MEMORIAL UNIVERSITY

Faculty of Science

Office of the Dean
St. John's, NL Canada A1B 3X7
Tel: 709 864 8154 Fax: 709 864 3316
deansci@mun.ca www.mun.ca/science

MEETING OF THE FACULTY COUNCIL OF THE FACULTY OF SCIENCE

A regular meeting of the Faculty Council of the Faculty of Science will be held on Wednesday, November 20, 2019 at 1 p.m. in C-2045.

AGENDA

1. **Regrets**
2. **Adoption of the Minutes of October 16, 2019**
3. **Business Arising from the Minutes**
4. **Correspondence**
5. **Reports of Standing Committees**:
   - **A. Undergraduate Studies Committee**:
     - **a.** Department of Earth Sciences, calendar changes amending/deleting courses (Paper 5.A.a., pages 5-22)
     - **b.** Department of Biochemistry, special topics course BIOC 4242, Field Studies in Nutrition and Food, approved by the committee and presented for information only. (Paper 5.A.b., pages 23-38)
   - **B. Graduate Studies Committee:**
     - **a.** Department of Computer Science, addition of range of special topics course numbers (Paper 5.B.a., page 39)
     - **b.** Department of Psychology
       i. Proposed calendar change to increase graduate statistics training for MSc and PhD students (Paper 5.B.b.i., pages 40-44)
       ii. Proposed calendar changes to alter the voting members of the PhD comprehensive examination in Experimental Psychology (Paper 5.B.b.ii., pages 45-47)
     - **c.** Department of Mathematics and Statistics, special topics course, MATH 6346, Pursuit-Evasion Problems, approved by the committee and presented for information only. (Paper 5.B.c., pages 48-51)
   - **C. Library Committee**
6. **Reports of Delegates from Other Councils**
7. **Report of the Dean**
8. **Question Period**
9. **Adjournment**

Mark Abrahams, Ph.D.
Dean of Science

MEMORIAL UNIVERSITY

Faculty of Science

Office of the Dean
St. John's, NL Canada A1B 3X7
Tel: 709 864 8154 Fax: 709 864 3316
deansci@mun.ca www.mun.ca/science

FACULTY OF SCIENCE
FACULTY COUNCIL OF SCIENCE
MINUTES OF MEETING OF OCTOBER 16, 2019

A meeting of the Faculty Council of the Faculty of Science was held on Wednesday, October 16, 2019, at 1:00 p.m. in room C-2004.

FSC 2697 **Present:**

Biochemistry
M. Berry

Biology
S. Dufour

Chemistry
C. Bottaro, S. Pansare

Computer Science
R. Byrne, D. Churchill, A. Fiech

Earth Sciences
A. Malcolm

Mathematics & Statistics
D. Dyer, R. Haynes, J.C. Loredo-Osti

Physics & Physical Oceanography
S. Curnoe, J. Lagowski, M. Morrow, K. Poduska

Psychology
K. Fowler, C. Thorpe

Dean of Science Office
M. Abrahams, K. Foss, T. Fridgen, G. Jackson

Geography
E. Edinger

Staff
C. Deacon, C. Hyde, B. Power, T. Stuckless

Graduate Students
A. Akerele, Y. Lim

FSC 2698 **Regrets**
A. Bates, S. Mantyka

FSC 2699 **Adoption of Minutes**
Moved: Minutes of the September 18, 2019, meeting be adopted (Berry/Loredo-Osti).
Two abstentions. Carried.

FSC 2700 **Business Arising:** None

FSC 2701 **Correspondence:** None

FSC 2702 **Reports of Standing Committees:**

A. **Undergraduate Studies Committee:** No business.

B. **Graduate Studies Committee:**
Presented by Stephanie Curnoe, Deputy Head, Graduate Studies, Department of Physics and Physical Oceanography

a. **Moved:** Department of Physics and Physical Oceanography, calendar changes to PhD program (Curnoe/Lagowski). **Carried.**

C. **Nominating Committee:** No business.

D. **Library Committee:** No business.

FSC 2703 **Distinguished Emerging Scholar Award:**
Moved: Travis Fridgen presented the proposed Distinguished Emerging Scholar Award for discussion and feedback. The focus of the conversation was whether the award should include teaching. Arguments for and against this proposal were made, with consensus being that broader consultation was required.

FSC 2704 **Report of the Dean**
Presented by Mark Abrahams, Dean

1. Due to a health issue, Dr. Tom Chapman, the Head of Biology, has stepped down for the remainder of the year. In the meantime, I want to thank Dr. Ted Miller for assuming the role of acting Head until Tom returns in the new year.

2. Also in Biology, I want to congratulate the Biology Department Lab Instructors, Instructional Assistants, and Science Technicians for being this year's recipients of the Glenn Roy Blundon Award. This award is presented annually to individuals or groups who contribute to the ongoing development of equitable and accessible learning and living environments for students at Memorial.

3. I thank all of you who have submitted your annual activity reports. I am still working through a number and will respond to all who have submitted their reports.

4. I am now preparing for the Faculty Complement Planning and Budget Consultation meeting that is scheduled for October 30. I thank those departments that have provided me with their revised Academic Staffing Plan and, once all are received, will develop the submission for the Faculty of Science.

5. A reminder that we have a number of public presentations being hosted by departments in the Faculty of Science. This Thursday Dr. Gary Pielak will present the Reddy Lecture. On October 24 Dr. Frank Elgar will present the Canning Memorial Lecture, and on November 18 Dr. Alan Aspuru-Guzik will give the Elizabeth Laird Lecture. All these presentations will be at 7 pm in the Bruneau Centre, in Room IIC-2001.

6. Also a reminder that convocation is tomorrow. B.Sc. degrees at 10 am, M.Sc.'s at 3 pm and Ph.D.'s and Psy.D.'s at 7:30 pm.

FSC 2705 Question Period

Integrated Planning Committee (IPC) have annual consultations with the university community regarding the budget and the sessions are coming up in November. These sessions are good and inform you of the university's budget, so everyone should try to attend.

Dr. Abrahams is chairing the Post-Secondary Education Review which will provide information to the provincial government on the work – teaching, research and service to the province – currently undertaken at the university.

FSC 2706 Adjournment

The meeting adjourned at 1:30 p.m.

MEMORIAL UNIVERSITY

Office of the Registrar

St. John's, NL Canada A1C 5S7
Tel: 709 864 8260 Fax: 709 864 2337
www.mun.ca

October 28, 2019

TO: All Members of Faculty Council, Faculty of Science

FROM: Tracey Edmunds, Secretary, Committee on Undergraduate Studies
Faculty of Science (Acting)

SUBJECT: **Proposals for Calendar Changes**

At a meeting held on October 25, 2019, the Faculty of Science Committee on Undergraduate Studies agreed that the following item should be forwarded to Faculty Council for approval:

1. Department of Earth Sciences

(a) Amended or deleted course(s): EASC 3210, 3600, 1000, 1002, 2502, 3172, 4502, 4503, 4605, 4702, 4800

At a meeting held on October 25, 2019, the Faculty of Science Committee on Undergraduate Studies approved a proposal for a Special Topics Course from the Department of Biochemistry, and agreed that the following item should be forwarded to Faculty Council for information:

1. Department of Biochemistry

(a) Proposal for a Special Topics Course: Biochemistry 4242 – Field Studies in Nutrition and Food

Tracey Edmunds

_____
Tracey Edmunds

Memorial University of Newfoundland
Undergraduate Calendar Change Proposal Form
Cover Page

LIST OF CHANGES

Indicate the Calendar change(s) being proposed by checking and completing as appropriate:

- ☐ New course(s):
- ☐ Amended or deleted course(s): EASC 3210, 3600, 1000, 1002, 2502, 3172, 4502, 4503, 4605, 4702, 4800
- ☐ New program(s):
- ☐ Amended or deleted program(s):
- ☐ New, amended or deleted Glossary of Terms Used in the Calendar entries
- ☐ New, amended or deleted Admission/Readmission to the University (Undergraduate) regulations
- ☐ New, amended or deleted General Academic Regulations (Undergraduate)
- ☐ New, amended or deleted Faculty, School or Departmental regulations
- ☐ Other:

ADMINISTRATIVE AUTHORIZATION

By signing below, you are confirming that the attached Calendar changes have obtained all necessary Faculty/School approvals, and that the costs, if any, associated with these changes can be met from within the existing budget allocation or authorized new funding for the appropriate academic unit.

Signature of Dean/Vice-President: _____

Date: _____

Date of approval by Faculty/Academic Council: _____

Memorial University of Newfoundland
Undergraduate Calendar Change Proposal Form
Senate Summary Page for Courses

COURSE NUMBER AND TITLE
EASC 3210 Economic Mineral Deposits

REVISED COURSE NUMBER AND TITLE
N/A

ABBREVIATED COURSE TITLE
N/A

RATIONALE
We propose to remove the alternative prerequisites (i.e., EASC 2031 and Chemistry 3211; or Engineering 3610 and the former Engineering 3205) from EASC 3210 Economic Mineral Deposits. We noted that Engineering students do not take EASC 3210, and no one Engineering student would take these two courses because they are meant for two different programs. Additionally, we determined that in preparation for EASC 3210 Economic Mineral Deposits, students need to know skills that are taught in EASC 2502 and EASC 2905, which are not covered in Chemistry 3211.

CALENDAR CHANGES
3210 Economic Mineral Deposits is an introduction to the study of mineral deposits and definition of the basic physio-chemical parameters of ore deposit formation. The course involves a systematic review of genetic models for the principal types of metallic mineral deposits, and links these models to a common theme of the relationship between lithosphere-hydrosphere-biosphere interactions and metallogeny. Laboratory exercises involve examination of representative suites of samples from different types of metallic mineral deposits and provide an introduction to the use of reflected light microscopy.
LH: 3

PR: ~~either~~ EASC 2031, 2502 and 2905~~; or EASC 2031 and Chemistry 3211; or Engineering 3610 and the former Engineering 3205~~

CALENDAR ENTRY AFTER CHANGES
3210 Economic Mineral Deposits is an introduction to the study of mineral deposits and definition of the basic physio-chemical parameters of ore deposit formation. The course involves a systematic review of genetic models for the principal types of metallic mineral deposits, and links these models to a common theme of the relationship between lithosphere-hydrosphere-biosphere interactions and metallogeny. Laboratory exercises involve examination of representative suites of samples from different types of metallic mineral deposits and provide an introduction to the use of reflected light microscopy.
LH: 3

PR: EASC 2031, 2502 and 2905

SECONDARY CALENDAR CHANGES

N/A

Memorial University of Newfoundland
Undergraduate Calendar Change Proposal Form
Senate Summary Page for Courses

COURSE NUMBER AND TITLE
3600 Environmental Geology

REVISED COURSE NUMBER AND TITLE
N/A

ABBREVIATED COURSE TITLE
N/A

RATIONALE
We propose to add laboratory safety courses, Science 1807 and Science 1808, as prerequisites for EASC 3600 Environmental Geology because the students use hazardous materials during the laboratory section of this course. We also propose to remove the prerequisites EASC 1000, Chemistry 2210 and the former CHEM 2300, because in the past 10 year's the course instructor does not know of a student that did not take EASC 2502 as the prerequisite. Additionally, Chemistry has not offered CHEM 2300 since Fall 2012, and the course has been completely removed from the calendar. It has been replaced by CHEM 2301, and a credit restriction exists between the current 2301 and the former 2300.

CALENDAR CHANGES
3600 Environmental Geology examines the application of basic concepts and fundamental principles of geochemistry in evaluating natural and human-induced change through time on the interaction of the Earth's lithosphere, hydrosphere, atmosphere and biosphere; includes the effects of contaminants on global change. Laboratory time will be used for short field- based studies and for exercises examining the effects of contaminants on global change.
LH: 3
PR: ~~either~~ EASC 2502, Science 1807 and Science 1808; ~~or EASC 1000, Chemistry 2210 and the former CHEM 2300~~

CALENDAR ENTRY AFTER CHANGES
3600 Environmental Geology examines the application of basic concepts and fundamental principles of geochemistry in evaluating natural and human-induced change through time on the interaction of the Earth's lithosphere, hydrosphere, atmosphere and biosphere; includes the effects of contaminants on global change. Laboratory time will be used for short field- based studies and for exercises examining the effects of contaminants on global change.
LH: 3

PR: EASC 2502, Science 1807 and Science 1808

SECONDARY CALENDAR CHANGES

N/A

Memorial University of Newfoundland
Undergraduate Calendar Change Proposal Form
Senate Summary Page for Courses

COURSE NUMBER AND TITLE

EASC 1000 Earth Systems
EASC 1002 Concepts and Methods in Earth Sciences
EASC 2502 Introduction to Geochemistry
EASC 3172 Electric and Electromagnetic Methods in Geophysics
EASC 4502 Advanced Geochemistry
EASC 4503 Mineral Exploration Geochemistry
EASC 4605 Environmental Geoscience Field School
EASC 4702 Sedimentary Basins and Hydrocarbon Exploration
EASC 4800 Advanced Paleontology

RATIONALE

The above listed courses all incorporate the use of hazardous materials is the laboratory portion of the course. In line with the University's Health and Safety regulations, we propose adding Science 1807 and Science 1808 as pre-requisites for these courses.

CALENDAR CHANGES

1000 Earth Systems is a survey of the structure, function and interrelations of Earth's lithosphere, hydrosphere, atmosphere and biosphere. Topics include an exploration of the physical and chemical properties of planetary materials, forces driving and sustaining Earth systems, and biological modifiers (including humankind) on the Earth today.
LH: 3
PR: Science 1807 and Science 1808

1002 Concepts and Methods in Earth Sciences provides an introduction to a broad range of concepts concerning the development of the geological record and the Earth; practical methods for collection of field based data; topics in map interpretation and geometric analysis, stratigraphy, paleontology, structure, petrology, and geophysics. The course is presented with an emphasis on the development of practical skills needed to pursue a career in Earth Sciences.
LH: 3
PR: Science 1807 and Science 1808; EASC 1000

2502 Introduction to Geochemistry provides an overview of both low- and high-temperature geochemistry. Topics include: origin and classification of the elements;

chemical differentiation of the solar system and solid Earth; aqueous geochemistry and the stability of minerals; radiogenic and stable isotopes. Geochemical concepts are illustrated using data and processes drawn from Earth systems. The laboratory component emphasizes the development of numerical skills needed in geochemistry.
CO: Mathematics 1001
LH: 3
PR: Science 1807 and Science 1808; EASC 1000 and 1002 with a grade of at least 55% in each, Chemistry 1051 (or 1001)

3172 Electric and Electromagnetic Methods in Geophysics is an introduction to electrical and electromagnetic methods in geophysics applied in mineral exploration, petroleum well logging and environmental studies, and examples of application of various techniques; use of data processing and modelling techniques in interpretation; introduction to radiometric methods used in mineral and petroleum exploration. The laboratory component involves outdoor surveys using geophysical equipment, and computer-based presentation and analysis of collected data using modern geophysical software.
AR: attendance is required in the laboratory component of this course. Failure to attend may result in a failing grade or deregistration from the course.
CO: EASC 2905 or permission of the Head of the Department
LH: 3
PR: Science 1807 and Science 1808; Physics 1051 (or 1021 or the former 1054); Mathematics 1001; Mathematics 2000 or Statistics 2550 or the former Statistics 2510; EASC 2905 or permission of the Head of the Department for students following a Minor in Earth Sciences or a Major in Environmental Physics

4502 Advanced Geochemistry focuses primarily on the application of trace, radiogenic and stable isotope geochemistry to constrain the origin, mass balance and chemical fluxes within the Earth's lithosphere and asthenosphere. The course permits students to complete assignments in aspects of geochemistry that reflect their career interests.
LH: 3
PR: Science 1807 and Science 1808; EASC 2031 and 2502 and a minimum of 6 credit hours in Earth Sciences at the 3000 level

4503 Mineral Exploration Geochemistry is an examination of the application of geochemistry to mineral exploration, covering: the lithogeochemical characteristics of ore deposits, their host rocks, and element dispersion from them; the principles of sampling and analysis in exploration geochemistry; approaches to the statistical analysis, graphical presentation, and interpretation of survey results; and the design of effective geochemical surveys. Particular emphasis will be placed on case studies relevant to exploration in Newfoundland and Labrador. Laboratory/seminar sessions involve working with exemplary data sets, using computer-based software for statistical analysis and software for searching large databases and viewing the spatial relationships of different types of map data relevant to the mineral exploration industry.
LH: 3
OR: seminar

PR: Science 1807 and Science 1808; EASC 3210

4605 Environmental Geoscience Field School is a field-based course normally offered during a special session immediately before the Fall semester followed by laboratory analytical work during the Fall semester. The aim of this course is to investigate anthropogenic impacts on the environment using geochemical, hydrological, and microbial methods. Emphasis is placed on site investigation, sample collection and preparation techniques, instrumental analysis, and data analyses.
AR: attendance required
OR: field-based course
PR: Science 1807 and Science 1808; EASC 2502, EASC 3600, Mathematics 1001, and one of Mathematics 2000, Statistics 2550, or the former Statistics 2510

4702 Sedimentary Basins and Hydrocarbon Exploration (same as the former EASC 4602) provides a review of sedimentary basin types and associated petroleum systems including concepts applicable to petroleum generation, migration and accumulation. Regional-scale stratigraphic and structural concepts/models are presented as a framework for hydrocarbon fluid flow and entrapment. Laboratories include description and analysis of data typical of basin- and regional-scale exploration and appraisal of hydrocarbon resources using a variety of integrated, interdisciplinary techniques (geological, geophysical and geochemical).
CR: EASC 4601 and the former EASC 4602
LH: 3
PR: Science 1807 and Science 1808; EASC 2401, 2702, 3170 and 3420

4800 Advanced Paleontology (same as Biology 4800) is a field, lecture, laboratory and seminar course dealing with selected topics in general and applied paleontology. Topics include measuring evolution and extinction, population paleontology, functional morphology, paleoecology, statistical methods for paleontological studies, and applications in petroleum, mining, and environmental studies.
CR: Biology 4800
LH: 3
PR: Science 1807 and Science 1808; EASC 3811, and Statistics 2550 or any of the courses listed in the credit restrictions of Statistics 2550 or Mathematics 2000

CALENDAR ENTRY AFTER CHANGES

1000 Earth Systems is a survey of the structure, function and interrelations of Earth's lithosphere, hydrosphere, atmosphere and biosphere. Topics include an exploration of the physical and chemical properties of planetary materials, forces driving and sustaining Earth systems, and biological modifiers (including humankind) on the Earth today.
LH: 3
PR: Science 1807 and Science 1808

1002 Concepts and Methods in Earth Sciences provides an introduction to a broad range of concepts concerning the development of the geological record and the Earth; practical methods for collection of field based data; topics in map interpretation and geometric analysis, stratigraphy, paleontology, structure, petrology, and geophysics. The course is presented with an emphasis on the development of practical skills needed to pursue a career in Earth Sciences.
LH: 3
PR: Science 1807 and Science 1808; EASC 1000

2502 Introduction to Geochemistry provides an overview of both low- and high-temperature geochemistry. Topics include: origin and classification of the elements; chemical differentiation of the solar system and solid Earth; aqueous geochemistry and the stability of minerals; radiogenic and stable isotopes. Geochemical concepts are illustrated using data and processes drawn from Earth systems. The laboratory component emphasizes the development of numerical skills needed in geochemistry.
CO: Mathematics 1001
LH: 3
PR: Science 1807 and Science 1808; EASC 1000 and 1002 with a grade of at least 55% in each, Chemistry 1051 (or 1001)

3172 Electric and Electromagnetic Methods in Geophysics is an introduction to electrical and electromagnetic methods in geophysics applied in mineral exploration, petroleum well logging and environmental studies, and examples of application of various techniques; use of data processing and modelling techniques in interpretation; introduction to radiometric methods used in mineral and petroleum exploration. The laboratory component involves outdoor surveys using geophysical equipment, and computer-based presentation and analysis of collected data using modern geophysical software.
AR: attendance is required in the laboratory component of this course. Failure to attend may result in a failing grade or deregistration from the course.
CO: EASC 2905 or permission of the Head of the Department
LH: 3
PR: Science 1807 and Science 1808; Physics 1051 (or 1021 or the former 1054); Mathematics 1001; Mathematics 2000 or Statistics 2550 or the former Statistics 2510; EASC 2905 or permission of the Head of the Department for students following a Minor in Earth Sciences or a Major in Environmental Physics

4502 Advanced Geochemistry focuses primarily on the application of trace, radiogenic and stable isotope geochemistry to constrain the origin, mass balance and chemical fluxes within the Earth's lithosphere and asthenosphere. The course permits students to complete assignments in aspects of geochemistry that reflect their career interests.
LH: 3
PR: Science 1807 and Science 1808; EASC 2031 and 2502 and a minimum of 6 credit hours in Earth Sciences at the 3000 level

4503 Mineral Exploration Geochemistry is an examination of the application of geochemistry to mineral exploration, covering: the lithogeochemical characteristics of ore deposits, their host rocks, and element dispersion from them; the principles of sampling and analysis in exploration geochemistry; approaches to the statistical analysis, graphical presentation, and interpretation of survey results; and the design of effective geochemical surveys. Particular emphasis will be placed on case studies relevant to exploration in Newfoundland and Labrador. Laboratory/seminar sessions involve working with exemplary data sets, using computer-based software for statistical analysis and software for searching large databases and viewing the spatial relationships of different types of map data relevant to the mineral exploration industry.
LH: 3
OR: seminar
PR: Science 1807 and Science 1808; EASC 3210

4605 Environmental Geoscience Field School is a field-based course normally offered during a special session immediately before the Fall semester followed by laboratory analytical work during the Fall semester. The aim of this course is to investigate anthropogenic impacts on the environment using geochemical, hydrological, and microbial methods. Emphasis is placed on site investigation, sample collection and preparation techniques, instrumental analysis, and data analyses.
AR: attendance required
OR: field-based course
PR: Science 1807 and Science 1808; EASC 2502, EASC 3600, Mathematics 1001, and one of Mathematics 2000, Statistics 2550, or the former Statistics 2510

4702 Sedimentary Basins and Hydrocarbon Exploration (same as the former EASC 4602) provides a review of sedimentary basin types and associated petroleum systems including concepts applicable to petroleum generation, migration and accumulation. Regional-scale stratigraphic and structural concepts/models are presented as a framework for hydrocarbon fluid flow and entrapment. Laboratories include description and analysis of data typical of basin- and regional-scale exploration and appraisal of hydrocarbon resources using a variety of integrated, interdisciplinary techniques (geological, geophysical and geochemical).
CR: EASC 4601 and the former EASC 4602
LH: 3
PR: Science 1807 and Science 1808; EASC 2401, 2702, 3170 and 3420

4800 Advanced Paleontology (same as Biology 4800) is a field, lecture, laboratory and seminar course dealing with selected topics in general and applied paleontology. Topics include measuring evolution and extinction, population paleontology, functional morphology, paleoecology, statistical methods for paleontological studies, and applications in petroleum, mining, and environmental studies.
CR: Biology 4800
LH: 3
PR: Science 1807 and Science 1808; EASC 3811, and Statistics 2550 or any of the courses listed in the credit restrictions of Statistics 2550 or Mathematics 2000

Memorial University of Newfoundland
Undergraduate Calendar Change Proposal Form
Appendix Page

CONSULTATIONS SOUGHT

Academic Unit	Response Received
Humanities and Social Sciences	No
Business Administration	No
Education	No
Engineering and Applied Science	Yes
Human Kinetics and Recreation	Yes
Marine Institute	Yes
Medicine	Yes
Music	No
Nursing	No
Pharmacy	Yes
Science	Yes, Chemistry
Social Work	Yes
Library	Yes
Grenfell Campus	
Arts and Social Science	No
Science and the Environment	No
Fine Arts	No

LIBRARY REPORT

N/A

RESOURCE IMPLICATIONS

N/A

ADDITIONAL INFORMATION REQUIRED FOR NEW COURSE PROPOSALS

N/A

Consultation responses for EASC3210, 3600, 1000, 1002, 2502, 3172, 3600, 4502, 4503, 4605, 4702, 4800 calendar changes

Consultation request

Subject	**Proposed calendar changes from Earth Sciences**
From	Earth Sciences Chair of Undergraduate Matters
To	hss@mun.ca, lbauer@mun.ca, mcollett@mun.ca, engrconsult@mun.ca, lerohr@mun.ca, miugconsultations@mi.mun.ca, deanofn, univlib@mun.ca, kjacobse@grenfell.mun.ca, ssedean@grenfell.mun.ca, thennessey@grenfell.mun.ca
Date	Tue 13:01

- UCCPF-Senate_Summary_Pa...807 and 1808 Prereq.docx (~15 KB)
- UCCPF-Senate_Summary_Page-Courses_EASC3210.docx (~13 KB)
- UCCPF-Senate_Summary_Page-Courses_EASC3600.docx (~13 KB)

Oct. 15, 2019

Dear colleagues,

The purpose of this email is to extend an opportunity for you to provide feedback on the attached calendar change proposals. Please find attached proposals relating to:

1) Adding Science 1807 and 1808 lab safety courses as prerequisites to any EASC course with a laboratory where students may come in contact with a hazardous material
2) Removing alternate prerequisite options for EASC 3210 Economic Mineral Deposits
3) Removing alternate prerequisite options for EASC 3600 Environmental Geology

If you have any comments on these proposed calendar changes please send them to me by Oct. 24th.

Thank you,
Penny Morrill

--
Penny Morrill, PhD
Chair of the undergraduate matters committee
Department of Earth Sciences

Consultation Responses

Subject	**RE: Proposed calendar changes from Earth Sciences**
From	MIUG Consultations
To	Earth Sciences Chair of Undergraduate Matters
Date	Thu 08:58

Hello,

Thank you for the opportunity to review and comment on the proposals for changes to Earth Science course prerequisites. This will have no impact on Marine Institute programs and we support the proposals.

Regards,

Bev

Bev Fleet
Chair, Undergraduate Studies Committee
Marine Institute, Memorial University
TEL: 709-778-0369
FAX: 709-778-0535
Bev.Fleet@mi.mun.ca

Subject **FW: Proposed calendar changes from Earth Sciences**
From cvardy@mun.ca
To eascugconsultations@mun.ca
Cc Margaret.Steele@med.mun.ca
Date Wed 11:11

- UCCPF-Senate_Summary_Pa...807 and 1808 Prereq.docx (~15 KB)
- ATT00001.htm (~236 B)
- UCCPF-Senate_Summary_Page-Courses_EASC3210.docx (~13 KB)
- ATT00002.htm (~236 B)
- UCCPF-Senate_Summary_Page-Courses_EASC3600.docx (~13 KB)
- ATT00003.htm (~178 B)

Good Morning

The attached calendar changes from Earth Sciences have been reviewed and the Faculty pf Medicine is supportive

Regards

Cathy Vardy

CATHY VARDY, MD, FRCPC | VICE DEAN AND PROFESSOR OF PEDIATRICS

Faculty of Medicine
Health Sciences Centre

Room M2M319

Memorial University of Newfoundland
St. John's, Newfoundland | A1B 3V6

T 709 864 6417 | F 709 864 6336
www.med.mun.ca/

Subject **Re: Proposed calendar changes from Earth Sciences**

From Rohr, Linda
To Earth Sciences Chair of Undergraduate Matters
Date Tue 21:47

Hi Penny,

No concerns from HKR with the proposed changes to Earth Sciences.

Linda

Linda E. Rohr PhD

Dean, School of Human Kinetics & Recreation

Memorial University

t: 709.864.8129 f: 709.864.7531 e: lerohr@mun.ca

PE 2027

Subject **EASC 3600**
From Fridgen,Travis
To eascugconsultations@mun.ca
Date Tue 14:11

Hi Penny,

Just wondering about EASC 3600. What has changed in that course that CHEM 2210 and 2300 (presumably the new 2301) are no longer required. I just noticed that there was a justification for removing 3211 as a PR from 3210, but nothing mentioned about the others.

Take care,

Travis

DR. TRAVIS FRIDGEN | ASSOCIATE DEAN OF SCIENCE

(Administration & Undergraduate)

Professor of Chemistry
Memorial University
St. John's, NL , Canada A1B 3X7
T 709-864-8155

http://www.faculty.mun.ca/tfridgen/

Subject **Re: EASC 3600**
From Earth Sciences Chair of Undergraduate Matters
To Fridgen,Travis
Date Today 09:21

Oct. 18, 2019

Dear Travis,

Chemistry 2210 and 2300 were alternative prerequisites for EASC3600, if the students did not have EASC 2502 Intro to Geochem. However, I have been teaching EASC3600 for 10 years, and I often teach EASC 2502. I know of no student that has used the Chemistry 2210 and 2300 prereqs to get into the course. Michelle Miskelle, can't remember any either, and she does not know why the Chemistry 2210 and 2300 alternates are listed. That said, plus the information from Barry Power that Chemistry has not offered CHEM 2300 since Fall 2012, and the course has been completely removed from the calendar, and that It has been replaced by CHEM 2301 and a credit restriction exists between the current 2301 and the former 2300.

The rational for in the course change proposal says the following:

We also propose to remove the prerequisites EASC 1000, Chemistry 2210 and the former CHEM 2300, because in the past 10 year's the course instructor does not know of a student that did not take EASC 2502 as the prerequisite. Additionally, Chemistry has not offered CHEM 2300 since Fall 2012, and the course has been completely removed from the calendar. It has been replaced by CHEM 2301, and a credit restriction exists between the current 2301 and the former 2300.

Cheers,
Penny

Penny Morrill, PhD
Chair of the undergraduate matters committee
Department of Earth Sciences

Subject **FW: Proposed calendar changes from Earth Sciences**
From Davis,Erin
To eascugconsultations@mun.ca
Date 2019-10-18 15:43

- UCCPF-Senate_Summary_Pa...807 and 1808 Prereq.docx (~15 KB)
- UCCPF-Senate_Summary_Page-Courses_EASC3210.docx (~13 KB)

- UCCPF-Senate_Summary_Page-Courses_EASC3600.docx (~13 KB)

Thank you for sending these changes for our consideration, pharmacy has no concerns with the proposed changes.
Erin
--
Erin Davis, PharmD
Associate Dean Undergraduate Studies
Associate Professor
Memorial University School of Pharmacy
T 709 864 8815
E emdavis@mun.ca

Subject **RE: Proposed calendar changes from Earth Sciences**
From Ambi, Alison
To Earth Sciences Chair of Undergraduate Matters
Date Sun 17:45

Hello Penny,

The proposed calendar changes will have no impact on library resources.

Alison Ambi

Head, Collections Strategies
Subject Librarian for Computer Science, Earth Sciences, Mathematics & Statistics, Physics, Psychology

QEII Library
Memorial Univeristy of Newfoundland
+1 709 864-7125
www.library.mun.ca

Subject **RE: Proposed calendar changes from Earth Sciences**
From adeanugradswk
To Earth Sciences Chair of Undergraduate Matters
Date Wed 11:28

Hello Penny,

I have reviewed your calendar changes and have no suggestions or comments.

Regards,

Heather

_____

Heather J. Hair, PhD, RSW
Associate Dean Undergraduate Programs
School of Social Work, Memorial University
St. John's, NL, Canada, A1C 5S7
T: 709-864-2562 or 709-864-7349

Subject **Re: Proposed calendar changes from Earth Sciences**

From Engineering Consult

To Earth Sciences Chair of Undergraduate Matters

Cc Jayde Edmunds, Dennis Peters, Bruce Quinton

Date Wed 15:07

Dear Dr. Morrill,

Thank you for the opportunity to comment on the Calendar change documents for nine Earth Sciences courses.

At today's meeting of the Committee on Undergraduate Studies of the Faculty of Engineering and Applied Science, the Committee found no impact on Engineering programs.

We do note that the change to the prerequisites for EASC 3210 "Economic Mineral Deposits" does replace a secondary Calendar change in our own recent Calendar change package to implement departmental course codes in Engineering. We agree with your change.

We are happy to support these proposed changes.

Dr. Glyn George, Chair
Committee on Undergraduate Studies
Faculty of Engineering and Applied Science
Memorial University of Newfoundland
St. John's NL A1B 3X5

Memorial University of Newfoundland
Undergraduate Calendar Change Proposal Form
Senate Summary Page for Courses

COURSE NUMBER AND TITLE
Special Topics Course: Biochemistry 4242 Field Studies in Nutrition and Food

ABBREVIATED COURSE TITLE
Bioc4242 Field Studi in Nutrition&Food

RATIONALE
The course will be offered in part at the Memorial Harlow campus, to provide experiential learning using resources related to food, nutrition and health that are not available in the regions of the St. John's or Grenfell campuses. Within a reasonable distance from Harlow campus exists a variety of facilities that offer learning opportunities relevant to students in the Biochemistry (Nutrition) program that span agricultural and processed food production, food and human health, and laboratory-based techniques to study human nutrition.

The course will be offered to students who have completed 2 years of full time study as of 30 April; priority will be given to students enrolled in the Biochemistry (Nutrition) stream. The course may also be of interest to students completing the Certificate in Food Studies (Humanities and Social Sciences), or those in Biology or Kinesiology with an interest in human nutrition. Biochemistry 2600 - Introduction to Human Nutrition will be the prerequisite course, which has an enrolment of 250+ students per year; this prerequisite should provide an ample sized pool of eligible students. Enrolment will be limited to 15 students.

The primary objective of the course is to enrich the students' understanding of the relationships between food and the environment as well as food, nutrients and human health. A secondary objective is to enhance the writing skills of the students through feedback on assignments. In addition, the course will provide students with an international learning experience that may serve to encourage students to consider graduate studies or employment opportunities abroad.

CALENDAR CHANGES
None required for Special Topics course

Memorial University of Newfoundland
Undergraduate Calendar Change Proposal Form
Appendix Page

CONSULTATIONS SOUGHT

The following faculties/academic units have been consulted, as the course may be of interest to students registered in their programs who have taken the pre-requisite course:

Academic Unit	Response received?
Chemistry	Yes
Computer Science	No
Math and Stats	No
Ocean Sciences	Yes
Psychology	No
Biology	Yes
Physics	No
Computer Science	No
Humanities and Social Sci	No
Human Kinetics and Rec	No
Pharmacy	No
Nursing	No
Arts and Soc Sci (Grenfell)	No
Marine Intitute	Yes
Medicine	Yes

LIBRARY REPORT

A library report is attached.

RESOURCE IMPLICATIONS

This course will incur additional costs to the students, but will be cost neutral to the University, the academic unit (Biochemistry) and the Faculty of Science.

The estimated costs to the student associated with this course include:

1) Return airfare to London from St. John's
2) Accommodations at Harlow Campus £112.70 (~$185.00 CAD) per week for shared accommodation including an evening meal.
3) A program fee of $400 per student to cover course related ground transportation in the UK and admission fees to field sites. Unused program fees will be refunded to the student upon return from the UK.

ADDITIONAL INFORMATION REQUIRED FOR NEW COURSE PROPOSALS

COURSE INSTRUCTORS: Robert Bertolo, Janet Brunton, Scott Harding

The course requires at least two instructors due to its field study nature, but the proposal is to send three faculty to establish the logistics of the field trips, to liaise with hosts at the various research centres.

Draft Course Outline – Dates, excursions and reading list to be confirmed in Winter 2020

Biochemistry 4242

Field Studies in Nutrition and Food

Spring 2020

Course Description

Field Studies in Nutrition and Food will incorporate field trips that are focused on aspects of nutrition and food that are not currently core parts of our nutrition curriculum. The approach can be divided into three subcategories: Farm to Fork Food Systems; Food, Nutrition and Health; and Modern Nutrition Research. A sample list of possible field trips is given below.

The course will be comprised of ***two weeks*** of intensive field trip studies, scheduled near the beginning of the course, and based out of the Harlow Campus of Memorial University (Harlow, UK). During each of the field trips, the students will collect information (ie. photos, research notes) that will become the basis for writing assignments that will be evaluated during and after the Harlow period. During the stay at Harlow, the students will be required to do preparatory work for various site visits and write a daily blog following each field trip. Following the stay at Harlow, students will complete most of the course assignments, including the submission of a photo-story and a research paper (described below).

The course will have a timeframe that would include two weeks at Harlow, followed by a 7 week period to allow for the development and completion of the assignments (details given below).

PREREQUISITE

BIOC 2600 or permission by the instructor

COURSE INSTRUCTORS

Instructors:

Dr. R. Bertolo (Course Co-ordinator)
Office: SN1036
rbertolo@mun.ca
Dr. J. Brunton
Office: SN3024
jbrunton@mun.ca
Dr. S. Harding
Office: ER3011
sharding@mun.ca

Office Hours: During the stay at Harlow Campus, the professors will be on-site and will interact daily with students for group and one-on-one meetings. For the remainder of the course, a minimum of two hours of contact time per week is TBD, or available by appointment.
If you wish to email either instructor, please put **4242** in the subject line or your email may be deleted automatically as spam. ***Do NOT use D2L/Brightspace to send course-related emails***, as

it is checked less often and you are unlikely to receive a prompt reply. The instructors will endeavour to reply to emails within 48 hours (excluding weekends and holidays).

EVALUATION

*Preparation and Participation:	10%
*Daily Blog:	25%
Photostory:	15% (Due shortly after Harlow)
Research Paper Draft:	10% (Due 3 weeks following the return from Harlow)
Research Paper Final:	40% (Due 2 weeks following feedback from the instructor)
Total:	**100%**

**The Preparation and Participation mark plus the evaluation of the Daily Blog assignments will satisfy the requirement that students receive at least 20% of their total term grade early in the semester.*

PREPARATION AND PARTICIPATION (10%)

Students will be assigned readings that are specifically selected to prepare for each site visit and/or to support the experiential learning activity. The expectation is that the assigned reading will be completed prior to the day of the activity. The grade will be assessed through contributions to group discussions prior to or during the day's activity; how the student utilizes the information may also be evaluated, for example, through questions asked to various hosts.

FIVE DAILY BLOGS (5% each, 25% total)

Students will be required to write about their daily experiences in the form of a blog. **Five** blogs must be completed over the two week Harlow period of the course and must be submitted within two days of that activity. The students may select the experiences they would like to blog about, as long as five blogs are completed. The blog should be accompanied by ***at least*** one photo that is relevant to the topic. Each blog must be between 600 and 800 words in length, but the type of blog is open, and creativity is encouraged. Examples of different types of blogs may include, but are not limited to:

- reflection or commentary on something learned during the day
- a journal or diary-type review of the day
- a "trip advisor" or "yelp" type review of an event
- a debate or editorial (ie. Take a stand on a controversy)

For a blog to be successful, the target audience must be considered. We suggest that you write the blog as if it were to be read by your peers. You can choose a different target audience but be sure to make your choice clear to the instructors. Completed blogs will be uploaded to a Brightspace dropbox as a Word or PDF file with the photo embedded in an appropriate place. Computers are available in the Harlow library for student use. ***The blogs will be graded on completeness and quality of writing.***

PHOTOSTORY (15%)

This is intended to be a fun and creative assignment that the student will work on throughout their time at Harlow. A photo story is a series of pictures that adhere to a pre-determined theme. The photos may be arranged in a way that makes the theme self-explanatory, or they may be captioned with short titles or phrases. The theme is completely up to the student. It does not necessarily have to be directly related to the planned experiences or site visits but should be related to some aspect of food, nutrition, research, health etc. Students should give some thought to a photo story theme prior to or shortly after arriving at Harlow. The instructors will be available for consultation on appropriate themes. The photo story should be submitted to the Brightspace dropbox as a Powerpoint, Word or PDF file. The photo story will be due shortly after the end of the Harlow period; the exact date will be provided at the beginning of the course.

RESEARCH PAPER (40%)

The research paper topic will be decided in consultation with the instructors, based on some aspect of food or nutrition that is related to one of the field trips. Examples might include the validity of methods of collecting nutrient intake data by researchers doing community health surveys, or the impact of climate change on some aspect of food security. The paper will be 3000 – 3500 words in length. The instructors will assist the students in finding appropriate literature and resources to develop the paper. The initial draft of the paper will be due three weeks after returning from Harlow (the date will be provided at the beginning of the course). The draft will be reviewed, edited and graded by an instructor, and individual feedback will be provided to each student within two weeks of its submission date. The student will be given two weeks to revise their research paper and submit it for a final grade.

Lists of (possible) site visits/experiences and a sample reading list can be found on the pages following.

List of (possible) site visits and experiences for Bioc4242*:

'Farm to Fork' Food Systems

- Writtle University College (Harlow): agricultural systems of animal and crop production
- John Innes Centre: horticultural systems and seed development
- National Fruit Collection/Wimpole Rare Breed Farm: origins of agriculture and modern adaptations
- Waitrose Test Kitchen: food systems post-production, consumer behaviour

Nutrition and Health

- London School of Hygiene & Tropical Medicine: food security, global nutrition, world hunger
- London Museums of Health & Medicine (London): several relevant options with a focus on nutritional diseases, including the Wellcome Collection, Royal College of Physicians Museum, Royal College of Medicine Museum, Hunterian Museum, Gordon Museum
- Quadram Institute: food, microbiome and health

Modern Nutrition Research

- King's College London: modern approaches to nutrition research (including nutritional epidemiology, cohort studies, advanced clinical nutrition)
- King's College London: nutritional assessment laboratory skills
- Imperial College of London: metabolomics centre
- The Wellcome Sanger Institute (human genomic research)
- Writtle University College: livestock animal science research techniques

*NOTE: A minimum of 7 and maximum of 9 of these sites will be included in the course, based on the availability of the programs or sponsors at each site.

Reading List (Example)*

'Farm to Fork' Food Systems

Lee SA, Whenham N, Bedford MR. ***Review on docosahexaenoic acid in poultry and swine nutrition: Consequence of enriched animal products on performance and health characteristics.*** Anim Nutr. 2019;5:11-21. doi: 10.1016/j.aninu.2018.09.001.

Aslam MF, Ellis PR, Berry SE, Latunde-Dada GO, Sharp PA. ***Enhancing mineral bioavailability from cereals: Current strategies and future perspectives***. Nutr Bull. 2018;43(2):184-188. doi: 10.1111/nbu.12324.

Lindgren E, Harris F, Dangour AD, Gasparatos A, Hiramatsu M, Javadi F, Loken B, Murakami T, Scheelbeek P, Haines A. ***Sustainable food systems-a health perspective***. Sustain Sci. 2018;13:1505-1517. doi: 10.1007/s11625-018-0586-x

Nutrition and Health

Myers SS, Smith MR, Guth S, Golden CD, Vaitla B, Mueller ND, Dangour AD, Huybers P. ***Climate Change and Global Food Systems: Potential Impacts on Food Security and Undernutrition.*** Annu Rev Public Health. 2017;38:259-277. doi: 10.1146/annurev-publhealth-031816-044356.

Kapsokefalou M, Roe M, Turrini A, Costa HS, Martinez-Victoria E, Marletta L, Berry R, Finglas P. ***Food Composition at Present: New Challenges. Nutrients***. 2019 Jul 25;11(8). pii: E1714. doi: 10.3390/nu11081714.

Finnigan TJA, Wall BT, Wilde PJ, Stephens FB, Taylor SL, Freedman MR. ***Mycoprotein: The Future of Nutritious Nonmeat Protein,*** a Symposium Review. Curr Dev Nutr. 2019 Apr 4;3(6):nzz021. doi: 10.1093/cdn/nzz021

Del Bo' C, Bernardi S, Marino M, et al. ***Systematic Review on Polyphenol Intake and Health Outcomes: Is there Sufficient Evidence to Define a Health-Promoting Polyphenol-Rich Dietary Pattern***? Nutrients. 2019 Jun 16;11(6). pii: E1355. doi: 10.3390/nu11061355

Modern Nutrition Research

Bashiardes S, Godneva A, Elinav E, Segal E. ***Towards utilization of the human genome and microbiome for personalized nutrition.*** Curr Opin Biotechnol. 2018;51:57-63. doi: 10.1016/j.copbio.2017.11.013.

Gibson RS, Charrondiere UR, Bell W. ***Measurement Errors in Dietary Assessment Using Self-Reported 24-Hour Recalls in Low-Income Countries and Strategies for Their Prevention***. Adv Nutr. 2017; 15;8(6):980-991. doi: 10.3945/an.117.016980.

Golley RK, Bell LK, Hendrie GA, Rangan AM, Spence A, McNaughton SA, Carpenter L, Allman-Farinelli M, de Silva A, Gill T, Collins CE, Truby H, Flood VM, Burrows T. ***Validity of short food questionnaire items to measure intake in children and adolescents: a systematic review***. J Hum Nutr Diet. 2017;30(1):36-50. doi: 10.1111/jhn.12399.

*Note that the reading list will be tailored to the specific site visits and experiences once they are confirmed.

Reply all | Delete Junk | •••

Consultation on Special Topic Course for Biochemistry

BiocDHundergrad
Tue 9/3, 1:16 PM
Library Correspondence; Faculty of Humanities and Social Sciences; lrobinson@gre

Reply all |

Sent Items

You forwarded this message on 9/3/2019 5:51 PM

Special Topics Course C...
730 KB

Show all 1 attachments (730 KB) Download

Good Afternoon,

Please find attached a proposal for a Special Topics course in Biochemistry (Bioc 4242 - Field Studies in Food and Nutrition). We hope to offer the course in Spring 2020. This is the first offering of this special topics course. We would appreciate receiving feedback on the proposal by Sept 27th. Comments should be sent to biocDHundergrad@mun.ca

Thank you very much.

.....
Janet Brunton
Professor and Deputy Head (Undergraduate)
Department of Biochemistry
Memorial University of Newfoundland
St. John's, NL A1B 3X9
709 864-8533

Collection Development Division
Queen Elizabeth II Library

1 October 2019

To: Janet Brunton, Department of Biochemistry

From: Erin Alcock, Science Research Liaison Librarian

Subject: New Course Proposal, Special Topics: BIOC 4242 Field Studies in Food and Nutrition

I have reviewed the new course proposal for BIOC 4242 – Field Studies in Food and Nutrition and I have determined that the Memorial University Library system has more than adequate resources to support the objectives of this course.

While the physical collections of MUN Libraries will not be of use to students studying at Harlow Campus, there are thousands of electronic books in our collection that can be access remotely, on top of the extensive periodical holdings that cover this subject area.

Special Topics Course in Biochemistry (BIOC 4242 - Field Studies in Food and Nutrition)

Suzanne Dufour <sdufour@mun.ca>

Mon 9/9/2019 9:55 AM

To: BiocDHundergrad <biocdhundergrad@mun.ca>;

Good morning,

The Biology Undergraduate Studies Committee has meet on Friday and discussed the new course proposal sent out for consultation (BIOC 4242 - Field Studies in Food and Nutrition). The committee agreed that this is an exciting and interesting new course that would likely be of interest to Biology undergraduates. We were wondering if someone from your undergraduate committee and perhaps the proposed instructors of this new course would be interested in meeting with a few faculty from Biology, including some who have taught Harlow courses, to discuss how we might be able to coordinate course offerings between our departments to increase enrollment and enhance our respective students' experience at Harlow. We can also share some ideas and insights that might be useful. Please let me know if you are interested in having meeting with us.

Best wishes,

Suzanne

--
Dr. Suzanne Dufour
Associate Professor and Deputy Head (Undergraduate)
Department of Biology
Memorial University of Newfoundland
St. John's, NL
A1B 3X9
Canada

Tel: (709) 864-8025
Fax: (709) 864-3018
https://www.mun.ca/faculty/sdufour/

Reply all | Delete Junk | •••

FW: Consultation on Special Topic Course for Biochemistry

chemconsult@mun.ca
Thu 9/26, 12:13 PM
BiocDHundergrad

Reply all |

Inbox

Special Topics Course C...
730 KB

Show all 1 attachments (730 KB) Download

Hello,

After soliciting feedback from ASMs in Chemistry, no feedback on this Special Topics course was received. The Department of Chemistry has no concerns.

Take care,

PETER WARBURTON, PhD | ASSISTANT PROFESSOR AND DEPUTY HEAD (UNDERGRADUATE)

Department of Chemistry
Memorial University of Newfoundland
St. John's, Newfoundland and Labrador | A1B 3X7
Chemistry-Physics | Room C 2020 | T 709 864 6939 | F 709 864 3702

From: Dean of Science <deansci@mun.ca>
Sent: Wednesday, September 4, 2019 9:31 AM
To: Amina Ahmed Mahmood <aamahmood@mun.ca>; BiocDHundergrad <biocdhundergrad@mun.ca>; Hyde, Cathy <cathy@mun.ca>; Chemistry <chemconsult@mun.ca>; Computer Science consultation <compsci@mun.ca>; Earth Sciences <eascugcon@mun.ca>; Ivan Saika-Voivod <saika@mun.ca>; Math & Stats <mathconsult@mun.ca>; Ocean Sciences <amercier@mun.ca>; Psychology consult <psychdeputyhead@mun.ca>; Newhook, Rebecca <rnewhook@mun.ca>; Sharene Bungay <sharene@mun.ca>; Suzanne Dufour <sdufour@mun.ca>; Mackenzie, Theresa <tmackenz@mun.ca>; Associate Dean of Science (Undergraduate) <adsu@mun.ca>
Subject: FW: Consultation on Special Topic Course for Biochemistry

---

From: BiocDHundergrad
Sent: Tuesday, September 3, 2019 1:16 PM
To: Library Correspondence; Faculty of Humanities and Social Sciences; lrobinson@grenfell.mun.ca; ssedean@grenfell.mun.ca; Rohr, Linda; miugconsultations@mi.mun.ca; deanofmedicine@med.mun.ca; DeanNurse; pharminfo@mun.ca; miugconsultations@mi.mun.ca
Cc: BiocDHundergrad; Biochemistry Head; Associate Dean of Science (Undergraduate)
Subject: Consultation on Special Topic Course for Biochemistry

Reply all | Delete Junk | •••

RE: Consultation on Special Topic Course for Biochemistry

MIUG Consultations <MIUGconsultations@mi.mun.ca>
Wed 9/25, 8:51 AM
BiocDHundergrad

Reply all |

Inbox

Hello,

Thank you for the opportunity to review and comment on the proposal for the Special Topics course in Biochemistry (Bioc 4242 - Field Studies in Food and Nutrition). The Marine Institute has no issues with the proposal.

Regards,
Bev

Bev Fleet
Chair, Undergraduate Studies Committee
Marine Institute, Memorial University
TEL: 709-778-0369
FAX: 709-778-0535
Bev.Fleet@mi.mun.ca

From: BiocDHundergrad [mailto:biocdhundergrad@mun.ca]
Sent: Tuesday, September 3, 2019 1:17 PM
To: Library Correspondence <univlib@mun.ca>; Faculty of Humanities and Social Sciences <hss@mun.ca>; lrobinson@grenfell.mun.ca; ssedean@grenfell.mun.ca; Rohr, Linda <lerohr@mun.ca>; MIUG Consultations <MIUGconsultations@mi.mun.ca>; deanofmedicine@med.mun.ca; DeanNurse <DeanNurse@mun.ca>; pharminfo@mun.ca; MIUG Consultations <MIUGconsultations@mi.mun.ca>
Cc: BiocDHundergrad <biocdhundergrad@mun.ca>; Biochemistry Head <biochead@mun.ca>; Associate Dean of Science (Undergraduate) <adsu@mun.ca>
Subject: Consultation on Special Topic Course for Biochemistry

Good Afternoon,

Please find attached a proposal for a Special Topics course in Biochemistry (Bioc 4242 - Field Studies in Food and Nutrition). We hope to offer the course in Spring 2020. This is the first offering of this special topics course. We would appreciate receiving feedback on the proposal by Sept 27th. Comments should be sent to biocDHundergrad@mun.ca

Thank you very much.

Reply all | Delete Junk | •••

Re: FW: Consultation on Special Topic Course for Biochemistry

Annie Mercier <amercier@mun.ca>
Wed 10/9, 9:01 AM
BiocDHundergrad

Reply all |

Inbox

Dear Janet:
Our undergraduate studies committee has reviewed your proposal and I am summarizing the feedback herein:
The course was deemed very interesting both in terms of content and format. Offering this at the Harlow campus should enhance/broaden the student experience/perspective. A number of potentially interesting site visits are listed. The requirements under the "Photostory" are broadly defined and some members were wondering if it would be a good idea to narrow it down to allow measuring a more specific learning objective/outcome.
All the best,
Annie

Annie Mercier, PhD
Professor and Deputy Head,
Department of Ocean Sciences
Memorial University (Ocean Sciences Centre)
St. John's, NL, Canada, A1C 5S7
Tel: (709) 864-2011
Email: amercier@mun.ca
www.mun.ca/osc/amercier/bio.php

On 04-Sep.-2019 9:31 a.m., Dean of Science wrote:

From: BiocDHundergrad
Sent: Tuesday, September 3, 2019 1:16 PM
To: Library Correspondence; Faculty of Humanities and Social Sciences; lrobinson@grenfell.mun.ca; ssedean@grenfell.mun.ca; Rohr, Linda; miugconsultations@mi.mun.ca; deanofmedicine@med.mun.ca; DeanNurse; pharminfo@mun.ca; miugconsultations@mi.mun.ca
Cc: BiocDHundergrad; Biochemistry Head; Associate Dean of Science (Undergraduate)
Subject: Consultation on Special Topic Course for Biochemistry

Good Afternoon,

Please find attached a proposal for a Special Topics course in Biochemistry (Bioc 4242 - Field Studies in Food and Nutrition). We hope to offer the course in Spring 2020. This is the first offering of this special topics course. We would appreciate receiving feedback on the proposal by Sept 27th. Comments should be sent to biocDHundergrad@mun.ca

Reply all | Delete Junk | •••

FW: Consultation on Special Topic Course for Biochemistry

cvardy@mun.ca
Wed 9/11, 2:49 PM
BiocDHundergrad; DeanofMedicine@med.mun.ca

Reply all

Inbox

Special Topics Course C... 730 KB

ATT00001.htm 441 bytes

Show all 2 attachments (730 KB) Download all

Good afternoon

The Faculty of Medicine has reviewed this document and is supportive.

Regards

CATHY VARDY, MD, FRCPC | VICE DEAN AND PROFESSOR OF PEDIATRICS

Faculty of Medicine
Health Sciences Centre
Room M2M319
Memorial University of Newfoundland
St. John's, Newfoundland | A1B 3V6

T 709 864 6417 | F 709 864 6336
www.med.mun.ca/

Vision: *Through excellence, we will integrate education, research and social accountability to advance the health of the people and communities we serve.*

Destination Excellence: *Faculty of Medicine Strategic Plan 2018-2023*

Follow us: Facebook **www.facebook.com/MUNMedicine** | *Twitter* **www.twitter.com/MUNMed** *(optional)*

Begin forwarded message:

From: BiocDHundergrad <biocdhundergrad@mun.ca>
Date: September 3, 2019 at 1:16:47 PM NDT
To: Library Correspondence <univlib@mun.ca>, "Faculty of Humanities and Social Sciences" <hss@mun.ca>, "lrobinson@grenfell.mun.ca" <lrobinson@grenfell.mun.ca>, "ssedean@grenfell.mun.ca" <ssedean@grenfell.mun.ca>, "Rohr, Linda" <lerohr@mun.ca>, "miugconsultations@mi.mun.ca" <miugconsultations@mi.mun.ca>, "deanofmedicine@med.mun.ca" <deanofmedicine@med.mun.ca>, DeanNurse <DeanNurse@mun.ca>, "pharminfo@mun.ca" <pharminfo@mun.ca>, "miugconsultations@mi.mun.ca" <miugconsultations@mi.mun.ca>

Reply all | Delete Junk | •••

Subject: Consultation on Special Topic Course for Biochemistry

Good Afternoon,

Please find attached a proposal for a Special Topics course in Biochemistry (Bioc 4242 - Field Studies in Food and Nutrition). We hope to offer the course in Spring 2020. This is the first offering of this special topics course. We would appreciate receiving feedback on the proposal by Sept 27th. Comments should be sent to biocDHundergrad@mun.ca

Thank you very much.

.....
Janet Brunton

Professor and Deputy Head (Undergraduate)

Department of Biochemistry

Memorial University of Newfoundland

St. John's, NL A1B 3X9

709 864-8533

Department of Computer Science - Graduate Programs (MSc and PhD)
Proposed Calendar Changes for 2020-2021 University Calendar
Updated October 17, 2019

27.10 Computer Science
27.10.4 Courses

Add Entry:
6980-6998 Special Topics in Computer Science

36.7 Computer Science
36.7.2 Courses

Add Entry:
6980-6998 Special Topics in Computer Science

Rationale: The current range listed for special topics courses has used all the course numbers. The new entry, **6980-6998 Special Topics in Computer Science**, will allow for new courses to be offered in our Graduate Programs.

Approved at Computer Science Departmental Meeting - October 2, 2019

MEMORIAL UNIVERSITY

Department of Psychology

Memorial University of Newfoundland
Science Building Room 2065
St. John's, NL Canada A1B 3X9
Tel: 709 864 8496 Fax: 709 864 2430
psych@mun.ca www.mun.ca

Date: October 30, 2019

TO: School of Graduate Studies

FR: Department of Psychology

RE: Proposed Calendar Changes to Increase Graduate Statistics Training in the Department of Psychology

---

Rationale

The aim of this proposal is to increase and improve the statistical training for our M.Sc. and Ph.D. students (and potentially other students as well), as we believe that our students need this extra training. One of the main reasons for this is a changing research landscape that is demanding more advanced statistical techniques. Students are going to need this extra expertise in the near future. The other main reason is how our department compares to others in Canada in terms of our graduate students' statistical preparation. Counsel, Cribbie, and Harlow (2016) report that, in Psychology graduate programs across Canada, most programs require 2 statistics courses at the graduate level, while we only require one. Most programs also offer more courses than what are required, for those students who want to have additional training. However, while there are 5 other programs that, like ours, require only one graduate statistics course, ours is the only program that only offers one graduate statistics course. Anecdotally, we seem to have a good reputation for our undergraduate statistical training, so it is unfortunate that we seem to currently place last in our graduate statistical training. The proposal detailed below is meant to remedy this.

The Proposal

Additional Graduate Statistics Course

The change that we propose is the requirement of an extra statistics course addition to the current required statistics course, PSYC 6000. This would be required for all M.Sc. students except for those in the Behavioural Neuroscience area. Ph.D. students would also be required to take this course if they have not had equivalent training in their previous coursework.

There are two ways that students could meet this requirement:

1. "Taster" Course Option

To meet this demand, we would offer an extra statistics course, PSYC 6002, that would be taken after PSYC 6000, our current graduate statistics course. Instead of focusing on a specific topic, this course would cover four advanced topics that we feel will nicely round out statistical expertise and prepare students for many other advanced topics. These four topics are: 1) Latent variable modelling (i.e., factor analysis and structural equation modelling); 2) Linear mixed modelling; 3) Meta-analysis; and 4) Bayesian analyses.

Each of these techniques could warrant a course in and of themselves. As such, we think of this as a "taster" course that would provide enough material on each topic to cover most of the basic uses while giving the students enough background that they could learn some of the more complicated uses if their research required it. The idea is that PSYC 6000 would be taught in the Fall and this course, PSYC 6002, would be taught every Winter.

2. Directed Studies Graduate Statistics Option

Students would also have the option of taking on a statistics project with a faculty member in the department. This course could be used as the advanced statistical requirement for students over and above PSYC 6000 (i.e., instead of the proposed taster course above), but it could also be used for students who already have the proposed advanced course and want to gain further statistical expertise. Akin to the Directed Studies course we offer to our undergraduates, the idea behind this course is that students could gain additional expertise in a particular advanced topic by doing a project with a supervisor. A prototypical example of this is a student who undertook an analysis of a large database where advanced techniques were required and they learned these techniques (and did the analysis) under the supervision of a faculty member. Eligible projects would be expected to focus on the acquisition of a sophisticated quantitative technique (e.g., data mining, meta-analysis) not already covered at length in earlier, required coursework (other than new "taster" course; e.g., multiple regression would be ineligible unless it involved a novel component such as multilevel modelling) and for which the supervising faculty member bears personal expertise. Interested students would be expected to possess independent knowledge of that technique upon completion of the course commensurate with credits hours allocated to its practice.

Although we recognize that this option may appeal to many students and faculty members as a means of acquiring a particular technique intended for inclusion in a thesis or dissertation, it is important to note that the resultant work must itself be distinct from chapters reported therein. Put differently, this course is not intended to provide credit to a student for working on their thesis. Instead, students interested in acquiring such skills should either focus their directed studies on the quantitative theory underlying that chosen topic (for a more theoretical approach) or use a different data set to demonstrate their abilities (for a more applied approach). As with directed studies projects at the undergraduate level, a document – in this case explaining and reporting the analysis undertaken for the course – is required as the end product.

Faculty agreeing to supervise such a project would receive course equivalency the same as someone who supervises an undergraduate directed studies project. Any project and supervisor would have to be approved by the Head. There are two course numbers reserved for this course in case a student wants to do a second directed studies project using a different statistical topic.

The expectation is that this option would be relatively rare, and that most students would satisfy the additional statistics requirement by taking PSYC 6002.

Calendar changes

The proposed calendar changes to implement this change in our graduate statistical training are below, where additions are indicated in underline and deletions are indicated in strikethrough. The main requirements are to the M.Sc. program, but the course list for the Ph.D. program has also been changed to reflect the new courses being offered.

27.20 Psychology

- www.mun.ca/sgs/contacts/sgscontacts.php
- www.mun.ca/science
- www.mun.ca/psychology

The Degree of Master of Science is offered in Experimental Psychology. The Degree of Doctor of Philosophy is offered in Experimental Psychology. Interested students may wish to consult the sections in the Calendar describing the **Master of Applied Psychological Science (Co-operative)** and the Master of Science and Doctor of Philosophy in Cognitive and Behavioural Ecology programs.

27.20.1 Program of Study

A student may be accepted into a program leading to the M.Sc. in Experimental Psychology.

Experimental Psychology

1. The areas of specialization offered are: Animal Behaviour (see **Cognitive and Behavioural Ecology Program**), Behavioural Neuroscience and Clinical, Cognitive, Developmental and Social Psychology.
2. Students in the Behavioural Neuroscience area shall normally complete 12 credit hours, including: Advanced Statistics in Psychology (6000), Research Design (6001), and 6 credit hours related to their area of specialization. Students will also register for the Colloquium Series in Psychology (6010) each Fall and Winter semester of their program for a maximum of four registrations.

~~2.~~ 3. Students in all other areas shall normally complete 15 credit hours, including: Advanced Statistics in Psychology (6000), Research Design (6001), an additional 3 credit hours of Advanced Statistics Courses (either PSYC 6002, PSYC 6003, or PSYC 6004), and 6 credit hours related to their area of specialization. Students will also register for the Colloquium Series in Psychology (6010) each Fall and Winter semester of their program for a maximum of four registrations.

~~3.~~ 4. Every student shall submit an original thesis based upon an approved experimental research topic.

27.20.2 Courses

A selection of the following graduate courses will be offered to meet the requirements of students, as far as the resources of the Department will allow.

- 6000 Advanced Statistics in Psychology

- 6001 Research Design
- 6002 Advanced Statistics in Psychology II
- 6003/6004 Directed Studies in Advanced Statistics
- 6010 Colloquium Series in Psychology (repeatable, non-credit)
- 6100-6130 Special Topics in Experimental Psychology
- 6200 Learning I
- 6201 Learning II
- 6203 Behavioural Pharmacology
- 6210 Behavioural Analysis of Toxins
- 6351 Behavioural Ecology and Sociobiology *(cross-listed as CABE 6351)*
- 6400 Theory and Methods in Social Psychology
- 6401 Social Cognition
- 6402 Group Processes
- 6403 Program Evaluation and Applied Research
- 6404 Project in Applied Psychological Science *(Note: This course is open only to students in the Master of Applied Psychological Science)*
- 6500 Developmental Psychology I
- 6501 Developmental Psychology II
- 6502 Developmental Changes During Old Age
- 6700 Perception
- 6710 Human Information Processing
- 6720 Human Memory
- 6800 Behavioural Neuroscience I
- 6801 Behavioural Neuroscience II
- 6810 Psychometrics
- 6910 Personality
- 699A/B Core Graduate Seminar in Psychology

36.32.3 Courses

A selection of the following graduate courses will be offered to meet the requirements of students, as far as the resources of the Department will allow.

- 6000 Advanced Statistics in Psychology
- 6001 Research Design
- 6002 Advanced Statistics in Psychology II
- 6003/6004 Directed Studies in Advanced Statistics
- 6100-6130 Special Topics in Experimental Psychology
- 6200 Learning I
- 6201 Learning II
- 6203 Behavioural Pharmacology
- 6210 Behavioural Analysis of Toxins
- 6351 Behavioural Ecology and Sociobiology *(cross-listed as CABE 6351)*
- 6400 Theory and Methods in Social Psychology
- 6401 Social Cognition
- 6402 Group Processes
- 6403 Program Evaluation and Applied Research
- 6404 Project in Applied Psychological Science *(This course is open only to students in the Master of Applied Psychological Science)*
- 6500 Developmental Psychology I

- 6501 Developmental Psychology II
- 6502 Developmental Changes During Old Age
- 6700 Perception
- 6710 Human Information Processing
- 6720 Human Memory
- 6800 Behavioural Neuroscience I
- 6801 Behavioural Neuroscience II
- 6810 Psychometrics
- 6910 Personality
- 6990 Doctoral Seminar I
- 6991 Doctoral Seminar II
- 6992 Doctoral Seminar in Cognitive and Behavioural Ecology (cross-listed as CABE 6992)
- 699A/B Core Graduate Seminar in Psychology

MEMORIAL UNIVERSITY

Department of Psychology

Memorial University of Newfoundland
Science Building Room 2065
St. John's, NL Canada A1B 3X9
Tel: 709 864 8496 Fax: 709 864 2430
psych@mun.ca www.mun.ca

Date: October 30, 2019

TO: School of Graduate Studies

FR: Department of Psychology

RE: Proposed Calendar Changes to Alter the Voting Members of the Comprehensive Exam for the Ph.D. in Experimental Psychology

---

Our department proposes to change the voting members for the comprehensive exam of the Ph.D. in Experimental Psychology program. As the regulations currently stand, an examination committee for a comprehensive exam for all Ph.D. programs consists of the Supervisor, a Chair (representative of the Head), and at least three other members such that there are an odd number of voting members. There is also a representative from the Dean of Graduate studies on the committee, but they are a non-voting member while all the other members (including the Supervisor and the Chair) are voting members of the examination committee.

As a department, we would like to amend the voting rules for our program such the Supervisor and the Chair are non-voting members of the examination committee. As there is no standard comprehensive exam at Memorial, each unit determines the format that best suits its discipline. In Psychology, the focus is on demonstrating understanding of one of the particular areas within psychology by providing an expansive literature review related to the topic of their thesis. For example, a student in cognition might focus on models of semantic memory, a student in social psychology might focus on police interrogation techniques, a student in developmental psychology might focus on the relation between violent video game use and aggression in children, a student in Health and Wellness might focus on the connection between eating disorders and emotion regulation, and a student in behavioural neuroscience might focus on hippocampal spatial mapping. Because of the disparate areas encompassed within psychology, and because the comprehensive exam focuses on demonstrating mastery of a particular sub area, we find that the Chair often does not have the expertise to judge the content of the comp. The practice in our department has been for the Graduate Officer to be the Chair for comprehensive examinations, but that person cannot be expected to be knowledgeable enough in all areas of Psychology to be able to vote on all of our Ph.D. comprehensive exams. Changing the Chair would not solve the problem: Given the size of our areas (i.e., approximately 4 to 5 faculty in each area), it is frequently not possible to find a faculty member sufficiently knowledgeable who is not already serving on the comprehensive exam committee.

Once we remove the Chair as a voting member, we are left with an even number of committee members. To make the number of voting members to be an odd number, we propose to also make the Supervisor a non-voting member. This would parallel the existing regulations for Ph.D. defenses, where the Supervisor does not have a vote and where there are just 3 examiners. Furthermore, we feel that any student who should pass their comprehensive exam should be able to convince at least 2 of the 3 people who are not their supervisor, but are knowledgeable in their area, that they should do so.

In short, for our department, we feel that restricting the voting members to the three committee members who are neither the Supervisor nor the Chair will provide a reliable assessment of the candidate: It will ensure appropriate

expertise of the examiners (given the nature of our comprehensive examination), it will retain an odd number of voters to avoid ambiguous outcomes, and it will parallel the Ph.D. defence by requiring the candidate to convince 3 independent people of their knowledge and ability.

In making this change, we are mindful that we are reducing the number of people who decide whether a Ph.D. student should be allowed to continue in his or her program. Consulting broadly in our department, we feel that three voting members is a sufficient number to make this decision, especially as they are the group who both have the expertise and are at more arms-length from the candidate. To put this in another way, we are comfortable that any student who cannot convince more than one of these knowledgeable members of the committee that they should pass should in fact fail.

The proposed calendar changes to implement this voting membership alteration are below, where additions are indicated in underline and deletions are indicated in strikethrough. In consultation with the Dean of Graduate Studies, we have implemented the proposed change by stipulating the default voting members in the general regulations for the Ph.D. comprehensive exam (as they currently are), but then allowing for departmental regulations to specify different voting member rules. We then propose to add a regulation to the calendar entry for the Ph.D. Experimental Psychology that specifies the voting member change that we propose.

4.8.2 Ph.D. and Psy.D. Comprehensive Examination

1. The candidate shall submit to a comprehensive examination, which may be written or oral or both as determined by the academic unit. Candidates shall normally take the examination no later than the end of the seventh semester in the doctoral program. Unless an extension is approved by the Dean of Graduate Studies, failure to take the examination at this time will result in the termination of the candidate's program.
2. This examination, whether written or oral, shall be conducted by a Committee appointed by the Dean of Graduate Studies on the recommendation of the academic unit. It shall consist of the Head of the academic unit (or delegate) who shall be the Chairperson, the candidate's Supervisor [or, where a Supervisor has not yet been appointed, the Graduate Officer or Chair of the Graduate Studies (or equivalent) Committee], the Dean of Graduate Studies (or delegate), and at least three other members, the total voting members to be an odd number. For candidates in the Ph.D. program, voting members of the committee may be specified by Departmental Regulations. In the absence of any such regulations, all members of the Committee including the Chairperson, but excluding the Dean of Graduate Studies, shall be voting members. For candidates in the Psy.D. program, the voting members of the committee shall be clinical psychologists, but will not include Chairperson, the Supervisor, or the Dean of Graduate Studies.

…

34.32 Psychology

- www.mun.ca/sgs/contacts/sgscontacts.php
- www.mun.ca/science
- www.mun.ca/psychology

The Degree of Master of Science (M.Sc.) is offered in Experimental Psychology. Interested students should also see the **Master of Science in Cognitive and Behavioural Ecology**. The Degree of Doctor of Philosophy is offered in Experimental Psychology. Interested students may wish to consult the section in the Calendar describing the **Doctor of Philosophy in Cognitive and Behavioural Ecology program**.

34.32.1 Admission

1. All applicants are required to submit results from the General section of the Graduate Record Examinations.
2. At least one letter of reference should come from someone who is familiar with the applicant's research capability.

34.32.2 Program of Study

1. An applicant must hold either a Master's Degree or an Honours Bachelor's Degree with first class standing to be considered for admission. The program of study will be specified at the time of admission. Decisions on (a) whether to include courses in the program, and if so, (b) which specific courses are to be included will be based on the student's background and the proposed thesis topic.
2. **Comprehensive Examination**
   The Ph.D. comprehensive in Experimental Psychology shall be taken during the first year of the student's program. The examination will consist of two parts. Part 1 consists of a broad review of the literature that normally pertains to the topic of the thesis area. The literature review should incorporate theoretical, methodological, and empirical findings. Part 2 consists of an oral defence of the literature review. The comprehensive exam aims to ensure that the student is knowledgeable about the range of theories, methodologies, and empirical findings that are fundamental to the chosen field of study. The examination committee for the comprehensive exam will be created according to section 4.8.2 of the calendar, except that the Supervisor and the Chairperson of the examination committee will not be voting members.

MEMORIAL UNIVERSITY

School of Graduate Studies

Request for Approval of a Graduate Course

Adobe Reader, minimum version 8, is required to complete this form. Download the latest version: http://get.adobe.com/reader. (1) Save the form by clicking on the diskette icon on the upper left side of the screen; (2) Ensure that you are saving the file in PDF format; (3) Specify where you would like to save the file, e.g. Desktop; (4) Fill in the required data and save the file; (5) Submit the completed form to:

School of Graduate Studies; Memorial University of Newfoundland; IIC-2012 (Bruneau Centre for Research and Innovation); St. John's, NL A1C 5S7 Canada Fax: 709.864.4702 eMail: sgs@mun.ca

To: Dean, School of Graduate Studies
From: Faculty/School/Department/Program
Subject: ☐ Regular Course ☑ Special/Selected Topics Course

Course No.: 6346

Course Title: Pursuit-Evasion Problems

I. To be completed for all requests:

A. Course Type:
☑ Lecture course
☐ Laboratory course
☐ Directed readings
☐ Lecture course with laboratory
☐ Undergraduate course[1]
☐ Other (please specify)

B. Can this course be offered by existing faculty? ☑ Yes ☐ No

C. Will this course require new funding (including payment of instructor, labs, equipment, etc.)? If yes, please specify: ☐ Yes ☑ No

D. Will additional library resources be required (if yes, please contact munul@mun.ca for a resource consultation)? ☐ Yes ☑ No

E. Credit hours for this course: 3

F. Course description (reading list required):

This course is designed to study pursuit-evasion problems in graphs, particularly the cops and robber model of Winkler and Nowakowski. We will consider characteriztions, bounds, algorithms, and variations. Text: The Game of Cops and Robbers on Graphs, Bonato and Nowakowski.

G. Method of evaluation:

	Percentage	
	Written	Oral
Class tests	20	
Assignments	20	
Other (specify):		20
Final examination:	40	
Total	100	

[1] Must specify the additional work at the graduate level

II. To be completed for special/selected topics course requests only

For special/selected topics courses, there is no evidence of:

		Instructor's initials
1.	duplication of thesis work	DD
2.	double credit	DD
3.	work that is a faculty research product	DD
4.	overlap with existing courses	DD

Recommended for offering in the Fall (Winter) Spring 20 19

Length of session if less than a semester:

III. This course proposal has been prepared in accordance with General Regulations governing the School of Graduate Studies

[signature] — November 5, 2019

Course instructor — Date

[signature] — Nov 6, 2019

Approval of the head of the academic unit — Date

IV. This course proposal was approved by the Faculty/School/Council

Secretary, Faculty/School/Council — Date

COURSE DESCRIPTION
MATH 6346 - Pursuit-Evasion Problems

1 Rationale

This course is designed for those students who have completed a graduate course in a combinatorial subject such graph theory, combinatorial designs, or enumeration (MATH 6340, 6341, or 6342), or who have sufficient undergraduate background in graph theory, and who wish to study pursuit-evasion problems such as the "cop and robber" model of Winkler and Nowakowski.

This course will introduce the concepts of the cop and robber model; characterize those graphs that are k-cop-win; examine Meyniel's conjecture, and families of graphs for which Meyniel's conjecture are met; consider the cop-number of various graph products; study the algorithmic aspects of this model; consider the problem on infinite graphs; and examine recent variants, such as tandem, zero-, and limited-visibility cops and robber models.

2 Resource Implications

This course will use currently available teaching resources and will be taught by a faculty member appointed to the Department of Mathematics and Statistics.

3 Library Holdings and/or Other Resources required

1. Anthony Bonato, Pawel Pralat, *Graph searching games and probabilistic methods*, Taylor & Francis Group 2018.
2. P.M. Pardalos, D.-Z. Du, R.L. Graham, (eds) *Handbook of Combinatorial Optimization*, Springer, 2013.

4 Typical Evaluation

1. 4 Assignments: 20%
2. Oral Presentation: 20%
3. Midterm: 20%
4. Final exam: 40%

5 Text

Anthony Bonato, Richard Nowakowski, *The game of cops and robbers on graphs*, American Mathematical Society, 2011.

6 Course Outline

Roughly, the course will involve reading chapters 1-5, parts of chapters 6 and 7; and chapters 8-9 of the Bonato-Nowakowski book *The game of cops and robbers on graphs*. Below is a sample schedule.

Week 1	Chapter 1: Introduction §1.1-§1.5.
Week 2	Chapter 2: Characterizations: §2.1-§2.3.
Week 3	Chapter 3: Meyniel's Conjecture: §3.1-§3.4
Week 4	Chapter 4: Graph Products and Classes: §4.1-§4.3
Week 5	Chapter 4: Graph Products and Classes: §4.4-§4.6
Week 6	Chapter 5: Algorithms: §5.1-§5.2
Week 7	Chapter 5: Algorithms: §5.3-§5.4
Week 8	Chapter 6: Random Graphs: §6.1 - §6.2
Week 9	Chapter 7: Infinite Graphs: §7.1 - §7.2
Week 10	Chapter 8: Variants of Cops and Robbers: §8.1-§8.6
Week 11	Chapter 9: Good Guys Versus Bad Guys §9.1-§9.7
Week 12	Student Presentations

7 Prerequisites

One of MATH 6340, 6341, or 6342, or permission of the instructor.