal

Each week students will keep a journal documenting their progress, learning experience, findings, ideas, etc. in sufficient detail to reflect their level of engagement with the two MUSE courses. It can contain your free-form thoughts about the class, drawings, maps, collages, what you are learning, and doodles. (Please use titles, dates, etc., so we can understand what we're reading when we review your journal). We encourage you to think deeply and to write freely. We are not looking for perfect grammar and technical writing. Rather, we want to see you reflect on the course and your role in it. You might think about taking 15 minutes at the end of each day for this sort of reflection. The journal will be handed in at the end of each week. You will also be required to keep a journal for ENVR 480 -- keep them together in a single document/book for easy reference and cross pollination. We hope that this will help you see connections between the two courses.

Policy Memo

This is an independent research and writing assignment due halfway through the course. Students will identify one of the organizing topics of the course (waste management, urban agriculture or transportation) as a point of departure to investigate a specific intervention for the city of Montreal. Research will demonstrate the need for such an intervention and argue for this option over others. The assignment will be structured as a policy memo intended to inform and guide municipal decision-making. Additional details will be provided in class.

Debate Outline and Annotated Bibliography

For this assignment students will form small teams organized by the broad topics of their policy memo research (two teams for waste, urban agriculture and transportation, respectively). This assignment is intended to get you working as a group, to get you thinking about the debate, and to have you bring together the relevant literatures required for the debate. The outline and annotated bibliography should accomplish the following:

- The assignment should begin with a concise and clear one page statement that sketches the current context of your debate topic. The associated academic disciplines and/or fields of literature should be noted. Explain the rationale behind your "curation" of the sources that will be included in the bibliography.
- You will provide a paragraph of annotation for each reference. Approximately 4 to 5 sentences that,
 - Explain the content and core argument of the text (1 to 2 sentences max!)

- Describe the evidence and/or methods that are employed.
- Include an evaluative assessment of the text. This might include considering: how does the text fit in its field of literature? (e.g. Is it supporting widely held claims? Debunking standard assertions, etc?) Is the text likely to be a key resource for the project? Why/not? Are you persuaded by the claims made? Why/not? In other words, how/will this reference be of use to your debate?

Town Hall Debate

For the debate, you will work in the small teams that formed from the policy memo research and created a debate outline and bibliography together. These teams will present and formally debate their proposed intervention for improving sustainability in Montreal. Successful debaters will not just provide a compelling case for their suggestion, but also acknowledge the limits of their plan, and consider the strengths and weaknesses of competing ideas. Thoughtful and critical scrutiny should be employed, and the debate will be held before our McGill and Montreal communities at the MUSE symposium in Redpath Hall on May 29th, 2015. The rubric used to assess this debate will be posted to My Courses.

Active Course Participation

The success of this course hinges on student participation. This experience will be - quite literally - what you make it. Coming to class on time and well prepared is critical for the richest experience. This means students must do their readings ahead of time, and contribute to class discussion with thoughtful comments. (Quality is more impressive than quantity here!) There are also a number of field trips and other activities planned for this course, and it is equally important that students are prepared for these. Formulating questions for guest speakers or presenters we visit will be expected (and should be recorded in the field journals. In addition, debate team members will contribute an assessment of their own and their peers' contributions (this evaluation form will be made available on My Courses). Lastly, because of the condensed nature of this course, missing more than two days of class can be expected to significantly impact this component of the course grade.

Course Schedule (subject to change):

| Date | Activity | Readings | Assignments |
|---|--|--|---|
| Week 1 Introduction to Urban Sustainability Analysis | <i>At the end of week 1, students should begin defining and thinking about concepts central to urban sustainability analysis, and choose a topic for the policy memo research.</i> | | |
| May 4 | Introduction to MUSE | | |
| 5 | Mountain to River Walk with Les Amis de la Montagne | | Come prepared for a long walk |
| 6 | | | |
| 7 | AM: Principles of urban sustainability PM: Tools for Analysis | David Maddox - http://www.thenatureofcities.com/2013/05/08/the-cities-we-want-resilient-sustainable-and-livable/ David Owen, "More Like Manhattan", in Green Metropolis, 2009 "Driving Green Progress using indicators" in the <i>The Guide to Greening Cities</i> | |
| 8 | | | |
| Week 2 Urban Agriculture and Green Spaces | <i>By the end of week 2 students should be able to identify issues and challenges regarding urban agriculture and the protection of green spaces for sustainable cities. They should also be making progress on their policy research.</i> | | |
| 11 | | | |
| 12 | AM: Urban agriculture and green spaces – problems and possibilities PM: Lufa Farms excursion | Eric Duchemin, "Montreal's Urban Agriculture" J. Wolch <i>et al.</i> , "The forgotten and the future: reclaiming back alleys for a sustainable city", 2010. http://urbansustainability.sre.umich.edu/wp-content/uploads/2011/03/Wolch-Newell-et-al_Alleys- | Come with a question prepared for Lufa. |

| | | | |
|--|---|--|--|
| | | for-a-Sustainable-City.pdf | |
| 13 | | | |
| 14 | AM: Montreal, agriculture and food security PM: In class activities | Montreal Policy on Food Security | |
| 15 | Bioblitz! With the Redpath Museum. | | Come prepared for a day outside Course Journals Due |
| Date | Activity | Readings | Assignments |
| Week 3 Waste Management | <i>At the end of week 3 student should be able to use the topic of waste management as means to think through sustainability challenges in Montreal and urban environments more broadly; and complete and submit their policy memo.</i> | | |
| 18 | | | |
| 19 | AM: Urbanism, waste and social capital. PM: In class activities | Dale “United We Can: A Street Charity That Makes a Difference” (2012) | Policy Memo Due |
| 20 | | | |
| 21 | AM: Waste at McGill and in Montreal: from the ground up PM: Guest speaker and Q&A | Montreal Community Sustainable Plan 2010-2015 (http://ville.montreal.qc.ca/pls/portal/docs/PAGE/PES_PUBLICATIONS_EN/PUBLICATIONS/VERSION_SYNTHESE_EN.PDF) | |
| 22 | Field excursion to the St Michel Environmental Complex and Montreal’s sorting center for recyclable materials. | | Come with a question prepared for SMEC |
| Date | Activity | Readings | Assignments |
| Week 4 Transportation | <i>At the end of week 4, students should: have completed their research proposal; approach transportation as a means for thinking through urban sustainability challenges; develop a research question and operationalize its analysis in a research proposal; be able to identify and explain concepts from the course that they employed in their group sustainability maps and research proposals.</i> | | |
| 25 | | | |
| 26 | Transportation and social justice in Montreal | Poitras, C “A City on the Move: The Surprising Consequences of Highways” 2001, in <i>Metropolitain</i> | Debate outline and annotated bibliography due |

| | | | |
|----|---------------------|---|---|
| | | <i>Natures: Environmental Histories of Montreal</i> .p 168-183. | |
| 27 | | | |
| 28 | In class activities | | |
| 29 | MUSE Symposium | | Course Journals Due Town Hall Debate |

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 Procedures, which can be found at <http://www.mcgill.ca/integrity/>.

Right to Submit in English or French Work That Is to Be Graded

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

Debate Presentation Rubric

| Presentation Component | Unacceptable 0-4 | Acceptable 5-6 | Good 7-8 | Excellent 9-10 |
|---|---|---|--|---|
| Style: use effective verbal and nonverbal communication skills (e.g., voice volume, inflection, eye contact, etc.) | Poor style | Either fluent delivery but eading, or awkward delivery but spontaneous | Generally good delivery and spontaneity but could improve | Excellent style involving matching verbal and nonverbal style |
| Overview: introduction of presenters, topic and background described, agenda described | no introduction or overview,background or agenda | introduction of presenters but awkward, sketchy or unclear overview/agenda and background | Fluent introduction, clear overview, but could be more polished | Confident introduction, clear purpose, agenda, relevant and clear |
| Context: appropriate background for the research | Little or no context provided | Limited context provided | Good context for the intervention provided, explaining how the work fits in a larger field | Excellent – Introduces the topic in a way that provides clear new and advances knowledge |
| Vocabulary: appropriate and fluent use of concepts and terms | little or no attempt to include terms, concepts, authors | Terms not well related, sporadic or misused | Good use of terms, but still uses jargon or is awkward/uncertain for some usages | Confident and clear use of relevant vocab drawing from the course. |
| Policy Intervention: appropriate and insightful application of procedures | Little or no discussion of technique | Inaccurate or incomplete explanation or techniques. | Good but missing something that extends out knowledge | Clear explanation with good fit, rationale, fluency and originality. Substantially extends or deepens our understanding of a policy problem and how to address it |
| Coverage thorough and balanced in treatment of topic | very incomplete, significant gaps, or biased treatment of topic | Either thorough but biased or incomplete and balanced | Generally well balanced and planned but perhaps incorrect and some point | Thorough coverage of the topic with balanced treatment of key facts, approaches and concerns |
| Graphics: attractive & balanced layout, legible font | no graphics (may be appropriate in some cases) | graphics present but poor quality (illegible, inconsistent, , etc.) | Well done graphics | Well-designed and attractive graphics that simplify or summarize key ideas, original graphics rather than fuzzy scans |
| Team Roles: team members have equally weighted roles | unclear team roles | clear team roles but unequal contribution | Clear roles, equal contributions | Clear roles, balanced contributions, practiced transitions between presenters and cross reference each other |
| Discussion: team is prepared to facilitate discussion and in receptive to feedback | little or no discussion | discussion but without clear organization or purpose | Prepped discussion questions. Members not fully prepared for necessary depth of discussion | Prepared questions or key areas and responsive to and elicit participant reactions and questions. |

ENVR 421 & 422 GROUP MEMBER EVALUATION FORM (Modified from Felder, R. (2004). *Journal of Student-centered Learning*, 2(1), p.29-30) and from PARA 410, taught by M. Scott).

Your NAME: _____

Group: _____

The following evaluation of yourself and of your team members allows you to reflect on who in your group has been active and cooperative and also to identify who did not participate in the various group activities throughout the course. Please be consistent and fair when evaluating each group member's performance, using the guidelines below.

1 – never 2 – rarely 3 – sometimes 4 – usually 5 – always

| | | | | | |
|---|--|--|--|--|--|
| Insert Student Names across TOP: | | | | | |
| ASSESSMENT OF ACTIVITIES: | | | | | |
| Made serious effort at assigned work before meeting (1-5) | | | | | |
| Attempted to make contributions during meetings (1-5) | | | | | |
| Listens to ideas respectfully (1-5) | | | | | |
| Cooperates with group effort (1-5) | | | | | |
| | | | | | |
| Overall Rating; Select a word from rubric below | | | | | |
| Few Comments: | | | | | |

RUBRIC

Excellent: Consistently carried more than his/her fair share of workload
 Very good: Consistently did what he/she was supposed to do; very well prepared and cooperative
 Satisfactory: Usually did what he/she was supposed to do; acceptably prepared and cooperative
 Adequate: Often did what was supposed to do; minimally prepared and cooperative
 Marginal: Sometimes failed to show up or complete assignments; rarely prepared
 Deficient: Often failed to show up or complete assignments; rarely prepared
 Unsatisfactory: Consistently failed to show up or complete assignments; rarely prepared

| Courses in McGill School of Environment Programs | | | | | | |
|--|---|----------------------|---------------|--|--|--|
| Degree | Program Name | Program Type | Credit Weight | ENVR 421 (3 Credits) | ENVR 422 (3 Credits) | Comments |
| | | | | Complementary Course | Complementary Course | |
| | | | | ADD TO THE FOLLOWING GROUPS OF COURSES | ADD TO THE FOLLOWING GROUPS OF COURSES | |
| B.Sc. | Major Environment - Atmospheric Environment and Air Quality | Major | 60 credits | N/A | Social Science | |
| | Major Environment - Earth Science & Economics | Major | 66 credits | List B | List A | |
| | | | | | | |
| B.Sc. and B.Sc.(Ag.Env.Sc.) | Major Environment - Biodiversity & Conservation | Major | 63 credits | Social Science | Science, Policy and Management | |
| | Major Environment - Ecological Determinants of Health - Cellular | Major | 63 credits | N/A | Techniques and Management | |
| | Major Environment - Ecological Determinants of Health - Population | Major | 63 credits | Populations and Place | Techniques and Management | |
| | Major Environment - Environmetrics | Major | 63 credits | List 2 | List 2 | Can count 3 cr only; other course would be an elective |
| | Major Environment - Food Production and Environment | Major | 63 credits | Social Change and Human Impacts | Environment Management | |
| | Major Environment - Land Surface Processes and Environmental Change | Major | 63 credits | Social Science | Environment and Resource Management | |
| | Major Environment Renewable Resource Management | Major | 63 credits | Social Processes | Ecosystem Components or Management of Ecosystems | |
| | Major Environment - Water Environments and Ecosystems - Biological | Major | 60 credits | Social Science and Policy | Social Science and Policy | Can count 3 cr only; other course would be an elective |
| | Major Environment - Water Environments and Ecosystems - Physical | Major | 63 credits | N/A | N/A | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| B.A. & Sc. | Interfaculty Program - Environment | Interfaculty PROGRAM | 54 credits | Cultures and People | Environmental Management | |

| Courses in McGill School of Environment Programs | | | | | | |
|---|--|---------------------|---------------|--|--|---|
| Degree | Program Name | Program Type | Credit Weight | ENVR 421 (3 Credits) | ENVR 422 (3 Credits) | Comments |
| | | | | Complementary Course | Complementary Course | |
| | | | | ADD TO THE FOLLOWING GROUPS OF COURSES | ADD TO THE FOLLOWING GROUPS OF COURSES | |
| B.A. | Faculty Program Environment - Ecological Determinants of Health in Society | Faculty PROGRAM | 54 credits | Development & Ecology | Techniques and Management | |
| | | | | | | |
| | Faculty Program Environment - Economics and the Earth's Environment | Faculty PROGRAM | 54 credits | Advanced Courses | Advanced Courses | Can count 6 credits from Adv. Courses; both could count |
| | | | | | | |
| | Faculty Program- Environment and Development | Faculty PROGRAM | 54 credits | Social Sciences | Social Sciences | Can count 6 credits from Soc Sciences; both could count |
| Diploma | Diploma - Environment | Diploma | 30 credits | Social Sciences and Policy | | Offered by: Faculty of Science, the Faculty of Agricultural and Environmental Sciences and the Faculty of Arts. |
| B.Sc.,B.Sc.(Ag.Env.Sc.) | Minor- Environment | Minor | 18 credits | Social Sciences and Policy | | |
| B.A. | Minor Concentration - Environment | Minor Concentration | 18 Credits | | | |
| | | | | | | |
| Rationale: Two new courses, ENVR 421 and ENVR 422, will be added to the programs above as complementary course (s). | | | | | | |
| Approval of MSE courses by Department: March 13, 2015 | | | | | | |
| Effective Term of Implementation: September 2015 | | | | | | |

New Course

Proposal Reference Number : 9819
 PRN Alias : 14-15#1042
 Version No : 5
 Submitted By : Prof Renee Sieber
 Edited By : Ms Josie D'Amico

| | | | | | | |
|--------------------------------|---|--|-------------------------|------------------------------|----------------------------|------------------------------|
| | New Data | | | | | |
| Program Affected? | Y | | | | | |
| Program Change Form Submitted? | N (Simple Change) - Please add Principles of Geospatial Web, GEOG 384, in the second group of courses under Complementary courses in the Minor in Geographic Information Systems and Remote Sensing. | | | | | |
| Subject/Course/Term | GEOG 384 <ul style="list-style-type: none"> one term | | | | | |
| Credit Weight or CEU's | 3 credits | | | | | |
| Course Activities | <table border="1"> <tr> <td>Schedule Type</td><td>Hours per week</td></tr> <tr> <td>A - Lecture</td><td>3</td></tr> </table> <p style="text-align: right;">Total Hours per Week : 3 Total Number of Weeks : 13</p> | | Schedule Type | Hours per week | A - Lecture | 3 |
| Schedule Type | Hours per week | | | | | |
| A - Lecture | 3 | | | | | |
| Course Title | <table border="1"> <tr> <td>Official Course Title :</td><td>Principles of Geospatial Web</td></tr> <tr> <td>Course Title in Calendar :</td><td>Principles of Geospatial Web</td></tr> </table> | | Official Course Title : | Principles of Geospatial Web | Course Title in Calendar : | Principles of Geospatial Web |
| Official Course Title : | Principles of Geospatial Web | | | | | |
| Course Title in Calendar : | Principles of Geospatial Web | | | | | |
| Rationale | Responds to new developments in geospatial field, including big data and new geospatial sampling techniques, cloud based data visualization and application development. Current courses don't have sufficient time to cover these courses. Also relieves student numbers in another 300-level course, which is over-capacity. | | | | | |
| Responsible Instructor | | | | | | |
| Course Description | Theory and practice of geospatial web, including Examining spatial data accuracy and uncertainty of user generated content; Understanding motivations of contributors of volunteered geographic information for purposes like citizen science and crisis mapping; Critically evaluating political, societal, economic and legal issues in online mapping applications; Developing geospatial applications and identifying basic problem solving requirements for geospatial apps. For proposed solutions, evaluating and justifying various existing and emergent geospatial technologies and enabling software stacks; Exploring underlying methods of digital earth architectures; Understanding implications to geospatial analysis and visualization of real time streaming data and mobile sensors | | | | | |
| Teaching Dept. | 0288 : Geography | | | | | |
| Administering Faculty/Unit | SC : Faculty of Science | | | | | |
| Prerequisites | GEOG 201 COMP 202 or permission of the instructor | | | | | |

| | |
|--|--|
| | Web Registration Blocked? : N |
| Corequisites | |
| Restrictions | |
| Supplementary Calendar Info | |
| Additional Course Charges | |
| Campus | Downtown |
| Projected Enrollment | 30 |
| Requires Resources Not Currently Available | N |
| Explanation for Required Resources | |
| Required Text/Resources Sent To Library? | |
| Library Consulted About Availability of Resources? | |
| Consultation Reports Attached? | Y <ul style="list-style-type: none"> Geog.384_consultation_UP--140109.pdf |
| Effective Term of Implementation | 201601 |
| File Attachments | <ul style="list-style-type: none"> GEOG 384 Course Descriptionv5.pdf |
| 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 Géralda Bacaj Meeting Date: Apr 28 2015 Approval Date: Apr 30 2015 View Comments | | | Approved by Curric/Academic Committee Edited by: Josie D'Amico on: Apr 20 2015 |
| 4 | Approved Michel F Lapointe Meeting Date: Apr 06 2015 | | | | | | | Approved by Departmental Curriculum Committee Edited by: Renee Sieber on: Apr 11 2015 |

| | | | | | | | | |
|---|---|--|--|--|--|--|--|---|
| | Approval Date: Apr 12 2015 View Comments | | | | | | | |
| 3 | | | | | | | | Submitted to Departmental Curriculum Committee for approval Edited by: Renee Sieber on: Apr 10 2015 |
| 2 | | | | | | | | Submitted to Departmental Curriculum Committee for approval Edited by: Renee Sieber on: Apr 3 2015 |
| 1 | | | | | | | | Submitted to Departmental Curriculum Committee for approval Created on: Mar 24 2015 |

GEOG 384: Principles of the Geospatial Web 2.0

Introduction

The paradigm has shifted. No longer is desktop-bound, single software geographic information systems (GIS) considered the state of the art in technologies for geographic data handling, analysis and data visualization. Now advances in geographic information occur on cloud and mobile platforms and data representations are “mashed up” in web 2.0 applications. The nature of geographic data has changed as well. We now have very large and streaming datasets, called “big data”, containing geo-locations, for example from mobile sensors. Much of the new data comes from user generated content, which is generally available on social media and is far more heterogeneous in its characterization of geographic locations. In contrast to traditional geospatial data, which originates from authoritative sources, new possibilities emerge with crowdsourced asserted data, which is location-based sentiments and observations from non-experts (called volunteered geographic information {VGI}). In this course we will cover the principles of this paradigm, called the Geospatial Web 2.0 or Geoweb.

Like GIS, the Geoweb has broad applicability that extend well beyond the discipline of geography. Numerous examples can be seen in health provision and epidemiology, wildlife and natural resources, criminology, and transportation planning. The Geoweb can be used in retail marketing, political mobilization, tourism development, journalism and the humanities. The Geoweb also can be fully linked to social networking platforms.

The course will offer a combination of theory and practice of the Geoweb. In terms of theory, we will cover subjects like VGI and how it changes our ideas about spatial data accuracy. In practical lab sessions students will design and develop Geoweb “apps”. An additional goal is not to learn specific skills, but to ‘learn how to learn’. Geoweb software can change monthly so students learn of resources and strategies to effectively use emerging technologies and anticipate innovations in geospatial technologies. The course will cover the following topics:

- Exploring the underlying methods of digital earth architectures, including georeferent systems. These architectures underlie most platforms (e.g., Google Maps, Google Earth, Microsoft Bing Maps, OpenLayers, NASA WorldWind)
- Exploring political, economic and legal issues in using VGI
- Critically analyzing the concept of VGI, for example, spatial data accuracy and uncertainty of heterogeneous data sources (spatial data quality)
- Learning about the field of citizen science, including the underlying motivations of citizens (non-experts) to contribute
- Understanding the infrastructure of the Geoweb, including the geospatial software stack and Application Program Interfaces (APIs)
- Comparing and contrasting GIS and the Geoweb (e.g., changes in geocoding)

- Repurposing geographic digital content (secondary data), for example via web scraping
- Learning underlying concepts of server/cloud geospatial applications
- Understanding issues related to real time streaming data (e.g., changes in sampling and geostatistics)
- Working with location based services and mobile platforms
- Identifying basic problem solving requirements for geospatial apps. For proposed solutions, critically evaluating and justifying various existing and emergent geospatial technologies and enabling software stacks.

We also have the opportunity to hear from experts in the field. We anticipate having guest lectures from representatives of Geoweb firms like Mapbox and Stamen Design representatives of traditional GIS firms like ESRI, coordinators of VGI sites like OpenStreetMap, and faculty members working in the Geospatial Web (e.g., researching copyright laws for geospatial data).

GEOG 201 and COMP 202 are required. OR permission of the instructor.

Books and Other Reading Material

During the course, students will be required to read a variety of articles, white papers and other material. These will be posted on the course website. If you require additional help in learning material such as KML, web scraping, or Javascript, you may wish to purchase books (e.g., *Eloquent JavaScript: A Modern Introduction to Programming*).

Evaluation

In-class and online participation 10% (5% in-class and 5% online)

Programming – 15% (5% programming course completion and 10% quiz)

Assignments – 50%

Final Exam – 25%

In-class and online participation: Student preparation and participation as well as performance during class will be assessed for half (5%) of the participation grade. We are looking for quality of contributions over the quantity of contributions. Class participation will be evaluated based on evidence that students have read assigned readings, done exercises and otherwise prepared for class. Students also will be assessed in their ability to thoughtfully and reflectively build on other students' contributions. The other five percent of the participation grade will be based on online contributions on Twitter, using the hashtag #neogeoweb. Like above, quality of contributions in tweets is preferred over number of tweets.

Assignments: Assignments allow the student to apply lecture material and/or programming to real world cases of geospatial representation on the web. There are five assignments in the course. All assignments will be done in groups of three to four students. The goal is to balance levels of computational experience so every group possesses a similar level. All assignments are graded as a group regardless of individual contribution.

Programming: Approximately half of the assignments require the use of a specific coding language, which currently is Javascript. Students are required to learn JavaScript programming via the online course codeacademy. Students must successfully complete the codeacademy course and email a screenshot of the badge of completion by the beginning of Week 6. (Students must complete for loops by end of Week 4.) Five percent of the grade is based on completion of the codeacademy course on Javascript. This is on a pass-fail basis, where pass is completion of the course. Ten percent is on a quiz testing Javascript knowledge given during one of the in-class exercise periods following Week 6.

It is possible to waive out of the code academy requirement if the student knows JS. Contact the instructor for details.

Final Exam: The final exam is comprehensive of all material in the course. It is divided into two equally weighted components—a written exam and a lab practical exam. The latter is essentially a lab version of a test, where you move from computer station to station answering the geoweb questions presented to you.

Obligatory Statements

1. 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 Procedures (see www.mcgill.ca/students/srr/honest/ for more information). (approved by Senate on 29 January 2003)
2. 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. (approved by Senate on 21 January 2009 - see also the section in this document on Assignments and evaluation.)

Syllabus

Introduction

Overview of Geoweb and goals of the course.

In-class exercise: Work with existing Geoweb platform, Mapbox.
Set up Twitter account for online participation

Module 1: Digital Earths, the prime mapping platform in the Geoweb.

Definitions and types of digital earths. Georeferent systems and tiling. Differences between data structuration in GIS compared to the Geoweb. Introduction to concepts of markup languages as used on Digital Earths (e.g., KML). Examples from health geography.

In-class exercise: Create your first kml. In-class exercise: Work with 3D globe APIs (Cesium)

Assignment 1: Create a kmz 'story' with found ArcGIS shape files and attribute data, which should be displayed in an info window and rendered with the Google Charts API

Module 2: Geo- and Data Visualization

Principles of cartographic/ geo-visualization and the emergence of data visualization. Exploratory data visualization vs explanatory data visualization. Visualization as storytelling.

In-class exercise: Explore the "maps" of D3JS. Tell a story with a Geoweb platform.

Module 3: Geographic Data Handling in the Cloud

Introduction to web architectures, software stacks. Principles of web harvesting/scraping. Legal issues in repurposing data, for example, intellectual property and liability. Example from tourism. Structured and unstructured data. Formal introduction to tags, which extend from XML, to KML and HTML.

In-class exercise: Conduct web scraping. Tag content with XML. Create a web page

Assignment 2: Use Google Spreadsheets and XPath to automatically scrape and then map popular classified advertising site

Module 4: Democratization of Data: Volunteered Geographic Information (VGI) and Beyond

Concepts in VGI (e.g., citizen sensors, crowdsourcing, and neogeography). Motivations for volunteers to contribute. Common methods to assessing accuracy of VGI. Legal issues underlying VGI (e.g., copyright and intellectual property of using citizen-generated content). Emergence of citizen science, crisis mapping and open data.

In-class exercise: Create and edit your own VGI on OpenStreetMaps. Write Google Maps

mashup with Javascript (from w3schools)

Assignment 3: Create crowdsourcing application with the Google APIs or Cesium/webgl or Leaflet on the browser with Javascript and utilizing Google Fusion tables as the Internet database

Module 5: Streaming, real time BIG Geospatial Data

Introduction to concepts of big data and data-intensive science. Brief discussion of geosensors, which are a prime source of geolocated data. Challenges to working with big data, like sampling.

In-class exercise: Collect and manipulate Twitter data

Assignment 4: Create a transportation app with bixi bike or streaming bus data

Module 6: Geoweb on Mobile Devices

Concepts of geospatial awareness on devices--location based services (LBS), including location intelligence, vehicle tracking, and RFIDs. Examples from mobile commerce. Social issues in LBS (privacy, surveillance)

In-class exercise: Mobile messaging and mapping of geographic data

Assignment 5: Conduct data journalism using D3JS using heroku or jsfiddle

TBD: Final exam

CONSULTATION REPORT FORM
RE: COURSE PROPOSAL

Date: November 25, 2013
TO: Prof. Raphaël Fischler, Director, School of Urban Planning
FROM: Renee Sieber, Geography

The attached proposal has been submitted for your consultation.

Course Title: GEOG 384: The Geospatial Web 2.0

The School of Urban Planning has no objections to the creation of this course. It welcomes the proposed addition to the curriculum and hopes that its own students will be able to benefit from it.

A handwritten signature in black ink, reading 'Raphaël Fischler', written in a cursive style.

Signature:

Date: January 9, 2014

From: Bettina Kemme [<mailto:kemme@cs.mcgill.ca>]
Sent: March-28-14 2:10 PM
To: Lea Berrang Ford, Prof.
Subject: Re: consultation: GEOG 384

Dear Lea,

as Chair of the Academic Committee, I will provide you with the consultation report in form of this email.

The department has no objectives in regard to this course. We offer some courses that might cover parts of what is taught in this course but the particular angle this course is taking is very different, so I don't see any significant overlap.

best regards
Bettina Kemme

Chair of the Academic Committee

Lea Berrang Ford, Prof. wrote:

Bettina,

We submitted a consultation request to CompSci a while back regarding a proposed course by Renee Sieber (GEOG 384: Principles of the GeoSpatial Web 2.0).

Thanks in advance.

Cheers,
Lea

Dr. Lea Berrang Ford
Assistant Professor
Department of Geography
McGill University
805 Sherbrooke Street West, Burnside 705 Montreal, QC, H3A 0B9, Canada
Tel: +1-514-398-4944<<tel:%2B1-514-398-4944>>
Fax: +1-514-398-7437<<tel:%2B1-514-398-7437>>
Email: Lea.BerrangFord@McGill.ca<<mailto:Lea.BerrangFord@McGill.ca>>



1.0 Degree Title
Specify the two degrees for concurrent degree programs

1.1 B.Sc. Liberal Program

1.2 Concentration (Legacy = Concentration/Option)
If applicable (30 char. max.)

Chemistry - General

1.3 Minor (with Concentration, if applicable)
(30 char. max.)

1.4 Category

Faculty Program (FP)

Major

Joint Major

Major Concentration (CON)

Minor

Minor Concentration (CON)

Honours (HON)

Joint Honours

Component (HC)

Internship/Co-op

Thesis (T)

Non-Thesis (N)

Other

Please specify

Liberal Program

1.5 Complete Program Title

B.Sc. Liberal Program Core Science Component Chemistry - General

2.0 Administering Faculty/Unit

Science/Chemistry

Offering Faculty/Department

Science/Chemistry

3.0 Effective Term of revision or retirement
Please give reasons in 5.0 "Rationale" in the case
of retirement
(Ex. Sept. 2004 = 200409) Retirement

Term: 201509

4.0 Existing Credit Weight

49

Proposed Credit Weight

49

5.0 Rationale for revised program

Last year, we removed MATH 315 as a core course from the other Chemistry program, but inadvertently left it in this one. We would like to move MATH 315 to a Complementary course to reflect that changes made to our Majors/Honours programs. Also, under Complementary courses, students will now have more flexibility to pursue chemistry courses of interest to them.



6.0 Revised Program Description (Maximum 150 words)



8.0 Consultation with
Related Units

☐ Yes ☒ No

Financial Consult ☐ Yes ☒ No

Attach list of consultations

9. Approvals

Routing Sequence

Name

Signature

Date

Department

Masad Ramha

Cliff Daulton

May 7th 2015

Curric/Acad Committee

Faculty 1

Faculty 2

Faculty 3

SCTP

GS

APPC

Senate

Submitted by

Name

Amv S. Blum

To be completed by ARR:

Phone

514-398-6237

CIP Code

Email

amv.blum@mcoill.ca

Submission Date

Oct 18, 2013



1.0 Degree Title

Specify the two degrees for concurrent degree programs

1.1

B.Sc. Liberal Program

1.2 Concentration (Legacy = Concentration/Option) If applicable (30 char. max.)

Chemistry – Physical

1.3 Minor (with Concentration, if applicable) (30 char. max.)

1.4 Category

Faculty Program (FP)

Major

Joint Major

Major Concentration (CON)

Minor

Minor Concentration (CON)

Honours (HON)

Joint Honours

Component (HC)

Internship/Co-op

Thesis (T)

Non-Thesis (N)

Other

Please specify

Liberal Program

1.5 Complete Program Title

B.Sc, Liberal Program Core Science Component Chemistry - Physical

2.0 Administering Faculty/Unit

Science/Chemistry

Offering Faculty/Department

Science/Chemistry

3.0 Effective Term of revision or retirement Please give reasons in 5.0 "Rationale" in the case of retirement

(Ex. Sept. 2004 = 200409)

Retirement X

Term: **201509**

4.0 Existing Credit Weight

47

Proposed Credit Weight

47

5.0 Rationale for revised program

This program is not serving anyone at the University. Since its inception, not a single student has graduated in this program. We would like to remove it from the books.



6.0 Revised Program Description (Maximum 150 words)



8.0 Consultation with
Related Units

☐ Yes ☒ No

Financial Consult ☐ Yes ☒ No

Attach list of consultations

9. Approvals

Routing Sequence

Name

Signature

Date

Department

Musad Dambra

AMV Blum

May 7/2015

Curric/Acad Committee

Faculty 1

Faculty 2

Faculty 3

SCTP

GS

APPC

Senate

Submitted by

Name

Amv S. Blum

To be completed by ARR:

Phone

514-398-6237

CIP Code

Email

amv.blum@mcaill.ca

Submission Date

Oct 18, 2013



1.0 Degree Title
Specify the two degrees for concurrent degree programs

1.1 Bachelor of Science

1.2 Concentration (Legacy = Concentration/Option)
If applicable (30 char. max.)

1.3 Minor (with Concentration, if applicable)
(30 char. max.)

Chemistry

1.4 Category

Faculty Program (FP)

Major

Joint Major

Major Concentration (CON)

x Minor

Minor Concentration (CON)

Honours (HON)

Joint Honours

Component (HC)

Internship/Co-op

Thesis (T)

Non-Thesis (N)

Other

Please specify

1.5 Complete Program Title

Bachelor of Science; Minor in Chemistry

2.0 Administering Faculty/Unit

SCIENCE/Chemistry

Offering Faculty/Department

Science/Chemistry

3.0 Effective Term of revision or retirement
Please give reasons in 5.0 "Rationale" in the case
of retirement

(Ex. Sept. 2004 = 200409)

Retirement

Term: 201509

4.0 Existing Credit Weight

18

Proposed Credit Weight

18

5.0 Rationale for revised program

CHEM 203 is a dead-end course, which does not satisfy as a prerequisite for additional chemistry courses. CHEM 204 provides sufficient background in Physical Chemistry to expand the options for students who need to replace Chemistry credits towards their minor with additional Chemistry courses (commonly Organic Chemistry for students from CEGEP or students who need Organic Chemistry for their Major programs).

6.0 Revised Program Description (Maximum 150 words)

☐
☐
☐
☐
☐
☐
☐

8.0 Consultation with
Related Units

☐ Yes ☒ No

Financial Consult ☐ Yes ☒ No

Attach list of consultations

9. Approvals

Routing Sequence

Name

Signature

Date

Department

Masad Damha

CLL Quilley

May 7th, 2015

Curric/Acad Committee

Faculty 1

Faculty 2

Faculty 3

SCTP

GS

APPC

Senate

Submitted by

Name

Amv S. Blum

To be completed by ARR:

Phone

514-398-6237

CIP Code

Email

amv.blum@mcaill.ca

Submission Date

Oct 18, 2013



1.0 Degree Title
Specify the two degrees for concurrent degree programs

1.1 Bachelor of Arts and Science

1.2 Concentration (Legacy = Concentration/Option)
If applicable (30 char. max.)

Chemistry

1.3 Minor (with Concentration, if applicable)
(30 char. max.)

1.4 Category

Faculty Program (FP)

Major

Joint Major

x Major Concentration
(CON)

Minor

Minor Concentration (CON)

Honours (HON)

Joint Honours

Component (HC)

Internship/Co-op

Thesis (T)

Non-Thesis (N)

Other

Please specify

1.5 Complete Program Title

Bachelor of Arts and Science Major Concentration Chemistry

2.0 Administering Faculty/Unit

Science/Chemistry

Offering Faculty/Department

Science/Chemistry

3.0 Effective Term of revision or retirement
Please give reasons in 5.0 "Rationale" in the case
of retirement

(Ex. Sept. 2004 = 200409)

Retirement

Term: 201509

4.0 Existing Credit Weight

36

Proposed Credit Weight

36

5.0 Rationale for revised program

CHEM 203 is a dead-end course, which does not satisfy as a prerequisite for additional chemistry courses. CHEM 204 is a prerequisite to CHEM 214. The two courses together provide sufficient background in Physical Chemistry to expand the options for students in this program to take additional chemistry courses that require some background in Physical Chemistry.

Under Complementary courses, students will have more flexibility by being able to take any 400+ chemistry courses, rather than being limited to specific courses.

6.0 Revised Program Description (Maximum 150 words)



8.0 Consultation with
Related Units

☐ Yes ☒ No

Financial Consult ☐ Yes ☒ No

Attach list of consultations

9. Approvals

Routing Sequence

Name

Signature

Date

Department

Masad J Damha

CMH

May 7th, 2015

Curric/Acad Committee

Faculty 1

Faculty 2

Faculty 3

SCTP

GS

APPC

Senate

Submitted by

Name

Amv S. Blum

To be completed by ARR:

Phone

514-398-6237

CIP Code

Email

amv.blum@mcaill.ca

Submission Date

Oct 18, 2013



1.0 Degree Title
Specify the two degrees for concurrent degree programs

1.1 B.Sc. Liberal Program

1.2 Concentration (Legacy = Concentration/Option)
If applicable (30 char. max.)

Chemistry – Biological

1.3 Minor (with Concentration, if applicable)
(30 char. max.)

1.4 Category

Faculty Program (FP)

Major

Joint Major

Major Concentration (CON)

Minor

Minor Concentration (CON)

Honours (HON)

Joint Honours

Component (HC)

Internship/Co-op

Thesis (T)

Non-Thesis (N)

Other

Please specify

Liberal Program

1.5 Complete Program Title

B.Sc. Liberal Program Core Science Component Chemistry - Biological

2.0 Administering Faculty/Unit

Science/Chemistry

Offering Faculty/Department

Science/Chemistry

3.0 Effective Term of revision or retirement
Please give reasons in 5.0 "Rationale" in the case
of retirement

(Ex. Sept. 2004 = 200409)

Retirement

Term: 201509

4.0 Existing Credit Weight

49

Proposed Credit Weight

47

5.0 Rationale for revised program

CHEM 352 used to be a requirement for this program. After CHEM 352 was revised to CHEM 552, it was removed from the program, but inadvertently the credits were not properly replaced.

Under Complementary courses, students will now have more flexibility to pursue a chemistry course of interest to them.



6.0 Revised Program Description (Maximum 150 words)



8.0 Consultation with
Related Units

☐ Yes ☒ No

Financial Consult ☐ Yes ☒ No

Attach list of consultations

9. Approvals

Routing Sequence

Name

Signature

Date

Department

Curric/Acad Committee

Faculty 1

Faculty 2

Faculty 3

SCTP

GS

APPC

Senate

Submitted by

Name

Amv S. Blum

Phone

514-398-6237

Email

amv.blum@mcaill.ca

Submission Date

Oct 18, 2013

To be completed by ARR:

CIP Code

Revision for EPSC 549

Proposal Reference Number : 9930
 PRN Alias : 14-15#1153
 Version No : 3
 Submitted By : Ms Kristy Thornton
 Edited By : Ms Josie D'Amico

| | |
|--------------------|-------------------|
| Summary of Changes | Course Activities |
|--------------------|-------------------|

| | Current Data | New Data | | | | |
|--------------------------------|--|--|---------------|--------------------------|---------------|---|
| Program Affected? | | N | | | | |
| Program Change Form Submitted? | | | | | | |
| Subject/Course/Term | EPSC 549 <ul style="list-style-type: none"> one term | | | | | |
| Credit Weight or CEU's | 3 credits. | | | | | |
| Course Activities | <ul style="list-style-type: none"> A - Lecture L - Laboratory | <table border="1"> <thead> <tr> <th>Schedule Type</th> <th>Hours Per Week</th> </tr> </thead> <tbody> <tr> <td>A - Lecture</td> <td>3</td> </tr> </tbody> </table> <p> A schedule type was removed. Total Hours per Week : 3 Total Number of Weeks : 13 </p> | Schedule Type | Hours Per Week | A - Lecture | 3 |
| Schedule Type | Hours Per Week | | | | | |
| A - Lecture | 3 | | | | | |
| Course Title | <table border="1"> <tr> <td>Course Title on Transcript</td> <td>Hydrogeology</td> </tr> <tr> <td>Course Title on Calendar</td> <td>Hydrogeology.</td> </tr> </table> | Course Title on Transcript | Hydrogeology | Course Title on Calendar | Hydrogeology. | |
| Course Title on Transcript | Hydrogeology | | | | | |
| Course Title on Calendar | Hydrogeology. | | | | | |
| Rationale | | For the past several years EPSC 549 has been a lecture-only course and has not included a lab section. The course activities and supplemental calendar information are being revised to reflect the changes. | | | | |
| Responsible Instructor | | | | | | |
| Course Description | Introduction to groundwater flow through porous media. Notions of fluid potential and hydraulic head. Darcy flux and Darcy's Law. Physical properties of porous media and their measurement. Equation of groundwater flow. Flow systems. Hydraulics of pumping and recharging wells. Notions of hydrology. Groundwater quality and contamination. Physical processes of contaminant transport. | | | | | |
| Teaching Dept. | 0289 : Earth & Planetary Sciences | | | | | |
| Administering Faculty/Unit | SC : Faculty of Science | | | | | |
| Prerequisites | Prerequisite: permission of the instructor | | | | | |
| Corequisites | | | | | | |
| | | | | | | |

| | | |
|--|--|-------------------------------------|
| Restrictions | | |
| Supplementary Calendar Info | 1. Winter 2. 3 hours lectures, 1-2 hours laboratory | 1. 3 hours lectures |
| Additional Course Charges | | |
| Campus | | |
| Projected Enrollment | | |
| Requires Resources Not Currently Available | | |
| Explanation for Required Resources | | |
| Consultation Reports Attached? | | |
| Effective Term of Implementation | | 201509 |
| 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 |
|-------------|-----------------------------------|----------------------|--------------------|---------------|---|---------|------|--|
| 3 | | | | | Approved Geralda Bacaj Meeting Date: Apr 28 2015 Approval Date: May 12 2015 View Comments | | | Approved by Curric/Academic Committee Edited by: Josie D'Amico on: Apr 22 2015 |
| 2 | | | | | | | | Submitted to Curriculum/Academic Committee for approval Edited by: Kristy Thornton on: Apr 16 2015 |
| 1 | | | | | | | | Submitted to Curriculum/Academic Committee for approval Created on: Apr 10 2015 |

Revision for BIOL 352

Proposal Reference Number : 9990
 PRN Alias : 14-15#1213
 Version No : 3
 Submitted By : Ms Nancy Nelson
 Edited By : Ms Josie D'Amico

| | |
|--------------------|---|
| Summary of Changes | Course Title, Course Description, Prerequisites |
|--------------------|---|

| | Current Data | New Data | | | | | | | | |
|--------------------------------|---|---|-----------------------------|--------------------------|-----------------------|---|----------------------------|-------------------------------|--------------------------|---|
| Program Affected? | | N | | | | | | | | |
| Program Change Form Submitted? | | | | | | | | | | |
| Subject/Course/Term | BIOL 352 <ul style="list-style-type: none">one term | | | | | | | | | |
| Credit Weight or CEU's | 3 credits. | | | | | | | | | |
| Course Activities | <ul style="list-style-type: none">A - LectureL - Laboratory | | | | | | | | | |
| Course Title | <table><tr><td>Course Title on Transcript</td><td>Vertebrate Evolution</td></tr><tr><td>Course Title on Calendar</td><td>Vertebrate Evolution.</td></tr></table> | Course Title on Transcript | Vertebrate Evolution | Course Title on Calendar | Vertebrate Evolution. | <table><tr><td>Course Title on Transcript</td><td>Vert Evol:Dinosaurs & Mammals</td></tr><tr><td>Course Title on Calendar</td><td>Vertebrate Evolution: Dinosaurs and Mammals</td></tr></table> | Course Title on Transcript | Vert Evol:Dinosaurs & Mammals | Course Title on Calendar | Vertebrate Evolution: Dinosaurs and Mammals |
| Course Title on Transcript | Vertebrate Evolution | | | | | | | | | |
| Course Title on Calendar | Vertebrate Evolution. | | | | | | | | | |
| Course Title on Transcript | Vert Evol:Dinosaurs & Mammals | | | | | | | | | |
| Course Title on Calendar | Vertebrate Evolution: Dinosaurs and Mammals | | | | | | | | | |
| Rationale | | The new title and course description better reflect the additional content of the course. Also, BIOL 305 (Animal Diversity) was added as another choice of prerequisite. | | | | | | | | |
| Responsible Instructor | | Virginie Millien | | | | | | | | |
| Course Description | The origin and evolution of the major groups of vertebrates. Emphasis is placed on the evolutionary and embryonic origin of key vertebrate anatomies within the context of living and extinct vertebrate phylogeny. | Detailed description of the origin, evolutionary history, diversity and adaptations of archosaurian and mammalian radiations. Aspects of their anatomy will be emphasized with lab dissections and demonstrations. Extensive collections and exhibits of the Redpath Museum will be used. | | | | | | | | |
| Teaching Dept. | 0286 : Biology | | | | | | | | | |
| Administering Faculty/Unit | SC : Faculty of Science | | | | | | | | | |
| Prerequisites | Prerequisites: BIOL 304 or permission | Prerequisites: BIOL 304 or BIOL 305 <table><tr><td>Web Registration Blocked? :</td><td>N</td></tr></table> | Web Registration Blocked? : | N | | | | | | |
| Web Registration Blocked? : | N | | | | | | | | | |
| Corequisites | | | | | | | | | | |
| Restrictions | | | | | | | | | | |

| | | |
|--|---|-------------------------------------|
| Supplementary Calendar Info | 1. Winter 2. 2 hours lecture, 3 hours laboratory | |
| Additional Course Charges | | |
| Campus | | Downtown |
| Projected Enrollment | | |
| Requires Resources Not Currently Available | | N |
| Explanation for Required Resources | | |
| Consultation Reports Attached? | | |
| Effective Term of Implementation | | 201601 |
| 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 |
|-------------|--|----------------------|--|---------------|---|---------|------|---|
| 3 | | | | | Approved Geralda Bacaj Meeting Date: Apr 28 2015 Approval Date: Apr 30 2015 View Comments | | | Approved by Curric/Academic Committee Edited by: Josie D'Amico on: Apr 22 2015 |
| 2 | | | | | | | | Approved by Departmental Chair Edited by: Josie D'Amico on: Apr 22 2015 |
| 1 | Approved Nancy Nelson Meeting Date: Mar 16 2015 Approval Date: Apr 17 2015 View Comments | | Approved Nancy Nelson Meeting Date: Apr 07 2015 Approval Date: Apr 17 2015 View Comments | | | | | Approved by Departmental Chair Created on: Apr 17 2015 |

Revision for BIOC 404

Proposal Reference Number : 9980

PRN Alias : 14-15#1203

Version No : 4

Submitted By : Mr Thomas Martin Schmeing

Edited By : Mr Thomas Martin Schmeing

Summary of Changes **Course Title, Course Description, Restrictions**

| | Current Data | New Data | | | | | | | | |
|--------------------------------|--|---|-----------------------|--------------------------|------------------------|--|----------------------------|---------------------------------------|--------------------------|--|
| Program Affected? | | N | | | | | | | | |
| Program Change Form Submitted? | | | | | | | | | | |
| Subject/Course/Term | BIOC 404 <ul style="list-style-type: none"> one term | | | | | | | | | |
| Credit Weight or CEU's | 3 credits. | | | | | | | | | |
| Course Activities | <ul style="list-style-type: none"> A - Lecture | | | | | | | | | |
| Course Title | <table border="1"> <tr> <td>Course Title on Transcript</td> <td>Biophysical Chemistry</td> </tr> <tr> <td>Course Title on Calendar</td> <td>Biophysical Chemistry.</td> </tr> </table> | Course Title on Transcript | Biophysical Chemistry | Course Title on Calendar | Biophysical Chemistry. | <table border="1"> <tr> <td>Course Title on Transcript</td> <td>Biophysical Methods in Biochem</td> </tr> <tr> <td>Course Title on Calendar</td> <td>Biophysical Methods in Biochemistry</td> </tr> </table> | Course Title on Transcript | Biophysical Methods in Biochem | Course Title on Calendar | Biophysical Methods in Biochemistry |
| Course Title on Transcript | Biophysical Chemistry | | | | | | | | | |
| Course Title on Calendar | Biophysical Chemistry. | | | | | | | | | |
| Course Title on Transcript | Biophysical Methods in Biochem | | | | | | | | | |
| Course Title on Calendar | Biophysical Methods in Biochemistry | | | | | | | | | |
| Rationale | | <p>BIOC 404 is currently entitled "Biophysical Chemistry", yet the course material focuses in large part on the practical applications of the biophysical chemistry phenomena, and it is appropriate for the course name to reflect this. In addition, CHEM514 is entitled "Biophysical Chemistry" and is not an equivalent course, despite being a final year undergraduate course with the same name. Although both fall broadly in the domains of biochemistry & biophysics, the two courses deal with completely different topics, and BIOC 404 has a focus much more centered on research methods. The name "Biophysical Methods in Biochemistry" better conveys course content. The course will continue to present the fundamental biophysical bases of important techniques used in modern biochemistry research laboratories. However, the course emphasizes the utility of these biochemical and biophysical techniques (such as electrophoresis, sedimentation, spectroscopy, magnetic resonance and crystallography) as they are applied to the essential molecules of life, to solve outstanding research questions. The restriction ("Not open...CHEM 404") is being removed since CHEM 404 no longer exists.</p> | | | | | | | | |
| Responsible Instructor | | Martin Schmeing | | | | | | | | |

| | | |
|--|---|--|
| Course Description | Hydrodynamic and electrophoretic methods for separation and characterization of macromolecules. Optical and magnetic resonance spectroscopy of biopolymers, and applications to biological systems. | Applications and fundamental bases of important biophysical techniques used in modern biochemistry research laboratories to isolate, characterize and determine the structure and dynamics of proteins, nucleic acids, small molecules and complexes that underlie life and disease. |
| Teaching Dept. | 0216 : Biochemistry | |
| Administering Faculty/Unit | SC : Faculty of Science | |
| Prerequisites | Prerequisites: CHEM 204, CHEM 214 or equivalent | |
| Corequisites | | |
| Restrictions | <ul style="list-style-type: none"> Restriction: Not open to students who have taken or are taking CHEM 404. | None |
| Supplementary Calendar Info | 1. Winter | |
| Additional Course Charges | | |
| Campus | | |
| Projected Enrollment | | |
| Requires Resources Not Currently Available | | |
| Explanation for Required Resources | | |
| Consultation Reports Attached? | | |
| Effective Term of Implementation | | 201601 |
| 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 |
|-------------|-----------------------------------|----------------------|--------------------|---------------|--|---------|------|---|
| 4 | | | | | Approved Gerald Bacaj Meeting Date: Apr 28 2015 Approval Date: May 12 | | | Approved by Curric/Academic Committee Edited by: Thomas Martin Schmeing on: Apr 21 2015 |

| | | | | | | | | |
|---|--|--|---|--|---------------------------------------|--|--|--|
| | | | | | 2015 View Comments | | | |
| 3 | | | | | | | | Approved by Departmental Chair Edited by: Josie D'Amico on: Apr 21 2015 |
| 2 | | | | | | | | Approved by Departmental Chair Edited by: Josie D'Amico on: Apr 21 2015 |
| 1 | | | Approved Albert Berghuis Meeting Date: Apr 21 2015 Approval Date: Apr 21 2015 View Comments | | | | | Approved by Departmental Chair Created on: Apr 16 2015 |