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, December 11, 2013, at 1 p.m. in C-2045.

AGENDA

1. Regrets

2. Adoption of the Minutes of November 20, 2013

3. Business Arising from the Minutes

4. Correspondence: None

5. Reports of Standing Committees:
   A. Undergraduate Studies Committees:
      c. Department of Chemistry, calendar changes, paper 5.A.c (8 pages).
      e. Department of Earth Sciences, calendar changes, paper 5.A.e (9 pages).
      f. Department of Biochemistry, proposal for new course, BIOC 4230, Lipid and Lipoprotein Metabolism, paper 5.A.f (7 pages).
      g. Department of Biochemistry, calendar changes, paper 5.A.g (11 pages).
      h. Department of Ocean Sciences, calendar changes, request to cross-list Biology courses, paper 5.A.h (6 pages).
      i. Department of Ocean Sciences, calendar changes, request to cross-list Physics course, paper 5.A.i (7 pages).
      j. Department of Physics and Physical Oceanography, calendar changes, paper 5.A.j (6 pages).
      k. Response to Senate Committee on Undergraduate Studies, proposed changes to general regulations 5.6 and 5.7, paper 5.A.k (8 pages).
B. Graduate Studies Committee:
   a. Department of Psychology, calendar changes to PsyD Program, paper 5.B.a (5 pages).
   b. Department of Biochemistry, proposal for new course, BIOC 6000, Lipid and Lipoprotein Metabolism, paper 5.B.b (6 pages).

C. Nominating Committee: None

D. Library Committee: None

6. Reports of Delegates from Other Councils

7. Report of the Dean

8. Question Period

9. Adjournment

[Signature]
Mark Abrahams
Dean of Science
FACULTY OF SCIENCE
FACULTY COUNCIL OF SCIENCE
MINUTES OF MEETING OF NOVEMBER 20, 2013

A meeting of the Faculty Council of the Faculty of Science was held on Wednesday, November 20, 2013, at 1:00 p.m. in room C-2045.

FSC 2213 Present
Biology
Mulligan, M.

Biology
Leroux, S. Marino, P.

Chemistry
Pickup, P.

Computer Science
Batten, D. Fiech, A. Gong, M.

Mathematics & Statistics
Loredo-Osti, J.C. Sullivan, S.

Ocean Sciences
Fletcher, G.

Physics & Physical Oceanography
de Young, B. Poduska, K.

Psychology
Martin, G.

Dean of Science
Abrahams, M. Foss, K. Foster, A. Rideout, J. Zedel, L.

Geography
Simms, E.

Education
Vaandering, D.
Arts
Bishop, N.

School of Music
Cook, N.

Faculty of Business
Stapleton, D.

Graduate Students
Adeniyi, Balogun

Undergraduate Students
Kennedy, Sean

FSC 2214 Regrets
Nathan Cook

FSC 2215 Adoption of Minutes
There was one amendment to the October 16 minutes. At the October 16 meeting of Faculty Council, it was asked that academic units not submit electronic versions of calendar changes directly to the Registrar’s Office but rather to the Dean’s office for onward submission to the Registrar’s Office. In fact, the directive was to be that if changes were approved at Faculty Council, units must ensure the changes are included in their electronic submission as well. Moved: Minutes of the October 16 meeting be adopted as amended. (Pickup/Mulligan). Carried.

FSC 2216 Business Arising: None

FSC 2217 Correspondence
A. Secretary, Senate Committee on Undergraduate Studies has provided two memos regarding the process for considering calendar changes.
B. Notification was received of a representative to Faculty of Science Faculty Council, Nathan Cook from the School of Music.

FSC 2218 Reports of Standing Committees:
A. Undergraduate Studies Committee:
   Report presented by Shannon Sullivan, Chair, Undergraduate Studies Committee.
   b. Moved: Department of Computer Science, proposal for new course, COMP 4750, Introduction to Natural Language Processing (Sullivan/Batten). Carried.
c. **Moved:** Department of Computer Science, calendar changes, to be treated as an omnibus package (Sullivan/Batten). **Carried.** 
**Moved:** Department of Computer Science, calendar changes (Sullivan/Batten). **Carried.** **One abstention.** Concerning a new attendance requirement in COMP 4770, there was discussion about whether students could be deregistered for a course for not attending. It was concluded that this language was consistent with that of other courses.

d. **Moved:** Department of Earth Sciences, proposal for new course, EASC 3700, Geomorphology (Sullivan/Marino). **Carried.**

e. **Moved:** Department of Earth Sciences, proposal for new course, EASC 4703, Environmental Change and Quaternary Geography (Sullivan/Marino). **Carried.**

f. **Moved:** Department of Earth Sciences, calendar changes, to be treated as an omnibus package (Sullivan/Marino). **Carried.** 
**Moved:** Department of Earth Sciences, calendar changes (Sullivan/Marino). **Carried.**

g. Department of Mathematics and Statistics, calendar changes, item deferred to the December meeting of Faculty Council.

B. **Graduate Studies Committee:**
Report presented by J.C. Loredo-Osti, Chair, Graduate Studies Committee

a. **Moved:** Computational Science, calendar changes, (Loredo-Osti/Mershrod). **Carried.**

b. **Moved:** Department of Psychology, proposal for new courses, PSYC 6623, Child Psychopathology, Assessment and Diagnosis, and PSYC 7022, Practicum in Child Assessment and Diagnosis (Loredo-Osti/Martin). **Carried.**

c. Department of Chemistry, proposal for new course, COMP 6500, Advanced NMR Spectroscopy, item deferred to the December meeting of Faculty Council.

C. **Nominating Committee:** None

D. **Library Committee:** None

**FSC 2219**  
**Reports of Delegates from Other Councils**

It was noted that a Faculty of Science Faculty Council representative was not present at the last Faculty of Arts Faculty Council meeting to present the calendar changes being requested by the Department of Computer Science.
FSC 2220  Report of the Dean:
Presented by Mark Abrahams, Dean.

The Dean will be devoting a large amount of time in the coming weeks as part of the team that will select the firm to do the architectural and engineering design work for the new science building. Bids on this tender close on Friday of this week and the selection process will begin next week.

The Provost has been very concerned about the number of undeclared undergraduate students and is proposing that we permit direct entry of first year students directly into the Faculty of Science, rather than requiring they make that decision after they enroll. The Dean has consulted with the Department Heads who were of the opinion that the Faculty of Science would support such an initiative.

The university has agreed to be a partner with the Conference Board of Canada's Centre for Skills and Post-Secondary Education. The purpose of this centre is to "... address the advanced skill and education challenges facing Canada today". If you want to learn more or become engaged in the process, you can download the draft report from the Conference Board website (www.conferenceboard.ca).

On a related note, the Faculty of Science and the Marine Institute signed an MOU with the Oceans Learning Partnership at Holy Spirit High School, the purpose being to promote careers associated with marine research to students in grades K - 12.

FSC 2221  Question Period:  None

FSC 2222  CEQ Participation
Presented by Paul Chancey, Director, CIAP

The CEQ is now presented in an electronic format and it appears that more meaningful information is being gathered. However, participation rates are down and course instructors are being asked to promote completion of the forms. There was discussion about evidence of bias due to the decreased numbers of questionnaires completed but it seems there is no statistical difference between the paper and on-line methods. There was also discussion about possible methods for increasing participation rates. The slides presented are attached.

FSC 2223  Adjournment:
The meeting adjourned at 1:55 p.m.
On-line CEQ at Memorial

Faculty of Science
November 20th, 2013
- Series of pilot semesters.
- Winter 2013 after a review by the SCC and a 
  Evaluation was moved to on-line version in
- APR is responsible for implementation.
- Committee on Course Evaluation.
- Process and Policy is guided by the Senate.
- Course evaluation instrument for Memorial.
- CEQ was first implemented in 2001 as standard.

Background
In time, the new system will allow CIAP to get results back to faculty more quickly.

Regarding comments:

- It ensures anonymity of students, particularly in the day a paper based form is administered.
- All students have an equal opportunity to respond, not just the students who are in class on the day.
- Students can complete the CEO at their convenience and provide more thoughtful feedback.

The Benefits of On-Line CEOs
Winter 2013 (full implementation): 33%
Fall 2012 (open pilot): 29%
Winter 2012 (select units pilot): 28%

Rates
Short-coming: Lower Response
enhanced with the online system.
and quality of student-provided comments are
Preliminary information suggests that quantity
Generated by on-line and paper-based CEQs.
There are no appreciable differences in the scores
Improve over time.
Implemented similar systems show that the rates
Information from other institutions who have
Lower response rates were anticipated.

However...
<table>
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<td>55</td>
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<tr>
<td>33.4%</td>
<td>781</td>
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St. John's (Winter 2013)
Response Rates by Course Level
Awareness campaigns... a work in progress.

@mun.ca accounts

Invitation email with two follow-up re-reminders to students

Messaging through student unions

Messaging on media screens

Messaging on Twitter and Facebook

News item on main page of D2L

Linking to CEO web page

Banner on main MUN web page targeted to students and the online CEO to students

Promotional video (with the support of DELTS) to promote

Response rates?

What is being done to try and address
hear about Learn what has worked for you.
If you have had a good level of success with online response rates, we would really like to
of course.

Put a message up in the D2L shell for your
Tell your students about the CEA by

Your Help is Critical
Thank you
Proposal
Calendar Changes to Existing Courses:
Statistics 4530 and Statistics 4590

Executive Summary

At its meeting of February 12th, 2013, Senate approved a substantial overhaul of courses and programs in Statistics. We propose to amend the prerequisites for Statistics 4530 and Statistics 4590 in order to rectify two omissions from that motion.

Resource Implications: Instructional Costs

None.

Consultations

Forthcoming

Library Holdings and/or Other Resources Required

Forthcoming

The costs, if any, associated with this change/these changes can be met from within the existing budget allocation or authorized new funding for the Faculty of Science.

Signature of Unit Head (if appropriate):

Date:

Signature of Dean/Associate Vice-President (Academic)/Vice-President:

Date:
SUMMARY PAGE FOR SENATE
Approval Form

Course Number and Title

Statistics 4530: Survey Sampling
Statistics 4590: Statistical Analysis of Data I

Abbreviated Course Title

Survey Sampling
Statistical Anlys Data I

Calendar Change(s)

Under the Faculty of Science, page 495, 2013-2014 Calendar, 9.8.4 (Statistics Courses), amend the prerequisite for Statistics 4530 to read:

"4530 Survey Sampling covers basic concepts, simple random sampling, unequal probability sampling and the Horvitz-Thompson principle, sufficiency, design and modelling in sampling, ratio and regression estimators, stratified and cluster sampling, methods for elusive and/or hard- to-detect populations.

PR: STAT 3411 Mathematics 2000 and the former STAT 3530"

Under the Faculty of Science, page 496, 2013-2014 Calendar, 9.8.4 (Statistics Courses), amend the prerequisite for Statistics 4530 to read:

"4590 Statistical Analysis of Data I examines the statistical analysis of real life univariate data using computational and statistical methods including descriptive statistics, chi-square tests, non-parametric tests, analysis of variance, linear, logistic and log-linear regressions. Other statistical techniques such as integrated autoregressive moving average modelling and forecasting or quality control methods may be introduced depending on the nature of the data.

LH: one 90 minute lab per week
PR: one of STAT 3520, 3521 or 3540 3441, 3520, or 3524"

Secondary Calendar Changes

None.

Rationale

These prerequisite changes were inadvertently omitted from the overhaul of Statistics programs and courses approved by Senate at its February 2013 meeting. In the case of Statistics 4530, its original prerequisites (Statistics 3530 and Mathematics 2000) have been deleted. The relevant Statistics
material has moved to Statistics 3411 (Statistical Inference I), while the revised content of the course no longer requires Mathematics 2000. In the case of Statistics 4590, the necessary preparatory material is no longer found in Statistics 3411; instead, Statistics 3540 (Time Series I) is now an appropriate alternative prerequisite alongside Statistics 3520 (Experimental Design I) and Statistics 3521 (Regression).

Consultations Sought From

1. Grenfell Campus
2. Marine Institute
3. Faculty of Arts

Comments Received

No
Yes
Yes

Library Report Received

Yes

Signature:  Dean, Associate Vice-President (Academic) or Vice-President

Name

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FOR OFFICE USE ONLY

APPROVAL GRANTED BY SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Chair:

Secretary:

Date:
Hi Dianne,

Attached are proposals to amend the prerequisites for Statistics 4530 and 4590.

I am forwarding them to you for your comments on the availability of appropriate Library resources to support these proposals.

Thanks,
Shannon

--
Dr. Shannon Patrick Sullivan  
Dept. of Mathematics & Statistics  
Senior Faculty Advisor, Faculty of Science  
Memorial University of Newfoundland  
St. John's · NL · Canada  
shannon@mun.ca · www.uw.mun.ca/~shannon

Statistics 4530 and 4590.pdf

Content-Type: application/
Content-Encoding: base64
29 October 2013

TO: Dr. Shannon Patrick Sullivan, Department of Mathematics & Statistics

FROM: Dianne Taylor-Harding, Collections Development Librarian, Mathematics & Statistics

SUBJECT: Library Resources Review –

Proposed Calendar Changes for STAT4530 Survey Sampling and STAT4590 Statistical Analysis of Data

The Department of Mathematics and Statistics has proposed calendar changes for courses STAT4530 Survey Sampling and STAT4590 Statistical Analysis of Data. The calendar descriptions will be altered to amend the prerequisites for Statistics 4530 and Statistics 4590.

The proposed changes will have no impact on collections activities in the Queen Elizabeth II Library. The Memorial University Libraries will continue to collect materials to support undergraduate, graduate and faculty research and study in Mathematics and Statistics at the University.

10/29/2013

X D. E. Taylor-Harding

Dianne E. Taylor-Harding
Collections Librarian, Mathematics & Statistics
Subject: Request for Consultation: Statistics 4530 and 4590
From: Shannon Patrick Sullivan <shannon@mun.ca>
Date: Wed, 16 Oct 2013 10:48:58 -0230
To: vpoffice@grenfell.mun.ca, miugconsultations@mi.mun.ca

Greetings,

Attached are proposals to amend the prerequisites for Statistics 4530 and 4590.

If you have any comments on these proposals, we would appreciate receiving your responses no later than Wednesday, November 13th.

Thanks,
Shannon

--
Dr. Shannon Patrick Sullivan
Dept. of Mathematics & Statistics
Senior Faculty Advisor, Faculty of Science
Memorial University of Newfoundland
St. John's · NL · Canada
shannon@mun.ca · www.mun.ca/~shannon

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Subject: Request for Consultation: Statistics 4530 and 4590
From: Shannon Patrick Sullivan <shannon@mun.ca>
Date: Wed, 16 Oct 2013 10:51:09 -0230
To: amarland@mun.ca, efoley@mun.ca

Greetings,

Attached are proposals to amend the prerequisites for Statistics 4530 and 4590.

Please circulate these proposals amongst the Faculty of Arts. We have requested that other relevant academic units respond to us with their comments no later than Wednesday, November 13th. If any such comments are received, I will forward them to you on that date so that the proposals can be considered by the Arts Undergraduate Studies Committee.

Thanks,
Shannon

--
Dr. Shannon Patrick Sullivan
Dept. of Mathematics & Statistics
Senior Faculty Advisor, Faculty of Science
Memorial University of Newfoundland
St. John's · NL · Canada
shannon@mun.ca · www.uca.mun.ca/~shannon

| Statistics 4530 and 4590.pdf | Content-Type: application/Content-Encoding: base64 |
Subject: RE: Request for Consultation: Statistics 4530 and 4590
From: MIUG Consultations <MIUGconsultations@mi.mun.ca>
Date: Thu, 24 Oct 2013 12:23:54 +0000
To: Shannon Patrick Sullivan <shannon@mun.ca>

Shannon,

Thank you for the opportunity to review the attached proposals to amend the prerequisites for Statistics 4530 and 4590. These changes have no impact on our programs here at the Marine Institute.

We are happy to support the proposed changes.

Sincerely,
Derek Howse
Chair, Undergraduate Studies Committee
Marine Institute, Memorial University
TEL: 709-778-0586
FAX: 709-778-0394
Derek.Howse@mi.mun.ca

-----Original Message-----
From: Shannon Patrick Sullivan [mailto:shannon@mun.ca]
Sent: October 16, 2013 10:49 AM
To: vpoffice@grenfell.mun.ca; MIUG Consultations
Subject: Request for Consultation: Statistics 4530 and 4590

Greetings,

Attached are proposals to amend the prerequisites for Statistics 4530 and 4590.

If you have any comments on these proposals, we would appreciate receiving your responses no later than Wednesday, November 13th.

Thanks,
Shannon

--
Dr. Shannon Patrick Sullivan
Dept. of Mathematics & Statistics
Senior Faculty Advisor, Faculty of Science Memorial University of

11/20/13 10:19
November 26, 2013

TO: All Members, Faculty Council of Science
FROM: Joan Burry, Secretary
       Committee on Undergraduate Studies, Faculty of Science
SUBJECT: Calendar Changes and New Course Proposals

At a meeting held on November 18, 2013, the Undergraduate Studies Committee of the Faculty of Science agreed that the following new course proposal and Calendar changes be forwarded to Faculty Council for approval:

1. Department of Psychology
   (i) New Course- Psychology 4980-The Psychology of Money and Financial Behaviour

2. Department of Chemistry- Calendar changes
   (i) Deletion of Biochemistry as a requirement for the Chemistry major programs
   (ii) Changes to the examination procedures for honours theses
   (iii) Changes to the Chemistry minor program

Joan Burry
Assistant Registrar and
Secretary: Committee
on Undergraduate Studies,
Faculty of Science
Proposal
New Course - Psychology 4980
The Psychology of Money and Financial Behavior

RESOURCE IMPLICATIONS:

Instructional Costs: No new costs will be incurred for either instructors or infrastructure.

Library Holdings and/or Other Resources Required

The costs, if any, associated with the new course can be met from within the existing budget allocation or authorized new funding for the Department of Psychology.

Signature of Unit Head: ________________________________
Date: ________________________________

Signature of Dean/Associate Vice-President (Academic)/Vice-President:

Date: ________________________________
Proposal – New Course
PSYC 4980 – The Psychology of Money and Financial Behaviour

Course Number and Title

Psychology 4980: The Psychology of Money and Financial Behavior

Abbreviated Course Title The Psychology of Money

Calendar Description

4980 The Psychology of Money and Financial Behavior is designed to help students understand the multitude of factors that influence decisions individuals make about money and related objects of value. These factors include the perceptions, motivations, attitudes, emotions, personality characteristics, and cognitive processes that underlie human interactions with money. The course will also explore the developmental and neurological bases of human monetary behavior as well as clinical aspects such as money related addictions, criminality, and psychopathology.
PR: PSYC 2520, 2570 and 2911, admission to a Major in Psychology or Behavioural Neuroscience, and any two 3000 level majors courses in Psychology

Executive Summary

This course is designed for senior Psychology and Behavioural Neuroscience majors. It provides students the opportunity to explore the relations people have with money from a multidisciplinary perspective. Assigned readings, a project, and a term paper are designed to help students understand the multitude of factors that influence decisions individuals make about money. Readings cover neural, motivational, social, cognitive, personality and psychopathological factors that determine these decisions.

Rationale

This course is proposed for two reasons. First, it will provide an additional 4000-level course available to our Psychology and Behavioural Neuroscience majors. The Psychology major requires four, 4000-level courses, while the Behavioural Neuroscience major requires two. Over the past few years there has been great demand and competition for such courses, especially amongst students in their final year. The addition of another 4000-level course would help meet this demand.

Second, pedagogically, the human relationship with money and money-related objects (e.g., investment instruments, consumer possessions, real estate) is an important and understudied area within modern day psychology. This is surprising given the central role that money plays in determining much of our behavior. For many people, the acquisition, investment, or the disposal (spending, giving) of money is the prime motivator of much daily behavior and is associated with a host of human emotions, decision making processes, personality characteristics and behavioral attributes such as power, status, achievement, and self-esteem. It is also a central aspect of some forms of human psychopathology such as money-addictions (hoarding, spending), criminality, and excessive gambling. The proposed course would be broad-based as it would look at the role that money plays within almost every sub-area of present day psychology (social, perception, cognition, learning/motivation, neuroscience, clinical, developmental).
Proposal – New Course
PSYC 4980 – The Psychology of Money and Financial Behaviour

Courses which explore related important determinants of human behavior (sex, drugs) exist both here and at other universities, but monetary and financial behavior has received little attention. Although there is now sufficient literature, currently there are no North American universities that offer such a course. Therefore, this suggested offering on money and behavior is proposed as a senior 4000 level course for students with a variety of psychology backgrounds.

Consultations

An earlier version of this proposal was sent to some relevant academic units for consultation in 2010/2011. Various delays prevented us from completing the approval process then, so we are recirculating this revised proposal more widely now.

In 2010/2011 we consulted with the Depts. of Economics and Faculty of Business, St. John’s Campus and with the Depts. of Psychology, Business and Economics, Grenfell College, Corner Brook. Only the Dept of Economics, St. John’s, provided a response with concerns about some overlap between the proposed course and Economics 2020 and 3150. My response to them is outline below

“RESPONSE: Response to the Dept of Economics, Memorial University, re: proposed course Psychology 45$0, The Psychology of Money and Financial Behavior”, Dr Russell Adams.

Thank you for your thoughtful comments on this proposal. First I would hope to allay some of what I believe to be your general concerns by reiterating that although this course deals with money, the focus is on the behavioral or psychological side of the topic. It was never the intent of the course to discuss at any length any of the issues of finance, investment strategies, or economics that usually fall under the purview of courses in business or economics. Rather, it is a course that focuses on the parallel (but slightly overlapping) topic of the human relationship with money and all of the diverse areas of psychology (social psychology, cognitive psychology, clinical psychology, neuroscience) that impinge on this issue. However in light of your concerns, I have modified the course in order to reduce the overlap with current courses in economics.

1) First in light of the first comment on common content between Psychology 40$0 and Economics 2020 and 3150, I now will provide only a very general introduction to the topic in the first week with little discussion of monetary history and financial instruments as originally planned.

2) Again, although I termed it a portfolio assignment, the focus of the assignment is to assess the psychological factors (emotions, thought processes) that play a role in decision-making. It is not about learning to become a good investor for example, (although good investors intuitively know how to evaluate their own psychological make-up and the general sentiment of the investor climate). The terminology and description of the assignment has been modified as such.

3) The intention of this course is to be a general but senior undergraduate course. As such it draws on students’ general expertise from all of the sub-areas within
Proposal – New Course
PSYC 4980 – The Psychology of Money and Financial Behaviour

psychology. It is that background toward which the course is oriented and not a background in business or economics. Therefore, requiring previous courses in economics is unnecessary and would be cumbersome for many students to accommodate, as especially psychology honours students’ course selections are very restricted over the undergraduate years. Again the course is designed to be a broad-based course in psychology, this time with a focus on money and its influence on behaviour, much like other topics that one could choose to examine in a similar manner, such as drugs or sex.

Response from Economics. Approval was given. See response of May 2011 below.

From: Eugene Tsoa <tsoa@mun.ca>
Subject: Re: Consultation on new course proposal
Date: 05 May, 2011 16:56:35 NDT
To: Psychology Head <Psychology.Head@mun.ca>

Dear Ian,

While I was on sabbatical leave for winter semester, I forwarded your message to the members of the department for comments and discussion during a departmental meeting in April. I was just advised upon my return to campus early this week that the department has no problem with your proposed new course now.

Thank you.

Eugene

Quoting Psychology Head <Psychology.Head@mun.ca>:

Dear Eugene,

Attached, please find a revised proposal for the Psychology 4980 Psychology of Money and Financial Behaviour course. As you will see Dr. Adams includes a response to your queries. Our Undergraduate Studies Committee would appreciate any comments or concerns you may have with the revised proposal.

I add that the course is restricted to psychology majors only; minors and non-majors are not permitted to take these courses.

If you have any problems with the attached PDF, please let me know.

-Ian

On 2010-11-10, at 16:09, Eugene Tsoa wrote:
Proposal – New Course
PSYC 4980 – The Psychology of Money and Financial Behaviour

Dear Ian,
Thank you for sending the course proposal for Psychology 4980. I have circulated the proposal to members of the Department of Economics and received some feedbacks. Members who are involved in teaching money and banking have raised some concerns. The main points are as follows:

1. The first two weeks of the proposed course are scheduled to cover materials found in Economics 2020 and Economics 3150.

2. The proposed course requires an investment portfolio assignment which would be better done with some prior knowledge of investment or portfolio selection theory normally found in monetary and financial economics.

I understand that the proposed course is a 4000 level course and as such it is intended for psychology majors or minors who have at least done two unspecified psychology courses at 3000 level. All 4000 level psychology courses however seem to have specific prerequisites except this proposed course. We suggest perhaps a relevant prerequisite for this course is Economics 2020 or 3150. Economics majors and minors may be interested in taking such a psychology course if the course is offered at a lower level.

Eugene

Eugene Tsoa
Professor and Interim Head
Department of Economics
Memorial University of Newfoundland

Quoting Psychology Head <Psychology.Head@mun.ca>:

Dear Dr. Tsoa,

Attached, please find a proposal for a new majors-only course called "The Psychology of Money and Financial Behaviour". The Department's Undergraduate Studies Committee would appreciate receiving any comments, questions, or concerns you may have.

Thanks in advance,
-Ian
--
Eugene Tsoa

5
Proposal – New Course
PSYC 4980 – The Psychology of Money and Financial Behaviour

Professor and Interim Head
Department of Economics
Memorial University of Newfoundland
St. John's, NL
CANADA A1C 5S7
Tel: 709-737-8108
Fax: 709-737-2094
Proposal – New Course
PSYC 4980 – The Psychology of Money and Financial Behaviour

Sample Course Outline and Method of Evaluation

Psychology 4980
The Psychology of Money and Financial Behaviour

Instructor: Dr. Russell J. Adams
Office: Science 3086e  Phone: 864-8496 (leave a message)
email: michelem@mun.ca
Email me right away to get on the class communications list.

Classes: xxx  Office  Hours: xxx

Money is a critical aspect and motivator of human thought and behavior. However, the human relationship with money and money-related objects (e.g. consumer possessions, monetary investments, real estate) is an understudied area within modern day psychology. This is very surprising given the central role that money plays in determining much of our behavior. For many people, the acquisition, investment, or the disposal (spending, giving) of money is the prime motivator of much daily behavior and is associated with a host of human emotions, decision making processes, personality characteristics and behavioral attributes such as power, status, achievement, and self-esteem. It is also a central aspect of some forms of human psychopathology such as money related addictions (hoarding, spending), criminality, and excessive gambling. This multidisciplinary course will cover all aspects of human behavior (neural, motivational, social, cognitive, personality and psychopathological) that interact with the intense human desire to obtain, retain, invest, and dispose of money and related possessions.

Text: Readings and other material provided by the instructor

Evaluation:

1. Two midterm exams (15% each) in weeks 6 and 11.

2. Term paper on a student selected topic/experiment on money and psychology (25%) due in my mailbox in SN2065, end of semester. Proposal (10%) due in class, week 5.

3. Presentation of Term Paper: 10% in weeks 12 and 13.

4. Term Assignment: 25%.

The Term paper: A major aspect of the course is the student’s independent research (term paper) on a topic selected entirely by the student within the field of money
Proposal – New Course  
PSYC 4980 – The Psychology of Money and Financial Behaviour

and behaviour. The student will write a major paper on the results of that research and will present a short seminar to the class at the end of the semester. The paper can be based on either existing academic research, or the results of original empirical research (experiment, questionnaire, observation) conducted by the student over the semester. If this empirical option is chosen, students can work with a partner on the design of the project and the collection of the data. An ethics proposal approved by the Psychology Department Human Research Ethics Research Committee may be required before such empirical work is undertaken. A proposal describing the paper (worth 10% of the final grade) is also required.

The Term Assignment: At the beginning of the semester, each student will receive a simulated basket of common types of real property (cash, real estate, stocks, and other investments) and will manage and make decisions about those items over the course of the semester in response to simulated changing real-world economic, social, personal, and political events. The purpose of the assignment is not to teach about investing or investment strategies per se, thus any formal prior knowledge of investment, economics, or finance is not required. Rather, the purpose is for students to evaluate the decisions they make at each point during the semester and discuss these decisions within the broader context of the other psychology-related information (both theoretical and experimental) learned during the course (e.g. personality traits, risk tolerance, decision-making theory, emotional influences).

Tentative Course Schedule:

**Week 1**  Introduction to the Psychology of Money  
**Weeks 2-3** Money, human emotion (fear, happiness, guilt) and human motivation  
(power, self-esteem, greed)  
**Week 4** Attitudes toward money (spending, credit, debt, saving)  
**Week 5** Personality type and money habits.  
**Week 6** Money within the social context (peers, family, culture, wealth, poverty)  
**Week 7** Gender differences and money matters.  
**Week 8** Financial decision making (investing strategies, error analysis, expectations)  
**Week 9** The neuroscience of monetary behavior (psychological responses, CNS involvement)  
**Week 10** Development of money habits (age differences, formation of childhood money patterns)  
**Week 11** Psychopathological aspects of money (spending, gambling addictions, criminality, compulsions, obsessions, hoarding).  
**Week 12-13** Student presentations of term paper.

Rules and Regulations: The term paper requires a proposal that will be due on a specific date. That proposal is compulsory. There will be no make-up exams or papers in this course. Missing assignments or tests require a physician’s note. All proposals
Proposal – New Course  
PSYC 4980 – The Psychology of Money and Financial Behaviour

and assignments are due in class on the due date. Late submissions will be penalized by 10% per day, beginning immediately after the class in which the work is due (i.e. that day).

Texts

There is currently no text that covers the multidisciplinary approach of this course. Readings and original research articles from various fields within psychology will be assigned by the instructor.

Instructor(s)

Instructor: Dr Russell J Adams. There are no alternate instructors.
Proposal – New Course
PSYC 4980 – The Psychology of Money and Financial Behaviour

SUMMARY PAGE FOR SENATE
Approval Form

Course Title and Number: The Psychology of Money and Financial Behaviour - Psychology 4980

Abbreviated Course Title: The Psychology of Money

Calendar Description

4980 The Psychology of Money and Financial Behaviour is designed to help students understand the multitude of factors that influence decisions individuals make about money and other related objects of value. These factors include the perceptions, motivations, attitudes, emotions, personality characteristics, and cognitive process that underlie human interactions with money. The course will also explore the developmental and neurological bases of human monetary behavior as well as clinical aspects such as money related addictions, criminality, and psychopathology.
PR: PSYC 2520, 2570 and 2911, admission to a Major in Psychology or Behavioural Neuroscience, and any two 3000 level majors courses in Psychology

Rationale: This course explores a new emerging area within the field of psychology and is needed to help fulfill the degree requirements of 4th year psychology majors and honors student

Consultations Sought in 2010/2011 From
Dept of Economics, MUN (St. John’s)
Faculty of Business MUN (St. John’s)
Grenfell Dept of Psychology
Grenfell Dept of Economics
Grenfell Dept of Business
Library Report Received

Comments Received 2010/2011
yes, May, 2011
No
No
No
yes, Nov. 2010
Proposal – New Course
PSYC 4980 – The Psychology of Money and Financial Behaviour

Consultations Sought in 2013 From

<table>
<thead>
<tr>
<th>Faculty of Science, Department of:</th>
<th>Comments Received 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemistry</td>
<td>yes</td>
</tr>
<tr>
<td>Biology</td>
<td>yes</td>
</tr>
<tr>
<td>Chemistry</td>
<td>yes/no</td>
</tr>
<tr>
<td>Computer Science</td>
<td>yes/no</td>
</tr>
<tr>
<td>Earth Sciences</td>
<td>yes/no</td>
</tr>
<tr>
<td>Mathematics and Statistics</td>
<td>yes/no</td>
</tr>
<tr>
<td>Ocean Sciences</td>
<td>yes/no</td>
</tr>
<tr>
<td>Physics and Physical Oceanography</td>
<td>yes</td>
</tr>
</tbody>
</table>

Other Academic Units

| Faculty of Arts                                                | yes/no                 |
| Department of Economics                                        | yes/no                 |
| Faculty of Business Administration                             | yes/no                 |
| Grenfell VP Office                                             | yes/no                 |
| Marine Institute                                               | yes/no                 |
| Library Report Received                                        | yes                    |

Approved by Dean, Associate Vice-President (Academic) or Vice-President

Yes/No

Name: Dr. Mark Abrahams
Dean, Faculty of Science

FOR OFFICE USE ONLY

APPROVAL GRANTED BY SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Chair: 
Secretary: 
Date: 
Hi Phil,

Thanks for your comment. Calendar changes are not required for the joint programs you mention. The current Calendar entries for both programs read as follows. That is, the 4000 level courses are not specified.

3. Psychology 1000, 1001, 2520, 2570, 2910, 2911, 3800, 3801, 3900, two further courses in Psychology chosen from the following: 3050, 3100, 3250, 3350, 3450, 3620, 3650, 3750; two 4000 level courses in Psychology of which one must be a research experience course.

Chuck

-----Original Message-----
From: pdavis@mun.ca
Sent: Friday, November 08, 2013 1:04 PM
To: Charles Malsbury
Subject: Re: request for consultation on new course proposal from Psychology

Chuck,

Looks interesting. We will have to add this course number to the calendar entries for the joint BSH in Biochem/Behavioral Neuroscience and Nutrition/Behavioral Neuroscience if this course is approved.

Phil

Quoting Charles Malsbury:
> Dear colleagues,
> 
> > Psychology is requesting your comments on our proposal for a new
> > 4000-level course designed primarily for Psychology and Behavioural
> > Neuroscience majors. It is "Psychology 49$0, The Psychology of Money
> > and Financial Behaviour". The proposal is attached.
> >
> > Thank you for your attention to this, and please let me know if you
> > have any questions.
> >
> > Chuck Malsbury
> >
Charles Malsbury
Deputy Head
Department of Psychology
864-7685

Philip J. Davis, Ph.D.
Professor and Acting Head
Department of Biochemistry
Memorial University
St. John's, NL
A1B 3X9
(709) 864-8529

3This email and its contents may contain confidential and/or private information and is intended for the sole use of the addressee(s). If you are not the named addressee you should not disseminate, distribute or copy this email. If you believe that you received this email in error please notify the original sender and immediately delete this email and all attachments.

Except where properly supported with required and authorized documents, no legal or financial obligation will be incurred by Memorial University as a result of this communication. 2
Charles Malsbury

From: Brad deYoung <bdeyoung@mun.ca>
Sent: Friday, November 08, 2013 2:48 PM
To: Charles Malsbury
Subject: Re: The Psychology of Money and Financial Behaviour

Charles

Seems like an interesting and useful course. We have no concerns.

Brad deY

On 2013-11-08, at 11:15 AM, Charles Malsbury wrote:

Dear colleagues,

Psychology is requesting your comments on our proposal for a new 4000-level course designed primarily for Psychology and Behavioural Neuroscience majors. It is “Psychology 49$0, The Psychology of Money and Financial Behaviour”. The proposal is attached.

Thank you for your attention to this, and please let me know if you have any questions.

Chuck Malsbury

Charles Malsbury
Deputy Head
Department of Psychology
864-7685

<Proposal For New Course PSYC 49$0.pdf>

Brad deYoung
Professor and Head
Physics and Physical Oceanography
Memorial University
709-864-8738
bdeyoung@mun.ca
Hi Chuck,

The Biology Undergraduate Studies Committee reviewed the new course proposal - Psychology 49$0 "The Psychology of Money and Financial Behaviour" and have no issue or concerns with the course as proposed.

Thanks
Karen

Karen Morris
Undergraduate Officer
Department of Biology
Memorial University of Newfoundland
St. John's, NL A1B 3X9
709-864-8021

Dear colleagues,

Psychology is requesting your comments on our proposal for a new 4000-level course designed primarily for Psychology and Behavioural Neuroscience majors. It is “Psychology 49$0, The Psychology of Money and Financial Behaviour”. The proposal is attached.

Thank you for your attention to this, and please let me know if you have any questions.

--Chuck Malsbury

Charles Malsbury
Hello,

The library memo for the PSYC 49$0 course proposal is attached. It's basically the same as the one that I did in 2010, but I updated some of the information in the tables. Please let me know if you need any additional information.

Sincerely,
Dianne

Dianne C. Keeping, MLIS, PhD
Collection Development Librarian (Social Sciences)
Queen Elizabeth II Library
Memorial University of Newfoundland
St. John's, NL
Canada
A1B 3Y1

Telephone: (709) 864-4308
Fax: (709) 864-2153

From: Charles Malsbury [mailto:malsbury@play.psych.mun.ca]
Sent: Wednesday, November 06, 2013 5:56 PM
To: Keeping, Dianne
Subject: new course proposal, Psychology of Money and Financial Behaviour

Dianne Keeping
Collection Development Librarian
Social Sciences

Ms. Keeping,

We are in the process of requesting approval for a new course tentatively titled, Psychology 49$0, The Psychology of Money and Financial Behaviour. Please review the attached proposal and let us know if the library has the resources required for this course.

A nearly identical proposal was sent to you in November, 2010 and at that time you replied in a memo to Dr. Ian Neath dated November 15, 2010, that the library did have the resources required by this course. We later withdraw our request for approval, but are now reinitiating the process.
Thank you for your attention to my request, and please let me know if you have any questions.

Chuck Malsbury

Charles Malsbury, Ph.D.
Deputy Head, Department of Psychology
864-7685
14 November 2013

TO: Dr. Charles Malsbury, Deputy Head, Department of Psychology

FROM: Dr. Dianne Keeping, Collection Development Librarian (Social Sciences)

SUBJECT: New Course Proposal, Psychology of Money & Financial Behavior (PSYC 49$0)

Upon review of the new course proposal for The Psychology of Money and Financial Behavior (PSYC 49$0), I have determined that Memorial University Library system does have sufficient resources to support the stated objectives of this course.

The University Library system has a wide range of resources on topics to be covered by the proposed course to support student research assignments. Additional resources may be acquired as needed.

The Library can also provide course specific research instruction sessions upon request by the course instructor.
Library Holdings Summary

**Table 1: Course Topics**

<table>
<thead>
<tr>
<th>LC Subject Headings</th>
<th># of Library Catalogue Entries*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Money – Psychological aspects</td>
<td>12</td>
</tr>
<tr>
<td>Money – Social Aspects</td>
<td>17</td>
</tr>
<tr>
<td>Economics – Psychological aspects</td>
<td>141</td>
</tr>
<tr>
<td>Neuroeconomics</td>
<td>7</td>
</tr>
<tr>
<td>Decision making – Psychological aspects</td>
<td>17</td>
</tr>
<tr>
<td>Investments – Psychological aspects</td>
<td>22</td>
</tr>
<tr>
<td>Investments – Decision making</td>
<td>29</td>
</tr>
<tr>
<td>Consumer behavior</td>
<td>529</td>
</tr>
</tbody>
</table>

*Catalogue entries for Memorial University Libraries as of the date on this memo

**Table 2: Selected Relevant Article Indexes & Databases currently held by the Library**

<table>
<thead>
<tr>
<th>Article Indexes &amp; Databases</th>
</tr>
</thead>
<tbody>
<tr>
<td>PsycINFO</td>
</tr>
<tr>
<td>Business Source Complete</td>
</tr>
<tr>
<td>Proquest Social Sciences Premium Collection</td>
</tr>
<tr>
<td>Sage Research Methods Online</td>
</tr>
<tr>
<td>EconLit</td>
</tr>
<tr>
<td>Mental Measurements Yearbook</td>
</tr>
<tr>
<td>Scopus</td>
</tr>
<tr>
<td>Web of Science</td>
</tr>
<tr>
<td>Academic Search Premier</td>
</tr>
</tbody>
</table>
November 26, 2013

TO: All Members, Faculty Council of Science

FROM: Joan Burry, Secretary
       Committee on Undergraduate Studies, Faculty of Science

SUBJECT: Calendar Changes and New Course Proposals

At a meeting held on November 18, 2013, the Undergraduate Studies Committee of the Faculty of Science agreed that the following new course proposal and Calendar changes be forwarded to Faculty Council for approval:

1. Department of Psychology
   (i) New Course- Psychology 4980-The Psychology of Money and Financial Behaviour

2. Department of Chemistry- Calendar changes
   (i) Deletion of Biochemistry as a requirement for the Chemistry major programs
   (ii) Changes to the examination procedures for honours theses
   (iii) Changes to the Chemistry minor program

Joan Burry
Assistant Registrar and
Secretary, Committee
on Undergraduate Studies,
Faculty of Science
Proposal
Calendar Change(s) to Existing Program(s)

1. To change Biochemistry 2101 from a required course to a recommended course for the Chemistry major and honours programs
2. A minor Change to the Regulations for the Chemistry honours Degree and for the Honours Degree in Computational Chemistry
3. Proposal to Change Course Requirements for a Chemistry Minor

Resource Implications: Instructional Costs
None

Resource Implications: Library Holdings and/or Other Resources Required
The cost associated with all of the proposed changes including the deletion of the biochemistry 2101 requirement does not affect the existing budget allocation for the chemistry department or authorize any new funding for the chemistry department.

Signature of Unit Head (if appropriate): __________________________________________

Date: ____________________________

Signature of Dean/Associate Vice-President (Academic)/Vice-President: ____________________________

Date: ____________________________
RATIONALE FOR CHANGES

1. The deletion of biochemistry 2101 from the list of required courses for chemistry majors and honours students was recommended in the final report of the CSC accreditation committee who visited the chemistry department in 2011. The accreditation committee suggested minor changes to the course content of chemistry 3410, bio-organic chemistry, to make it an acceptable course to fulfill the biochemistry requirement for accreditation for Memorial’s chemistry major and honours programs. The chemistry 3410 course now meets the CSC requirements for a biochemistry course with further refinements planned for the lab portion of the course. Biochemistry 2101 will become a recommended course for both the chemistry major and honours programs.

2. The chemistry department has determined that two examiners for an honours thesis in addition to the student’s supervisor were unnecessary and only one additional examiner has been used for several years.

3. The present regulations require all six second year chemistry courses beyond first year. The proposed changes in the minor program will provide flexibility for students and this should increase interest in the minor program. Only one course in each major branch of chemistry, organic, analytical, inorganic and physical, would now be required at the second level. A student would then be able to select two additional courses from the remaining second level courses or third level chemistry courses to complete the minor.

Consultations Sought From

1. Biochemistry
2. Biology
3. Mathematics and Statistics
4. Physics and Physical Oceanography
5. Grenfell
6. Marine Institute
7. Psychology
8. Computer Science
9. Earth Sciences
10. Ocean Sciences

Comments Received

Yes
Yes
No
No
Yes
No
No
No

Library Report Received

Yes

COURSE DELETIONS AND ADDITIONS

None

CHANGES TO CALENDAR REGULATIONS

Biochemistry 2101 is changed from a required course to a recommended course for the chemistry major and honours programs.

The number of faculty examiners for Chemistry 490A/B Honours dissertations is decreased from two to one.

The chemistry minor requirements are changed as follows:

A student now chooses one of Chemistry 2301 (or 2300) and 2302.
Chemistry 2401 is no longer required. 
A student chooses two courses in addition to the four required second level courses from the remaining 2000 level courses and above to complete the minor.

**CALENDAR REVISIONS**

8.3.3 Minor in Chemistry

Candidates who take a minor in Chemistry will complete Chemistry 1050 and 1051 (or 1010, 1011 and 1031) or equivalent, Chemistry 2100, 2210, 2301 (or 2300) or 2302, and 2400, and 2404 6 credit hours in other chemistry courses at the 2000 level or above.

8.3.4 General Degree: Major in Chemistry

The courses required for a Major in Chemistry are:

1. Chemistry 1050 and 1051 (or 1010, 1011 and 1031) or equivalent, 2100, 2210, 2301 (or 2300), 2302, 2400, 2401, 3110, 3210, 3211, 3303, 3410, 3411, and 3500.
2. Physics 1050 (or 1020 and 1021) and 1051.
4. Biochemistry 2101

   Recommended courses: Biochemistry 2101, Mathematics 2051, Physics 2820 and/or 2750, and 6 credit hours in one of the following languages: French, German, or Russian.

8.3.5 Honours Degree in Chemistry

8.3.5.1 Required Courses

1. Chemistry 1050 and 1051 (or 1010, 1011 and 1031) or equivalent, 2100, 2210, 2301 (or 2300), 2302, 2400, 2401, 3110, 3210, 3211, 3303, 3410, 3411, 3500, 490A/B and 12 credit hours selected from the remaining 4000-level Chemistry courses.
2. Physics 1050 (or 1020 and 1021) and 1051.
4. Biochemistry 2101

8.3.5.2 Other Information

1. Those courses in which a grade of B or an average of 75% or higher are required, as specified in Regulations for the Honours Degree of Bachelor of Science, Academic Standing, clause a., are the courses beyond first year used to satisfy clause 1. under Required Courses above, and Biochemistry 2404.

2. Recommended courses: Biochemistry 2100, Biochemistry 2101, Mathematics 2051, Physics 2820 and/or 2750.

3. A thesis based on a selected research topic carried out under the supervision of a member of the Department is to be submitted in the final year.
4. Chemistry 490A/B will normally require the equivalent of nine hours per week for two semesters. Registration in Chemistry 490A/B is restricted to those who have honours standing. The Honours dissertation will be assessed by a committee comprising the supervisor and one two other faculty members.

Secondary Changes

None

Email Responses to Consultations:

Biochemistry

Chris,

I understand the rationale for the change in status of Bioc 2101. The implications for us are minor as the bulk of students in 2101 are our own or Biology.

Phil

Philip J. Davis, Ph.D.
Professor and Acting Head
Department of Biochemistry
Memorial University
St. John’s, NL
A1B 3X9
(709) 864-8529

Hello Chris,

Since we met during the summer, I've done a little bit of research into the issue of the chemistry minor from the perspective of biochemistry majors/honours.

There's been a big drop in the number of our majors which is in this chart that I hope shows up:

The basic problem is now that one of our required courses Biochem 3105 is in the same slot as one of the required courses for the minor (2302, I believe). In talking with a couple of students who did complete the minor last year, they told me that you had approved substitutions - I think of 3410 for 2302 (though I could have the wrong course number). The Chem minor is still possible but students must take 2302 in second year and that requires some degree of advance planning.

Since you mentioned wanting to "loosen up" the Chem minor, I thought I'd mention this and encourage you in that direction! :-)

martin

=================================================================
Dr. Martin E. Mulligan        mulligan@mun.ca
Department of Biochemistry    P: (709) 864-7978
Memorial University of Newfoundland  F: (709) 864-2422
St. John's, Newfoundland, CANADA A1B 3X9
Biology

Hi Chris,

The Biology Undergraduate Studies Committee reviewed the proposed Chemistry calendar changes at our meeting on October 3. We have no concerns with the proposed changes and feel that the changes to the minor program may reduce scheduling problems our students having when minoring in Chemistry.

Thanks
Karen

Karen Morris
Undergraduate Officer
Department of Biology
Memorial University of Newfoundland
St. John's, NL A1B 3X9
709-864-8021

Computer Sciences

Chris,

These changes seem fine to me.

Donna

Ocean Sciences

Hi Chris - We're fine with these changes.

Christopher C. Parrish,
University Research Professor & Deputy Head,
Department of Ocean Sciences,
Memorial University of Newfoundland,
St. John's, Newfoundland, A1C 5S7 Canada.

Library

Dr. Flinn.

Fine over here in the library. They have very little effect on the library.

Best,

Erin Alcock
Science Research Liaison Librarian
QE2 Library
Memorial University of Newfoundland
ealcock@mun.ca
709-864-8316
SUMMARY PAGE FOR SENATE

Approval Form

Program Title

Proposal for minor Changes to the Regulations for the Chemistry major and honours Degrees and for the Honours Degree in Computational Chemistry.

Proposal to Change Course Requirements for a Chemistry Minor.

Summary of Changes

Biochemistry 2101 is changed from a required course to a recommended course for the chemistry major and honours programs.

The number of faculty examiners for Chemistry 490A/B Honours dissertations is decreased from two to one.

The chemistry minor requirements are changed as follows:

A student now chooses one of Chemistry 2301 (or 2300) and 2302.
Chemistry 2401 is no longer required.
A student chooses two courses in addition to the four required second level courses from the remaining 2000 level courses and above to complete the minor.

<table>
<thead>
<tr>
<th>Consultations Sought From</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1. Biochemistry</td>
<td>Yes</td>
</tr>
<tr>
<td>2. Biology</td>
<td>Yes</td>
</tr>
<tr>
<td>3. Mathematics and Statistics</td>
<td>Yes</td>
</tr>
<tr>
<td>4. Physics and Physical Oceanography</td>
<td>No</td>
</tr>
<tr>
<td>5. Grenfell</td>
<td>No</td>
</tr>
<tr>
<td>6. Marine Institute</td>
<td>No</td>
</tr>
<tr>
<td>7. Psychology</td>
<td>No</td>
</tr>
<tr>
<td>8. Computer Science</td>
<td>Yes</td>
</tr>
<tr>
<td>9. Earth Sciences</td>
<td>No</td>
</tr>
<tr>
<td>10. Ocean Sciences</td>
<td>No</td>
</tr>
</tbody>
</table>

Library Report Received

Yes

Approved by Dean, Associate Vice-President (Academic) or Vice-President

Yes/No

Name

______________________________
FOR OFFICE USE ONLY

APPROVAL GRANTED BY SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Chair: 

Secretary: 

Date: 
December 3, 2013

TO: All Members, Faculty Council of Science

FROM: Joan Burry, Secretary
Committee on Undergraduate Studies, Faculty of Science

SUBJECT: Calendar Changes and New Course Proposals

At a meeting held on December 2, 2013, the Undergraduate Studies Committee of the Faculty of Science agreed that the following new course proposals and Calendar changes be forwarded to Faculty Council for approval:

1. Department of Earth Sciences
   (ii) Change to prerequisites for EASC 2030 and 2502

2. Department of Biochemistry
   (i) New Course Biochemistry 4230: Lipid and Lipoprotein Metabolism and secondary Calendar changes
   (ii) Calendar change to Biochemistry 4105
   (iii) Calendar change to joint honours program Biochemistry and Physics

3. Department of Ocean Sciences
   (i) Proposal to cross-list Biology courses
   (ii) Proposal to cross-list Physics course

4. Department of Chemistry
   (i) Change to prerequisite for Chemistry 1050

5. Department of Physics and Physical Oceanography
   (i) Change to course titles

Joan Burry
Assistant Registrar and
Secretary: Committee
on Undergraduate Studies,
Faculty of Science
Proposal
New Course – Cross listed
EASC 2919 Introduction to Marine Geology
OCSC 2200 Introductory Geological Oceanography

Executive Summary

This new course, Introduction to Marine Geology, will be taught as (i) one of the five core
courses for the Minor in Oceanography, proposed by the Department of Ocean Sciences, as
well as (ii) a service course in the Department of Earth Sciences.

Resource Implications: Instructional Costs

This course will use the teaching resources currently available in the Department of Earth
Sciences.

No additional instructional resources are required. The course could be taught by several
members of the Department of Earth Sciences, including A.E. Aksu, George Jenner, John
Hanchar, Elliott Burden and others.

Library Holdings and/or Other Resources Required

The costs associated with the proposed new course can be met by the existing budget
allocation and authorized new funding for the Department of Earth Sciences.

Signature of Unit Head (if appropriate): ________________________________________

Date: ______________________________________________________________________

Signature of Dean/Associate Vice-President (Academic)/Vice-President:

__________________________________________________________________________

Date: ______________________________________________________________________
Sample Course Outline and Method of Evaluation

The proposed new course will be taught as a regular lecture course, with no laboratories. The course outline is given below:

<table>
<thead>
<tr>
<th>Week</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to Marine Geology – formation and evolution of the World oceans through geological times, mantle degassing, asteroid impacts, early composition of the oceans.</td>
</tr>
<tr>
<td>2</td>
<td>Oceans and climate of the early Earth – snowball Earth, zipper-rift, high-obliquity hypotheses viewed in the light of evidence from the rock record, including glacial deposits in tropical paleolatitudes, acidification of the oceans.</td>
</tr>
<tr>
<td>3</td>
<td>Emergence of life and the onset of ocean-atmosphere-biosphere interactions, how this evolved throughout the Paleozoic, hot houses versus ice houses.</td>
</tr>
<tr>
<td>4</td>
<td>Special lectures – (i) changes in the chemistry of the oceans caused by the evolution of life, banded iron formations, (ii) anoxia and anoxic events through geological times, and (iii) evolution of tides in Paleozoic when the Moon was much closer to Earth, importance of Devonian tidal deposits.</td>
</tr>
<tr>
<td>5</td>
<td>Plate Tectonics – development of the theory, early evidences, unequivocal geological evidences, driving forces of the plates, including mantle processes, gravitational processes, slab pull and slab suction</td>
</tr>
<tr>
<td>6</td>
<td>Plate Tectonics – type of plate boundaries and processes associated with the divergent, convergent and strike-slip plate boundaries, black smokers, white smokers</td>
</tr>
<tr>
<td>7</td>
<td>How do we study marine geology: introduction to geological sampling and geophysical imaging techniques, navigation as a function of the dimensions of objects to be studied.</td>
</tr>
<tr>
<td>8</td>
<td>Contemporary marine geological processes, estuaries, deltas, beaches and barrier islands.</td>
</tr>
<tr>
<td>9</td>
<td>Contemporary marine geological processes, continental shelves and continental slopes.</td>
</tr>
<tr>
<td>10</td>
<td>Contemporary marine geological processes, continental rises and deep abyssal plains and trenches.</td>
</tr>
<tr>
<td>11</td>
<td>Special lectures – (i) microfossils as paleoproxies, (ii) stable isotopic techniques in marine geology, (iii) deep oceanic circulation and geological processes.</td>
</tr>
</tbody>
</table>

Note that 3 lectures will be spent on each subject in the week-by-week sequence, except for special lectures where the special lectures are listed.
Evaluation:
Assignments 20%
Mid-term test 35%
Final examination 45%

A total of 6 assignments will be given throughout the term.

Texts

We have a digital textbook in mind (Marine Geology, exploring the new frontiers of the ocean by Jon Erickson). We are in discussions with the publisher to purchase the right to digital copies and adding our own material to it to make a complete text for this course.

Instructor(s)

SUMMARY PAGE FOR SENATE

Approval Form

Course Number and Title: EASC 2919 Introduction to Marine Geology (cross-listed w/)
OCSC 2200 Introductory Geological Oceanography

Abbreviated Course Title: Introduction to Marine Geology
Intro Geological Oceanography

Calendar Description (in Earth Sciences section)

2919 Introduction to Marine Geology (same as Ocean Sciences 2200) is a study of the
formation and evolution of oceans, including plate tectonics, mid-ocean ridges (birth place of
oceans), subduction zones (where oceans are consumed), sedimentary environments such as
estuaries, deltas, beaches and barrier islands, continental shelves, slopes and deep abyssal
plains and special topics, including anoxic events, evolution of tides, atmosphere-ocean
interactions, formation of banded iron formations, snowball Earth, black and white smokers, and
how Earth modulates its climate through atmosphere, hydrosphere, biosphere and lithosphere
interactions.

PR: EASC1000
CR: OCSC2200

Secondary Changes

In Section 9.9 Ocean Sciences of the calendar, the description of 2200 should be inserted and
read –

2200 Introductory Geological Oceanography (same as Earth Sciences 2919) is a study of
the formation and evolution of oceans, including plate tectonics, mid-ocean ridges (birth place of
oceans), subduction zones (where oceans are consumed), sedimentary environments such as
estuaries, deltas, beaches and barrier islands, continental shelves, slopes and deep abyssal
plains and special topics, including anoxic events, evolution of tides, atmosphere-ocean
interactions, formation of banded iron formations, snowball Earth, black and white smokers, and
how Earth modulates its climate through atmosphere, hydrosphere, biosphere and lithosphere
interactions.

PR: EASC1000
CR: EASC2919
Rationale

The Department of Ocean Sciences requires the introduction of a new course (i.e., Introductory Geological Oceanography) as one of the five core courses in the new Minor in Oceanography Programme. The Department of Earth Sciences has agreed to offer this course for Ocean Sciences, and we will simultaneously cross-list it as an Earth Sciences service course.

<table>
<thead>
<tr>
<th>Consultations Sought From</th>
<th>Comments Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marine Institute</td>
<td>Yes / No</td>
</tr>
<tr>
<td>Grenfell campus</td>
<td>Yes / No</td>
</tr>
<tr>
<td>Department of Biochemistry</td>
<td>Yes / No</td>
</tr>
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<td>Department of Biology</td>
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<td>Department of Chemistry</td>
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<td>Department of Ocean Sciences</td>
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</tr>
<tr>
<td>Department of Physics and physical Oceanography</td>
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</tr>
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<td>Department of Psychology</td>
<td>Yes / No</td>
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<td>Faculty of Arts</td>
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<td>Library Report Received</td>
<td>Yes / No</td>
</tr>
</tbody>
</table>

Signature: Dean, Associate Vice-President (Academic) or Vice-President

Name

FOR OFFICE USE ONLY

APPROVAL GRANTED BY SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Chair:

Secretary:

Date:
Consultations - EASC 2919

From: "Parrish, Chris" <cparrish@mun.ca>
Date: November 15, 2013 10:36:19 AM NST
To: "George Jenner" <gjenner@mun.ca>, "John Hanchar" <jghanchar@mun.ca>
Cc: "Fletcher, Garth" <fletcher@mun.ca>, "Michelle Miskell" <mmiskell@mun.ca>, "Ali Aksu" <aaksu@mun.ca>
Subject: RE: Geological Oceanography new course proposal

Thanks George. The proposed course will work really well as one of the Oceanography Minor core courses, and we can see how it builds on the prerequisite EASC1000 Earth Systems course. The sections on changes in the chemistry of the oceans, anoxia and stable isotopic techniques will connect directly with the Introductory Chemical Oceanography course we are developing. One small change we would request would be to the title, as we are going with "Introductory X-ical Oceanography" for the 4 disciplinary titles.

Chris Parrish,
University Research Professor & Deputy Head,
Department of Ocean Sciences

From: MIUG Consultations <MIUGconsultations@mi.mun.ca>
Date: November 20, 2013 3:52:14 PM NST
To: George Jenner <gjenner@mun.ca>
Cc: Derek Howse <Derek.Howse@mi.mun.ca>
Subject: RE: New course proposal

Dr. Jenner,

Thank you for the opportunity to review the cross listed courses EASC 2919 Introduction to Marine Geology / OCSC 2200 Introduction to Geological Oceanography. These courses will have no impact on the programs offered here at the Marine Institute.

We are happy to support this proposal as presented.

Derek Howse

Derek Howse
Chair, Undergraduate Studies Committee
Marine Institute, Memorial University
TEL: 709-778-0586
FAX: 709-778-0394

From: Michael Morrow <mmorrow@mun.ca>
Date: November 21, 2013 2:31:26 PM NST
To: gjenner@mun.ca, Brad deYoung <bdeyoung@mun.ca>
Subject: Re: Proposal - New Course EASC 2929

George

The Undergraduate Studies Committee in Physics and Physical Oceanography considered this proposal at its meeting today. No concerns were identified.

Best wishes

Michael Morrow

From: Karen Morris <morrisk@mun.ca>
Date: November 21, 2013 3:29:33 PM NST
To: gjenner@mun.ca
Cc: "Marino, Paul" <pmarino@mun.ca>
Subject: Re: New course proposal

Hi George,

The Biology Undergraduate Studies committee reviewed the proposal for a new cross listed course EASC 2919" Introduction to Marine Geology"/ OCSC 2200" Introduction to Geological Oceanography". The only suggestion that we want to offer is that a credit restriction be added to each as per other cross listed courses.

Thanks
Karen

Karen Morris
Undergraduate Officer
Department of Biology
Memorial University of Newfoundland
St. John's, NL A1B 3X9
709-864-8021
Collections Development Division  
Queen Elizabeth II Library  
St. John’s, Newfoundland, Canada  
A1B 3Y1

26 November 2013

TO: Dr. George Jenner, Undergraduate Studies, Department of Earth Sciences

FROM: Dianne Taylor-Harding, Collection Development Librarian, Earth Sciences

SUBJECT: Library Resources Review for New Course –
EASC2919 Introduction to Marine Geology
[OCSC2200 Introduction to Geological Oceanography]

After reviewing the calendar description for the proposed course EASC2919 Introduction to Marine Geology, I have determined that the new course will have no impact on the collections activities of the Memorial University Libraries.

The proposed course will cover –

“formation and evolution of oceans … including plate tectonics, mid-ocean ridges…, subduction zones…, sedimentary environments such as estuaries, deltas, beaches and barrier islands, continental shelves, slopes and deep abyssal plains and special topics, including anoxic events, evolution of tides, atmosphere-ocean interactions, formation of banded iron formations, snowball Earth, black and white smokers, and how Earth modulates its climate through atmosphere, hydrosphere, biosphere and lithosphere interactions.”

The Memorial University Libraries hold Research Level collections in fields related to marine geology / geological oceanography. See Appendix below for details.

11/26/2013

X D. E. Taylor-Harding
Dianne Taylor-Harding
Collections Librarian, Earth Sciences

St. John’s, Newfoundland, Canada A1B 3Y1  
Tel: (709) 864-7421  
Fax: (709) 864-2153
APPENDIX

1. Books - The Memorial University Libraries have a large Research Level collection of books and ebooks [monographs, conference proceedings, societal special papers, geological survey reports & maps, etc] on marine geology / geological oceanography topics.

<table>
<thead>
<tr>
<th>LC Subject Headings related to MARINE GEOLOGY / GEOLOGICAL OCEANOGRAPHY</th>
<th>Number of Book Titles in the Memorial University Libraries</th>
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</table>
2. **Journals**

The Memorial University Libraries subscribe to thousands of ejournals in Environmental & Earth Sciences, including geography, geology, climatology, oceanography, and marine sciences -

**Earth & Environmental Sciences** – link to approx. 2000 ejournal titles on earth sciences and marine science

3. **Reference & Research**

The Memorial University Libraries provide access to several online abstracting and indexing databases useful for Marine Geology / Geological Oceanography –

a) **GeoRef** is a comprehensive international geosciences database which indexes and abstracts over 3 million articles from 3,500+ journals as well as books, maps, government reports, conference papers, theses / dissertations in the earth sciences from 1669 to present. GeoRef includes Oceanography in its geosciences coverage.

b) **Oceanic Abstracts** indexes and abstracts worldwide technical literature pertaining to the marine and brackish-water environment. This comprehensive database focuses on physical oceanography, marine biology, fisheries, non-living resources, meteorology and geology, plus environmental, technological, and legislative topics.

c) **Scopus** is a large multidisciplinary database which indexes and abstracts articles in more than 20,000 scholarly journals, conference proceedings and books, including earth sciences, oceanography, geography and marine sciences from 1995 to the present.

d) **Web of Science** is another large multidisciplinary database which indexes and abstracts articles in more than 10,000 scholarly journals, conference proceedings and books, including earth sciences, oceanography, geography and marine sciences from 1900 to the present.

4. **Textbook and Readings**

The suggested textbook is –


The Queen Elizabeth II Library has a copy of the first edition of this work in its collection.
December 3, 2013

TO: All Members, Faculty Council of Science

FROM: Joan Burry, Secretary
Committee on Undergraduate Studies, Faculty of Science

SUBJECT: Calendar Changes and New Course Proposals

At a meeting held on December 2, 2013, the Undergraduate Studies Committee of the Faculty of Science agreed that the following new course proposals and Calendar changes be forwarded to Faculty Council for approval:

1. Department of Earth Sciences
   (ii) Change to prerequisites for EASC 2030 and 2502

2. Department of Biochemistry
   (i) New Course Biochemistry 4230: Lipid and Lipoprotein Metabolism and secondary Calendar changes
   (ii) Calendar change to Biochemistry 4105
   (iii) Calendar change to joint honours program Biochemistry and Physics

3. Department of Ocean Sciences
   (i) Proposal to cross-list Biology courses
   (ii) Proposal to cross-list Physics course

4. Department of Chemistry
   (i) Change to prerequisite for Chemistry 1050

5. Department of Physics and Physical Oceanography
   (i) Change to course titles

Joan Burry
Assistant Registrar and Secretary: Committee on Undergraduate Studies, Faculty of Science
Proposal
Calendar Changes to Existing Course EASC 2030

Course Number and Title

EASC 2030 Mineralogy

Proposed Changes to Calendar Description

2030 Mineralogy provides an introduction to crystallography and the structure of minerals; introduction to crystal optics; study of the rock forming minerals and minerals of economic significance. Laboratory work comprises study of the structures and symmetries of minerals, chemistry of rock forming minerals, introduction to transmitted light microscopy of rocks, hand specimen recognition of common rocks and minerals.

CO: EASC 2502
CR: the former EASC 203A/B
LH: 3
PR: EASC 1000 and 1002, Chemistry 1011 (or 1051 or equivalent), Physics 1051 (or 1021 or the former 1054), and Mathematics 1000

Rationale for Changes

EASC 1002 is the entry level course for Earth Sciences majors and a required course for a Minor in Earth Sciences and all joint Earth Sciences programs. The material presented in EASC 1002 is an important foundation for all higher level courses, and in practice, almost all students complete EASC 1002 successfully before taking any 2000 level course. It is an oversight that it has not been listed as a prerequisite to all 2000 level courses: we wish to address this oversight so that all students are properly prepared for EASC 2030.

Physics 1054 has not been offered for many years. We list it as "the former" to be consistent with other places it is mentioned in the Calendar.

Consultations

This proposal will be sent to the Heads of all departments in the faculty of science, the Head, Division of Science, Grenfell Campus, the Office of the Vice-President (Marine Institute) and the library

Library Holdings and/or Other Resources Required

None

Signature of Unit Head (if appropriate):

Date:

Signature of Dean/Associate Vice-President (Academic)/Vice-President:
SUMMARY PAGE FOR SENATE

Approval Form

Course Title and Number

EASC 2030 Mineralogy

Calendar Description Change(s)

2030 Mineralogy provides an introduction to crystallography and the structure of minerals; introduction to crystal optics; study of the rock forming minerals and minerals of economic significance. Laboratory work comprises study of the structures and symmetries of minerals, chemistry of rock forming minerals, introduction to transmitted light microscopy of rocks, hand specimen recognition of common rocks and minerals.

CO: EASC 2502
CR: the former EASC 203A/B
LH: 3
PR: EASC 1000 and 1002, Chemistry 1011 (or 1051 or equivalent), Physics 1051 (or 1021 or the former 1054), and Mathematics 1000

Rationale

EASC 1002 is the entry level course for Earth Sciences majors. It is an oversight that it has not been listed as a prerequisite to all 2000 level courses: we wish to address this oversight so that all students are properly prepared for EASC 2030.

We list Physics 1054 as “the former” to be consistent with other places it is mentioned in the Calendar.

Consultations Sought From

1. Grenfell Campus
2. Marine Institute
3. Department of Biochemistry
4. Department of Biology
5. Department of Chemistry
6. Department of Computer Science
7. Department of Economics
8. Department of Geography
9. Department of Mathematics and Statistics
10. Department of Ocean Sciences
11. Department of Physics and Physical Oceanography
12. Department of Psychology

Comments Received

Yes/No

Library Report Received

Yes/No

Approved by Dean, Associate Vice-President (Academic) or Vice-President
Yes/No

Name

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FOR OFFICE USE ONLY

APPROVAL GRANTED BY SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Chair: ____________________________________________

Secretary: ________________________________________

Date: ____________________________________________
Proposal
Calendar Changes to Existing Course EASC 2502

Course Number and Title
EASC 2502 Introduction to Geochemistry

Proposed Changes to Calendar Description

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: EASC 1000 and 1002, Chemistry 1011 (or 1051 or equivalent)

Proposed Changes to Abbreviated Course Title
Geochem. Earth Mtls. Intro to Geochemistry

Rationale for Changes
EASC 1002 is the entry level course for Earth Sciences majors and a required course for a Minor in Earth Sciences and all joint Earth Sciences programs. The material presented in EASC 1002 is an important foundation for all higher level courses, and in practice, almost all students complete EASC 1002 successfully before taking any 2000 level course. It is an oversight that it has not been listed as a prerequisite to all 2000 level courses: we wish to address this oversight so that all students are properly prepared for EASC 2502.

The abbreviation course title, which appears on student transcripts, does not match the title of the course.

Consultations
This proposal will be sent to the Heads of all departments in the faculty of science, the Head, Division of Science, Grenfell Campus, the Office of the Vice-President (Marine Institute) and the library

Library Holdings and/or Other Resources Required
None

Signature of Unit Head (if appropriate):

Date:
Signature of Dean/Associate Vice-President (Academic)/Vice-President: ____________________________

Date: ____________________________
SUMMARY PAGE FOR SENATE

Approval Form

Course Title and Number

EASC 2502 Introduction to Geochemistry

Calendar Description Change(s)

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: EASC 1000 and 1002, Chemistry 1011 (or 1051 or equivalent)

Rationale

EASC 1002 is the entry level course for Earth Sciences majors. It is an oversight that it has not been listed as a prerequisite to all 2000 level courses: we wish to address this oversight so that all students are properly prepared for EASC 2502.

Consultations Sought From

1. Grenfell Campus
2. Marine Institute
3. Department of Biochemistry
4. Department of Biology
5. Department of Chemistry
6. Department of Computer Science
7. Department of Economics
8. Department of Geography
9. Department of Mathematics and Statistics
10. Department of Ocean Sciences
11. Department of Physics and Physical Oceanography
12. Department of Psychology

Comments Received

Yes/No

Library Report Received

Yes/No

Approved by Dean, Associate Vice-President (Academic) or Vice-President

Yes/No

Name
FOR OFFICE USE ONLY

APPROVAL GRANTED BY SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Chair: _______________________________________

Secretary: ____________________________________

Date: ________________________________________
December 3, 2013

TO: All Members, Faculty Council of Science

FROM: Joan Burry, Secretary
       Committee on Undergraduate Studies, Faculty of Science

SUBJECT: Calendar Changes and New Course Proposals

At a meeting held on December 2, 2013, the Undergraduate Studies Committee of the Faculty of Science agreed that the following new course proposals and Calendar changes be forwarded to Faculty Council for approval:

1. Department of Earth Sciences
   (ii) Change to prerequisites for EASC 2030 and 2502

2. Department of Biochemistry
   (i) New Course Biochemistry 4230: Lipid and Lipoprotein Matabolism and secondary Calendar changes
   (ii) Calendar change to Biochemistry 4105
   (iii) Calendar change to joint honours program Biochemistry and Physics

3. Department of Ocean Sciences
   (i) Proposal to cross-list Biology courses
   (ii) Proposal to cross-list Physics course

4. Department of Chemistry
   (i) Change to prerequisite for Chemistry 1050

5. Department of Physics and Physical Oceanography
   (i) Change to course titles

Joan Burry
Assistant Registrar and
Secretary, Committee
on Undergraduate Studies,
Faculty of Science
Proposal
New Course – Biochemistry 4230
Lipid and Lipoprotein Metabolism

Executive Summary
This course, which was previously taught as a special topics offering, is now being regularized.

Resource Implications: Instructional Costs
This course will use current teaching resources in the Department of Biochemistry. No additional costs will be required.

Consultations
Grenfell Campus - comments are forthcoming
Marine Institute - attached

Library Holdings and/or Other Resources Required
Response from the Library is forthcoming

The costs, if any, associated with this change/these changes can be met from within the existing budget allocation for the Department of Biochemistry

Signature of Unit Head (if appropriate):

Date:

Signature of Dean/Associate Vice-President (Academic)/Vice-President:

Date:
Course Outline and Method of Evaluation
This sample is based on the outline that was used in Winter 2013. Specific dates mentioned herein were those in place for that semester. The next offering will follow the same outline with dates appropriate to the term.

Instruction:

Section 1 (Weeks 1 to 4):
An overview of the course topics, advances and controversies in lipid and lipoprotein metabolism, as well as their relevance to health and disease will be given by means of formal lectures. At the start of this Section, students will be provided a list of topics to choose from for writing an independent study research paper.
(Note: a list of sample topics from Winter 2013 is appended)

During this section, students will be assigned one paper for which a five page double-spaced written critique (excluding references) will be due January 31 by 11:59pm. Failure to meet this deadline will result in a mark of zero.

In addition, during the first week of the course all students will be assigned a current research paper that each will present in a journal club format during Section 3.

Section 2 (Week 5, class 1):
Students will write a midterm exam.

Section 3 (Week 5, class 2, to Week 9):
Papers assigned in Section 1 for oral presentations will be presented. Each presentation will be 15 minutes in length, during which the student will highlight the findings and provide a critique. The presentation will be followed by a discussion that may last up to 15 minutes. All students will be expected to read the papers and participate in their discussion.

A 10 page double-spaced manuscript of the assigned independent study research paper must be submitted to the course instructor by email no later than 11:59pm on March 7th; references and figures are not inclusive of the 10 pages. Failure to meet this deadline will result in a 20% deduction per day.

During this Section, students will start to prepare a 15 minute oral presentation of their independent study paper.

Section 4 (Weeks 10 - 13):
Undergraduate students will present their independent study work to the class first, followed by graduate students who will present their research proposal to the class. Presentations will highlight the topic and provide a discussion of future research about the topic. The presentation will be followed by a discussion that may last up to 15 minutes. All students are expected to read the summaries for the independent studies as well as the summaries for the BIOC 6000* research proposals. All students are expected to participate in the discussion for each presentation. Students may ask questions related to the independent study/research proposal, in the general areas of basic biochemistry or nutrition.

*NOTE: It is anticipated that this course will be jointly offered as a graduate course. Graduate students will be required to prepare a more detailed research proposal in place of the independent study. All students are expected to participate together in discussions.

Class schedule and attendance:
Attendance at all classes is expected, including attendance to any “make-up” classes. Absence from a class without a timely-provided physician note will result in no marks assigned toward any participation
or presentation for the day in question. In the event of a class cancellation due to unforeseen circumstances, a “make-up” class will be scheduled in order to complete all sections of the course.

**Evaluation:**

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<td>Written Critique of Paper</td>
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<tr>
<td>Participation</td>
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</table>

**Texts**

Reading list: The primary source of literature toward assignments will be from journal articles indexed to PubMed that are available through the University library system either in print or electronically. There is no required textbook for the course, however a number of reference books are available through the University library system, including:


**Instructor**

Dr. Robert Brown, Department of Biochemistry

**Sample list of independent research study topics**

- Apolipoprotein F
- Hypobetalipoproteinemia
- Role of omega-3 fatty acids in very low-density lipoprotein assembly and secretion
- Lipoprotein (a)
- Role and effects of omega-3 fatty acids in obesity
- Tay-Sachs disease
- *In vitro* and *in vivo* studies of lipoprotein lipase S447X
- Sitosterolemia
- Low-density lipoprotein receptor-related protein 6
- Niemann-Pick disease types A and B
- Apolipoprotein E isoforms in Alzheimer’s disease and atherosclerosis
- Phospholipid flipases
- Role and effects of coffee on cholesterol efflux, and reverse cholesterol transport
- Role and effects of arachidonic acid in rheumatoid arthritis
- Apolipoprotein M
- D-4F
- Snake venom phospholipase A2’s
SUMMARY PAGE FOR SENATE
Approval Form

Course Number and Title
BIOC 4230 – Lipid and Lipoprotein Metabolism

Abbreviated Course Title
Lipid & Lipoprotein Metabolism

Calendar description
4230 Lipid and Lipoprotein Metabolism is designed to provide current knowledge about advances and controversies in lipid and lipoprotein metabolism in the context of health and disease. Topics to be covered in the course include advanced knowledge about lipid and lipoprotein synthesis and regulation, reverse cholesterol transport, plus lipid and lipoprotein utilization to regulate cellular and physiological functions. The covered topics will be related to areas including reproductive biology, atherosclerosis, AIDS, Alzheimer’s, and cancer.
CR: BIOC 6000
PR: BIOC 3106 or PHAR 3111

Secondary Calendar Changes

4230-4239 4231-4239 Special Topics in Biochemistry
Changing 4230 from a Special Topics offering to a regular course offering necessitates a change in the range of Special Topics in Biochemistry course numbers.

Rationale
The course is designed to provide current knowledge about advances and controversies in lipid and lipoprotein metabolism in the context of health and disease. It has formerly been offered as a Special Topics course, but is now being converted to a regular course due to the demand for the course and the need for the topics covered to be offered on a regular basis. Addition of this course to our regular course offerings will expand the range of elective courses that are available to fourth year undergraduates.

Consultations
Marine Institute
Grenfell Campus

Comments Received
YES
forthcoming

Library Report Received
forthcoming

Signature: Dean, Associate Vice-President (Academic) or Vice-President

Name

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APPROVAL GRANTED BY SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Chair:
Secretary:
Date:
Consultations received to date – November 19th
Marine Institute

-----Original Message-----
From: Dawn King[mailto:Dawn.King@mi.mun.ca] On Behalf Of MIUG Consultations
Sent: November-19-13 9:45 AM
To: Sinnott, Anne
Cc: Derek Howse
Subject: RE: Consultation on Biochemistry Calendar changes proposed for 2014-2015 calendar

Anne,

Thank you for the opportunity to review the changes to the Biochemistry Physics Joint Honours program as well as the regularization of the Biochemistry 4230 course. The changes and new course have no impact on the programs at the Marine Institute.

We are happy to support the changes (with item seven removed as indicated in the attached revised calendar page) as presented.

Derek Howse

Derek Howse
Chair, Undergraduate Studies Committee
Marine Institute, Memorial University
TEL: 709-778-0586
FAX: 709-778-0394
Derek.Howse@mi.mun.ca

-----Original Message-----
From: Sinnott, Anne[mailto:asinnott@mun.ca]
Sent: November 15, 2013 8:19 PM
To: voffice@grenfell.mun.ca; MIUG Consultations; Alcock, Erin
Cc: Martin Mulligan
Subject: Consultation on Biochemistry Calendar changes proposed for 2014-2015 calendar

Dear Grenfell, Marine Institute, and Library:

Attached are 2 Biochemistry Calendar changes proposed for the 2014-2015 calendar.

One reduces the number of required courses in our Biochemistry Physics Joint Honours program, as our number is above average and makes the program difficult to complete. A tiny number of students take this major, averaging less than one per year. There may be some increase in enrolment based on this change, but we still anticipate small numbers.
This change has been discussed and agreed upon with Physics.

One regularizes a special topic offered twice already, and about to be offered again, Biochemistry 4230. The regularized offering should have similar enrolment levels as the current special topics enrolment.
I am sending this on behalf of our undergraduate studies chair, Dr. Martin Mulligan. If you have any comments or concerns, please let us know.

Anne Sinnott
This email is governed by the Terms and Conditions found in our Disclaimer<http://www.mun.ca/ict/disclaimer>.
December 3, 2013

TO: All Members, Faculty Council of Science

FROM: Joan Burry, Secretary
Committee on Undergraduate Studies, Faculty of Science

SUBJECT: Calendar Changes and New Course Proposals

At a meeting held on December 2, 2013, the Undergraduate Studies Committee of the Faculty of Science agreed that the following new course proposals and Calendar changes be forwarded to Faculty Council for approval:

1. Department of Earth Sciences
   (ii) Change to prerequisites for EASC 2030 and 2502

2. Department of Biochemistry
   (i) New Course Biochemistry 4230: Lipid and Lipoprotein Metabolism and secondary Calendar changes
   (ii) Calendar change to Biochemistry 4105
   (iii) Calendar change to joint honours program Biochemistry and Physics

3. Department of Ocean Sciences
   (i) Proposal to cross-list Biology courses
   (ii) Proposal to cross-list Physics course

4. Department of Chemistry
   (i) Change to prerequisite for Chemistry 1050

5. Department of Physics and Physical Oceanography
   (i) Change to course titles

Joan Burry
Assistant Registrar and
Secretary, Committee on Undergraduate Studies,
Faculty of Science
Calendar Changes for listing of Biochemistry 4105/Biology 4200/Pharmacy 3006 in Existing Biochemistry, Biology and Pharmacy Programs

Executive Summary
Biochemistry 4105 is now crosslisted with Pharmacy 3006, and about to be credit restricted with Biology 4200. The course is currently taught by Biochemistry and they have recently added several additional seats for students. This means that the course can be offered as an elective in more Biochemistry programs, and in a more appropriate electives clause in the Biochemistry honours program. Biology and Pharmacy already have the number of seats they wish and no program changes are needed. The course description is being slightly updated to reflect current teaching.

Resource Implications: Instructional Costs
This course will use existing teaching resources in the Department of Biochemistry at no additional cost.

Consultations
Biology – forthcoming
Pharmacy – forthcoming
Grenfell Campus - forthcoming
Marine Institute - attached

Library Holdings and/or Other Resources Required
This course has been taught for a long period of time and the library already has the appropriate resources for it. Consultation is forthcoming.

The costs, if any, associated with this change/these changes can be met from within the existing budget allocation for the Department of Biochemistry.

Signature of Unit Head (if appropriate):

Date:

Signature of Dean/Associate Vice-President (Academic)/Vice-President:

Date:
SUMMARY PAGE FOR SENATE

Approval Form

Existing Program Titles where updates are being done
1. Major in Biochemistry
2. Honours Degree in Biochemistry
3. Major in Nutrition

Calendar Changes
See appended pages

Secondary Calendar Changes
Update course descriptions for Biochemistry, Biology, Pharmacy – see appended pages

Rationale
The increased number of seats available in Biochemistry 4105 means that it can be added as an elective to more Biochemistry programs. The course description has been slightly updated to reflect current teaching.

Consultations Sought From
Biology
Pharmacy
Marine Institute
Grenfell Campus

Comments Received
forthcoming
forthcoming
YES
forthcoming

Library Report Received
forthcoming

Signature:  Dean, Associate Vice-President (Academic) or Vice-President

Name
Date

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APPROVAL GRANTED BY SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Chair:
Secretary:
Date:
CALENDAR CHANGES TO PROGRAMS

From the 2013.2014 calendar

8.1.2 Major in Biochemistry
2. Required courses to complete the major:
a. Biochemistry 2100, 2101, 3105, 3106, 3107, 3108.
b. At least 12 credit hours in courses from Biochemistry 2600, 3203, 4002, 4101, 4103, 4104, 4105, 4200, 4201, 4230-4239.

8.1.2.1 Honours Degree in Biochemistry
3. Required courses:
a. Biochemistry 2100, 2101, 3105, 3106, 3107, 3108, 4102, 499A, 499B, Medicine 310A/B.
b. Biochemistry 4210 or 4211.
c. Twelve credit hours in courses from Biochemistry 4002, 4101, 4103, 4104, 4105, 4200, 4201, 4230-4239.
d. At least 6 credit hours in courses from Biochemistry 2600, 3203, 4105, 4220, 4240-4249, Biology 2060, 3050, 3530, 4200, 4245, 4404, Chemistry 4201.

8.1.3.1 Major in Nutrition
2. Required courses to complete the major:
a. Biochemistry 2000 or 2005, 2100, 2101, 2600, 3106, 3203, 3402, 4300, 4301, Medicine 310A/B.
b. Six credit hours in courses from Biochemistry 3052, 3107, 3108, 3202, 3600, 4002, 4101, 4103, 4104, 4105, 4200, 4201, 4230-4249, Biology 3050.

COURSE DESCRIPTION CHANGES

From the 2013.2014 calendar

Current Calendar Listing Biochemistry:
4105 Immunology (same as the former Pharmacy 4105) is taught and administered by the School of Pharmacy. The course is an introduction to the molecular and cellular basis of immunity and hypersensitivity, and will include a discussion of the manipulation of the immune system in the management and treatment of disease.
CO: BIOC 2101, and either BIOC 311B or Medicine 310B
CR: the former Pharmacy 3105 and the former Pharmacy 4105
OR: tutorials
PR: BIOC 2101, and either BIOC 311B or Medicine 310B

Current Calendar Listing Biology
4200 Immunology is a study of vertebrate and invertebrate immune systems including antigens and antibodies and their reactions.
LH: 3
PR: BIOL 2060 and BIOL 3050

Current Calendar Listing Pharmacy
3006 Immunology is an introduction to the molecular and cellular basis of immunity and hypersensitivity. Manipulation of the immune system in the management and treatment of disease is discussed.
CR: Biochemistry 4105 and the former PHAR 4105
PR: PHAR 2003
UL: not applicable to the Bachelor of Science (Pharmacy) program for students admitted prior to Fall 2011

Proposed Calendar Listing Biochemistry:
4105 Immunology (same as Pharmacy 3006) is an introduction to the cells and organs of the innate and adaptive immune systems. The molecular and cellular basis of allergy, autoimmunity, vaccination and cancer immunology will also be discussed.
CR: Pharmacy 3006, the former Pharmacy 4105, and Biology 4200
PR: BIOC 2101

Proposed Calendar Listing Biology:
4200 Immunology is an introduction to the cells and organs of the innate and adaptive immune systems. The molecular and cellular basis of allergy, autoimmunity, vaccination and cancer immunology will also be discussed.
CR: Pharmacy 3006, the former Pharmacy 4105, and Biochemistry 4105
LH: 3
PR: BIOL 2060 and BIOL 3050

Proposed Calendar Listing Pharmacy:
3006 Immunology (same as Biochemistry 4105) is an introduction to the cells and organs of the innate and adaptive immune systems. The molecular and cellular basis of allergy, autoimmunity, vaccination and cancer immunology will also be discussed.
CR: Biochemistry 4105, Biology 4200, and the former PHAR 4105
PR: PHAR 2003 2004
UL: not applicable to the Bachelor of Science (Pharmacy) program for students admitted prior to Fall 2011

CONSULTATIONS RECEIVED to date November 19th

Marine Institute

-----Original Message-----
From: Dawn King [mailto:Dawn.King@mi.mun.ca] On Behalf Of MIUG Consultations
Sent: November-19-13 9:47 AM
To: Sinnott, Anne
Cc: Derek Howse
Subject: RE: further Biochemistry changes for 2014.15 calendar
Anne,

Thank you for the opportunity to review the change to the Biochemistry 4105 calendar listing. This change has no impact on programs at the Marine Institute. Comment has already been sent regarding the other two changes listed in the combined proposal.

We are happy to support the proposal as presented.

Derek Howse

Derek Howse
Chair, Undergraduate Studies Committee
Marine Institute, Memorial University
TEL: 709-778-0586
FAX: 709-778-0394
Derek.Howse@mi.mun.ca

-----Original Message-----
From: Sinnott, Anne [mailto:asinnott@mun.ca]
Sent: November 18, 2013 2:59 PM
To: MIUG Consultations; vpooffice@grenfell.mun.ca; Alcock, Erin
Cc: Martin Mulligan
Subject: further Biochemistry changes for 2014.15 calendar

Dear Marine Institute, Grenfell, Library,

Biochemistry has already sent you a packet of two changes - our new course Biochemistry 4230, and our revised Joint program with Physics.

We've one last change for the 2014-2015 calendar, updating our Biochemistry 4105 listing. That's attached as a solo item.

I also have all 3 of them in one packet. I'm attaching that too in case it makes your distribution or review of them easier.

Anne Sinnott
Biochemistry
864-7640
This email is governed by the Terms and Conditions found in our Disclaimer<http://www.mi.mun.ca/ict/disclaimer>. 
Proposal to update the Biochemistry Physics Joint Honours Program

Executive Summary
This joint honours program currently requires 135 credit hours and is almost impossible to complete. Most other joint honours programs in the Faculty of Science are now 120 credit hours. The number of required courses is being dropped to facilitate students interested in this program.

Resource Implications: Instructional Costs
This existing program will continue to use existing teaching resources in the Departments of Biochemistry and Physics at no additional cost.

Consultations
Physics – attached
Grenfell Campus - comments are forthcoming
Marine Institute - attached

Library Holdings and/or Other Resources Required
There is no anticipated change in library resources. Consultation is forthcoming.

The costs, if any, associated with this change/these changes can be met from within the existing budget allocation for the Department of Biochemistry.

Signature of Unit Head (if appropriate): ________________________________

Date: ________________________________

Signature of Dean/Associate Vice-President (Academic)/Vice-President:

Date:
SUMMARY PAGE FOR SENATE

Approval Form

Existing Program Title where update is being done
Biochemistry Physics Joint Honours

Calendar Changes
See appended pages

Secondary Calendar Changes
none

Rationale
This joint honours program currently requires 135 credit hours and is almost impossible to complete. Most other joint honours programs in the Faculty of Science are now 120 credit hours. Changes in the Biochemistry slate of courses are proposed to facilitate students who may be interested in this program. Similarly, some changes will be proposed to the slate of Physics courses.

Consultations Sought From
Physics
Marine Institute
Grenfell Campus

Comments Received
YES
YES
forthcoming

Library Report Received
forthcoming

Signature: Dean, Associate Vice-President (Academic) or Vice-President

Name Date

----------------------------------------------------------------------------------

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APPROVAL GRANTED BY SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Chair:
Secretary:
Date:
CALENDAR CHANGES TO PROGRAM

From the 2013.2014 calendar

4.1.5 Biochemistry and Physics Joint Honours
The following courses are required:
1. English 1080 and 1110 (or equivalent), Chemistry 1050 and 1051 (or Chemistry 1010, 1011, and 1031), Mathematics 1000 and 1001, Physics 1050 (or 1020) and 1051
2. Chemistry 2400, 2401.
3. Chemistry 2300 or 2301, or Physics 2053
4. Mathematics 2000, 2050, 2260 (or 3260), either Mathematics 3202 or Physics 3810.
5. Biochemistry 2100, 2101, 3105, 3106, either 3107 and 3108 or Medicine 310A/B; plus 12 credit hours in courses to be selected from Biochemistry 4002, 4101, 4102, 4103, 4104, 4105, 4200, 4201, 4210 or 4211, 4230-4249; plus a 3 credit hour course to be selected from Biochemistry 4210 or 4211.
6. Physics 2055, 2750 or 2056, 2820, 3220, 3400, 3500, 3750, 3820, 3900, 4820; plus one 4000 level Physics course.
7. One course to be selected from Physics 3150, 3300, 3751, 4400. Physics 3751 is recommended.
8. Either Physics 490A/B or Biochemistry 499A/B.
9. Other courses to complete the prescribed minimum of 435 120 credit hours in courses for the Joint Honours degree.

Consultation replies received to date – November 19th
Physics and Marine Institute

Physics
From: Brad deYoung <bdeyoung@mun.ca>
Sent: November-18-13 9:20 AM
To: Martin Mulligan
Cc: Dr. Michael Morrow; Rick Goulding; Sinnott, Anne
Subject: Support for Joint Hons Physics Biochemistry

Martin

Thanks for this. Yes we have reviewed and fully support the proposed revised program (below) for the Joint Honours in Biochemistry-Physics. This program should now be reachable for students, something that the previous program was not. Once approved we will let students know about this new program and encourage them to consider it. It was the last of our 1235 credit joint honours programs and we are glad to see it revised to 120 credit hours.

Thanks to you, and to Rick Goulding, for your work on this.

Brad

Brad deYoung
Professor and Head
Physics and Physical Oceanography
Memorial University
709-864-8738
bdeyoung@mun.ca

From the 2013-2014 calendar 4.1.5 Biochemistry and Physics Joint Honours
The following courses are required:

1. English 1080 and 1110 (or equivalent), Chemistry 1050 and 1051 (or Chemistry 1010, 1011, and 1031), Mathematics 1000 and 1001, Physics 1050 (or 1020) and 1051
2. Chemistry 2400, 2401.
3. Chemistry 2300 or 2301, or Physics 2053
4. Mathematics 2000, 2050, 2260 (or 3260), either Mathematics 3202 or Physics 3810.
5. Biochemistry 2100, 2101, 3105, 3106, either 3107 and 3108 or Medicine 310A/B; plus 12 credit hours in courses to be selected from Biochemistry 4002, 4101, 4102, 4103, 4104, 4105, 4200, 4201, 4210 or 4211, 4230-4249;
6. Physics 2055, 2750 or 2056, 2820, 3220, 3400, 3500, 3750, 3820, 3900; plus one 4000 level Physics course.
7. Either Physics 490A/B or Biochemistry 499A/B.
8. Other courses to complete the prescribed minimum of 120 credit hours in courses for the Joint Honours degree.

On 2013-11-18, at 9:10 AM, Martin Mulligan wrote:

________________________________________________________
Marine Institute
-----Original Message-----
From: Dawn King [mailto:Dawn.King@mi.mun.ca] On Behalf Of MIUG Consultations
Sent: November-19-13 9:45 AM
To: Sinnott, Anne
Cc: Derek Howse
Subject: RE: Consultation on Biochemistry Calendar changes proposed for 2014-2015 calendar

Anne,

Thank you for the opportunity to review the changes to the Biochemistry Physics Joint Honours program as well as the regularization of the Biochemistry 4230 course. The changes and new course have no impact on the programs at the Marine Institute.

We are happy to support the changes (with item seven removed as indicated in the attached revised calendar page) as presented.

Derek Howse

Derek Howse
Chair, Undergraduate Studies Committee
Marine Institute, Memorial University
TEL: 709-778-0586
FAX: 709-778-0394
Derek.Howse@mi.mun.ca

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Dear Grenfell, Marine Institute, and Library:

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One reduces the number of required courses in our Biochemistry Physics Joint Honours program, as our number is above average and makes the program difficult to complete. A tiny number of students take this major, averaging less than one per year. There may be some increase in enrolment based on this change, but we still anticipate small numbers. This change has been discussed and agreed upon with Physics.

One regularizes a special topic offered twice already, and about to be offered again, Biochemistry 4230. The regularized offering should have similar enrolment levels as the current special topics enrolment.

I am sending this on behalf of our undergraduate studies chair, Dr. Martin Mulligan. If you have any comments or concerns, please let us know.

Anne Sinnott
This email is governed by the Terms and Conditions found in our Disclaimer<http://www.mi.mun.ca/ict/disclaimer>. 
December 3, 2013

TO: All Members, Faculty Council of Science

FROM: Joan Burry, Secretary
Committee on Undergraduate Studies, Faculty of Science

SUBJECT: Calendar Changes and New Course Proposals

At a meeting held on December 2, 2013, the Undergraduate Studies Committee of the Faculty of Science agreed that the following new course proposals and Calendar changes be forwarded to Faculty Council for approval:

1. Department of Earth Sciences
   (ii) Change to prerequisites for EASC 2030 and 2502

2. Department of Biochemistry
   (i) New Course Biochemistry 4230: Lipid and Lipoprotein Metabolism and secondary Calendar changes
   (ii) Calendar change to Biochemistry 4105
   (iii) Calendar change to joint honours program Biochemistry and Physics

3. Department of Ocean Sciences
   (i) Proposal to cross-list Biology courses
   (ii) Proposal to cross-list Physics course

4. Department of Chemistry
   (i) Change to prerequisite for Chemistry 1050

5. Department of Physics and Physical Oceanography
   (i) Change to course titles

Joan Burry
Assistant Registrar and
Secretary: Committee
on Undergraduate Studies,
Faculty of Science
Proposal
Calendar Changes to Existing Courses Biology 3620, 4122 and 4601

Executive summary

Biology 3620, 4122 and 4601 are now under the administration of the Department of Ocean Sciences. We propose to have these courses registered as Ocean Sciences courses and cross list them with the Department of Biology.

Resource implications

There will be no resource implications, no additional costs associated with this change and no change in library holdings.

Signature of Unit Head


Date


Signature of the Dean


Date
Proposal
Calendar Changes to Existing Courses Biology 3620, 4122 and 4601

Course numbers and titles

BIOL/OCSC 3620 Aquatic Microbial Ecology
BIOL/OCSC 4122 Advanced Studies in Marine Animal Diversity
BIOL/OCSC 4601 Functional Biology of Fish

Proposed Additions to Calendar Description under 9.9 Ocean Sciences

3620 **Aquatic Microbial Ecology** (same as BIOL 3620) is a study of the nature, distribution and activities of microorganisms in the freshwater and marine environments. Field and laboratory work illustrate some of the investigative techniques used in this field of study.
CR: BIOL 3620, and former BIOL 3603
LH: 3
PR: BIOL 2600 and 3050, Statistics 2550 or equivalent

4122 **Advanced Studies in Marine Animal Diversity** (same as BIOL 4122) provides an in-depth examination of cellular, physiological, behavioural and ecological adaptations in marine animals. Lectures will be combined with discussions of relevant papers from the primary literature on topics of current interest which may relate morphology, ecology, evolution, natural history, species interactions and practical applications. Students will also gain hands-on experience by designing and conducting research projects involving live or preserved animals.
CR: BIOL 4122
LC: either three hours of lecture and three hours of laboratory per week or a two-week intensive course that embodies equivalent instructional time.
LH: either three hours of lecture and three hours of laboratory per week or a two-week intensive course that embodies equivalent instructional time.
PR: BIOL 2122, 2600 and 2900

4601 **Functional Biology of Fish** (same as BIOL 4601) is an introduction to anatomical physiological and cellular processes in the life cycle of fishes.
CR: BIOL 4601
PR: Biology 2060, 2210, and 3401

Secondary Changes

Proposed Additions to Calendar Description under 9.2 Biology

3620 **Aquatic Microbial Ecology** (same as OCSC 3620) is a study of the nature, distribution and activities of microorganisms in the freshwater and marine environments. Field and laboratory work illustrate some of the investigative techniques used in this field of study.
CR: OCSC 3620, and the former BIOL 3603
LH: 3
PR: BIOL 2600 and 3050, Statistics 2550 or equivalent
4122 Advanced Studies in Marine Animal Diversity (same as OCSC 4122) provides an in-depth examination of cellular, physiological, behavioural and ecological adaptations in marine animals. Lectures will be combined with discussions of relevant papers from the primary literature on topics of current interest which may relate morphology, ecology, evolution, natural history, species interactions and practical applications. Students will also gain hands-on experience by designing and conducting research projects involving live or preserved animals.
CR: OCSC 4122
LC: either three hours of lecture and three hours of laboratory per week or a two-week intensive course that embodies equivalent instructional time.
LH: either three hours of lecture and three hours of laboratory per week or a two-week intensive course that embodies equivalent instructional time.
PR: BIOI 2122, 2600 and 2900

4601 Functional Biology of Fish (same as OCSC 4601) is an introduction to anatomical physiological and cellular processes in the life cycle of fishes
CR: OCSC 4601
PR: Biology 2060, 2210, and 3401

Rationale for Change
Administrative responsibility for these three courses was transferred from the Biology Department to the Department of Ocean Sciences during the Spring of 2013. The Calendar changes requested are consistent with this change in administration and have been approved by the Department of Biology.

Approval Form

<table>
<thead>
<tr>
<th>Consultations Sought From</th>
<th>Comments Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Marine Institute</td>
<td>Yes / No</td>
</tr>
<tr>
<td>2. Grenfell campus</td>
<td>Yes / No</td>
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<tr>
<td>3. Department of Biochemistry</td>
<td>Yes / No</td>
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<td>4. Department of Biology</td>
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<td>5. Department of Chemistry</td>
<td>Yes / No</td>
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<td>6. Department of Computer Sciences</td>
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<td>8. Department of Geography</td>
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<td>9. Department of Mathematics and Statistics</td>
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<td>10. Department of Ocean Sciences</td>
<td>Yes / No</td>
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<td>11. Department of Physics and physical Oceanography</td>
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<td>12. Department of Psychology</td>
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<td>14. Faculty of Arts</td>
<td>Yes / No</td>
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<tr>
<td>15. Library Report Received</td>
<td>Yes / No</td>
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</table>

Approved by Dean, Associate Vice-President (Academic) or Vice President Yes / No
Name

APPROVAL GRANTED BY SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Chair: ______________________________________

Secretary: ______________________________________

Date: ______________________________________
Departmental Response

Hi Joan,
The Department of Ocean Science has requested that the following Biology course be cross listed as OCSC courses:
Biology 3620 Aquatic Microbial Ecology
Biology 4122 Advanced Studies in Marine Animal Diversity
Biology 4601 Functional Biology of Fish

A departmental meeting was held on November 27th at which time this request was approved.

If you have any questions please let me know.
Thanks
Karen

Karen Morris
Undergraduate Officer
Dept. of Biology
Memorial University of Newfoundland
St. John's, NL A1B 3X9
709-864-8021
December 3, 2013

TO: All Members, Faculty Council of Science

FROM: Joan Burry, Secretary
Committee on Undergraduate Studies, Faculty of Science

SUBJECT: Calendar Changes and New Course Proposals

At a meeting held on December 2, 2013, the Undergraduate Studies Committee of the Faculty of Science agreed that the following new course proposals and Calendar changes be forwarded to Faculty Council for approval:

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   (ii) Change to prerequisites for EASC 2030 and 2502

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   (ii) Calendar change to Biochemistry 4105
   (iii) Calendar change to joint honours program Biochemistry and Physics

3. Department of Ocean Sciences
   (i) Proposal to cross-list Biology courses
   (ii) Proposal to cross-list Physics course

4. Department of Chemistry
   (i) Change to prerequisite for Chemistry 1050

5. Department of Physics and Physical Oceanography
   (i) Change to course titles

Joan Burry
Assistant Registrar and
Secretary, Committee
on Undergraduate Studies,
Faculty of Science
Proposal

Calendar Change to Existing Course Physics/Ocean Sciences 2300

Executive summary

Physics 2300 Introductory Physical Oceanography is one of the core courses in the Minor in Oceanography currently under development by the Department of Ocean Sciences. We propose the creation of a new course OCSC 2300 that will be twinned with Physics 2300 and cross listed with the Department of Physics and Physical Oceanography

Resource Implications: Instructional Costs

None. This course will be taught by Faculty members of the Department of Physics and Physical Oceanography

Consultations

Consultations will be sought from:

1. St. John’s Campus: All Faculty of Science Departments and Faculty of Engineering
2. Grenfell Campus
3. Marine Institute
4. Library

Signature of Unit Head (if appropriate) ________________________________

Date: ________________________________

Signature of Dean/Associate Vice-President (Academic)/Vice-President ________________________________

Date: ________________________________
Calendar Change: Physics/Ocean Sciences 2300

SUMMARY PAGE FOR SENATE

Approval Form

Course number and Title:

PHYS/OCSC 2300 Introductory Physical Oceanography

Proposed Additions to Calendar Description under 9.9 Ocean Sciences

2300 Introductory Physical Oceanography (same as PHYS 2300) will provide an introduction to the physical ocean. Ocean characteristics studied will include: the properties of seawater, key features of ocean circulation, wind-forcing in the ocean, tides and shoreline processes as well as ocean coupling with the atmosphere, geosphere and cryosphere (ice) and new approaches to ocean sampling and numerical modelling. The course will take an integrated earth systems approach to the student of upwelling zones, open ocean ecosystems and climate change.
CR: PHYS 2300, ENVS 2371
PR: Any two first-year courses in Physics.

Secondary Changes

Proposed Additions to Calendar Description under 9.10 Physics and Physical Oceanography

2300 Introductory Physical Oceanography (same as OCSC 2300) will provide an introduction to the physical ocean. Ocean characteristics studied will include: the properties of seawater, key features of ocean circulation, wind-forcing in the ocean, tides and shoreline processes as well as ocean coupling with the atmosphere, geosphere and cryosphere (ice) and new approaches to ocean sampling and numerical modelling. The course will take an integrated earth systems approach to the student of upwelling zones, open ocean ecosystems and climate change.
CR: OCSC 2300, ENVS 2371
PR: Any two first-year courses in Physics.

Rationale for Change

Physics 2300 Introductory Physical Oceanography is one of the core courses in the Minor in Oceanography currently under the development by the Department of Ocean Sciences. We propose to have this course registered as an Ocean Sciences course cross listed with the Department of Physics and Physical Oceanography.

Consultations Sought From

Grenfell VP Office
Marine Institute
Biology

Comments Received

No
No
No
Earth Sciences No
Chemistry No
Biochemistry No
Computer Science No
Psychology No
Geography No
Mathematics No
Department of Physics and physical Oceanography Yes
Faculty of Engineering Yes

Library Report Received Yes

Signature: Dean, Associate Vice-President (Academic) or Vice-President

Name ____________________________

Calendar Change: Physics/Ocean Sciences 2300

FOR OFFICE USE ONLY

APPROVAL GRANTED BY SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Chair: ____________________________

Secretary: ____________________________

Date: ____________________________
Departmental Responses

From: Brad deYoung [mailto:bdeyoung@mun.ca]
Sent: November-24-13 2:37 PM
To: Fletcher, Garth
Cc: Parrish, Chris
Subject: Re: Calendar change PHYS 2300

Garth

We support the creation of OCSC 2300 and therefore support this request. We wonder about the wording that suggests Physics 2300 will be an OCSC course.

So the opening paragraph

Physics 2300 Introductory Physical Oceanography is one of the core courses in the Minor in Oceanography currently under development by the Department of Ocean Sciences. We propose the creation of a new course OCSC 2300 that will be twinned with Physics 2300 and cross listed with the Department of Physics and Physical Oceanography.

-----Original Message-----
From: Engineering Consultations [mailto:engrconsult@mun.ca]
Sent: November-29-13 2:33 PM
To: Fletcher, Garth
Cc: Edmunds, Jayde; Fisher, Andrew; Glyn George; Geoff Rideout
Subject: Re: Consultation Requests OCSC 2000, 2001, 2300 & 3000

Thank you Dr. Fletcher for the opportunity to comment on the proposed Calendar changes for the four new courses OCSC 2000, 2001, 2300 and 3000.

As Chair of the Committee on Undergraduate Studies of the Faculty of Engineering and Applied Science, I can report that these proposed changes have no impact on the Faculty.
Dr. Glyn George, Chair
Committee on Undergraduate Studies
Faculty of Engineering and Applied Science Memorial University of Newfoundland
St. John's NL A1B 3X5
Collections Development Division
Queen Elizabeth II Library
St. John's, Newfoundland, Canada
A1B 3Y1

27 November 2013

TO: Dr. Garth Fletcher, Head and Professor Emeritus, Department of Ocean Sciences
FROM: Dianne Taylor-Harding, Collections Librarian, Physics & Physical Oceanography

SUBJECT: Library Review for Proposal to Cross-list Courses -

PHYS2300 Introductory Physical Oceanography and
OCSC2300 Introductory Physical Oceanography

After reviewing the proposal to cross-list course PHYS2300 Introductory Oceanography and OCSC2300 Introductory Physical Oceanography, I have determined that this calendar change will have no impact on the collections activities of the Memorial University Libraries.

The Memorial University Libraries hold Research levels collections in Physical Oceanography. No additional library materials will be required to support these courses.

11/28/2013

X D. E. Taylor-Harding
Dianne E. Taylor-Harding
Collections Librarian, Physics & Physical Oceanography
December 3, 2013

TO: All Members, Faculty Council of Science

FROM: Joan Burry, Secretary
       Committee on Undergraduate Studies, Faculty of Science

SUBJECT: Calendar Changes and New Course Proposals

At a meeting held on December 2, 2013, the Undergraduate Studies Committee of the Faculty of Science agreed that the following new course proposals and Calendar changes be forwarded to Faculty Council for approval:

1. Department of Earth Sciences
   (ii) Change to prerequisites for EASC 2030 and 2502

2. Department of Biochemistry
   (i) New Course Biochemistry 4230: Lipid and Lipoprotein Metabolism and secondary Calendar changes
   (ii) Calendar change to Biochemistry 4105
   (iii) Calendar change to joint honours program Biochemistry and Physics

3. Department of Ocean Sciences
   (i) Proposal to cross-list Biology courses
   (ii) Proposal to cross-list Physics course

4. Department of Chemistry
   (i) Change to prerequisite for Chemistry 1050

5. Department of Physics and Physical Oceanography
   (i) Change to course titles

Joan Burry
Assistant Registrar and Secretary, Committee on Undergraduate Studies, Faculty of Science
Name changes: Physics 2300 and Physics 3300

Proposal
Calendar Change to Existing Courses
Physics 2300 and Physics 3300

Executive Summary
Physics 2300 is one of the courses identified as a core course in the Minor in Oceanography program currently under development by the Department of Ocean Sciences. In order to distinguish this course from other introductory courses that have been proposed as core courses in that program (Introductory Biological Oceanography, Introductory Chemical Oceanography, Introductory Geological Oceanography), it is proposed that the title for Physics 2300 be changed to “Introductory Physical Oceanography”.

To accommodate this change, it is also proposed that the title for Physics 3300 be changed to “Intermediate Physical Oceanography”.

Resource Implications: Instructional Costs
None

Consultations
Consultations sought from:
1. St. John’s Campus: All Faculty of Science Departments and Faculty of Engineering
2. Grenfell Campus
3. Marine Institute
Evidence of consultation will follow this page.

Library Holdings and/or Other Resources Required
Evidence of consultation follows this page.

The costs, if any, associated with this change/these changes can be met from within the existing budget allocation or authorized new funding for the Faculty of Science.

Signature of Unit Head (if appropriate):

Date:

Signature of Dean/Associate Vice-President (Academic)/Vice-President:

Date:
Name changes: Physics 2300 and Physics 3300

Consultations:

Example of E-mail letters sent (November 2, 2013):

**Subject:** Consultation: Proposed new course Physics 2300 Introductory Oceanography  
**From:** Michael Morrow <mmorrow@mun.ca>  
**Date:** 22/11/2013 12:21 PM  
**To:** "Burry, Joan" <jburry@mun.ca>  
**CC:** biohead@mun.ca, "Marino, Paul" <pmarino@mun.ca>, chemhead@mun.ca, cs-chair@mun.ca, John Hanchar <jhanchar@mun.ca>, math-head@mun.ca, fletcher@mun.ca, psychology.head@mun.ca

The Department of Physics and Physical Oceanography is proposing to rename Physics 2300 as "Introductory Physical Oceanography" and to rename Physics 3300 as "Intermediate Physical Oceanography". The course calendar change proposal form is attached. Feedback on this proposal would be appreciated before December 20, 2013.

Thanks

Michael Morrow, Undergraduate Studies Committee, Physics and Physical Oceanography

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**Responses as of Dec 3, 2013**

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**Response from Chemistry**

**Subject:** Re: Consultation: Proposed new course Physics 2300 Introductory Oceanography  
**From:** Chris Flinn <cgflinn@mun.ca>  
**Date:** 26/11/2013 10:34 AM  
**To:** Michael Morrow <mmorrow@mun.ca>

Hello Mike,

These changes make good sense in light of the proposed new courses for the oceanography minor.

cheers,

Chris Flinn  
Deputy Head, Undergraduate Studies,  
MUN Chemistry Department
Name changes: Physics 2300 and Physics 3300

Response from Library

26 November 2013
TO: Dr. Michael Morrow, Undergraduate Studies Committee,
Physics & Physical Oceanography
FROM: Dianne Taylor-Harding, Collections Librarian, Physics & Physical Oceanography
SUBJECT: Library Resources Review for Proposed Changes to Existing Courses – PHYS2300 Introductory Oceanography and PHYS3300 Introduction to Physical Oceanography

Upon review of the proposal to rename courses PHYS2300 Introductory Oceanography and PHYS3300 Introduction to Physical Oceanography, I have determined that the changes will have no impact on the collections activities of the Memorial University Libraries. If approved, the courses will be called PHYS2300 Introductory Physical Oceanography and PHYS3300 Intermediate Physical Oceanography. The Memorial University Libraries hold Research levels collections in Physical Oceanography. No additional library materials will be required to support these courses.

11/26/2013 X D. E. Taylor-Harding Dianne E. Taylor-Harding Collections librarian, Physics & Physical Ocean...
Name changes: Physics 2300 and Physics 3300

SUMMARY PAGE FOR SENATE

Approval Form

Course Number and Title:

PHYS 2300: Introductory Physical Oceanography
PHYS 3300: Intermediate Introduction to Physical Oceanography

Abbreviated Course Title

Introductory Phys Oceanography
Intermediate Intro Phys Oceanography

Calendar Change(s) - See attached

2300 Introductory Physical Oceanography will provide an introduction to the physical ocean. Ocean characteristics studied will include: the properties of seawater, key features of ocean circulation, wind-forcing in the ocean, tides and shoreline processes as well as ocean coupling with the atmosphere, geosphere and cryosphere (ice) and new approaches to ocean sampling and numerical modelling. The course will take an integrated earth systems approach to the student of upwelling zones, open ocean ecosystems and climate change.

CR: ENVS 2371
PR: Any two first-year courses in Physics.

3300 Intermediate Introduction to Physical Oceanography deals with the physics of processes in the ocean, but provides an integrated view of the whole field of oceanography. The importance of physical processes to other aspects of oceanography is treated.

PR: PHYS 2053 and Mathematics 2000

Secondary Calendar Changes

None

Rationale

Physics 2300 is one of the courses identified as a core course in the Minor in Oceanography program currently under development by the Department of Ocean Sciences. In order to distinguish this course from other introductory courses that have been proposed or are under development as core courses in that program (Introductory Biological Oceanography, Introductory Chemical Oceanography, Introductory Geological Oceanography), it is proposed that that the title for Physics 2300 be changed to “Introductory Physical Oceanography”.
Name changes: Physics 2300 and Physics 3300

To accommodate this change, it is also proposed that the title for Physics 3300 be changed to "Intermediate Physical Oceanography".

<table>
<thead>
<tr>
<th>Consultations Sought From</th>
<th>Comments Received (as of Dec 3/13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grenfell VP Office</td>
<td>No</td>
</tr>
<tr>
<td>Marine Institute</td>
<td>No</td>
</tr>
<tr>
<td>Ocean Sciences Centre</td>
<td>No</td>
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<tr>
<td>Biology</td>
<td>No</td>
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<tr>
<td>Earth Sciences</td>
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<td>Geography</td>
<td>No</td>
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<tr>
<td>Mathematics</td>
<td>No</td>
</tr>
<tr>
<td>Faculty of Engineering</td>
<td>No</td>
</tr>
</tbody>
</table>

Library Report Received: Yes

Signature: Dean, Associate Vice-President (Academic) or Vice-President

Name: ____________________________

FOR OFFICE USE ONLY

APPROVAL GRANTED BY SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Chair: ____________________________

Secretary: ________________________

Date: ____________________________
December 2, 2013

TO: All Members, Faculty Council of Science

FROM: Joan Burry, Secretary, Undergraduate Studies Committee, Faculty of Science

SUBJECT: Responses to Proposed Changes to General Regulations 5.6 and 5.7

In a memo dated October 10, 2013, the Senate Committee on Undergraduate Studies (SCUGS) requested feedback on proposed changes to General Regulations 5.6 EVALUATION and 5.7 EXAMINATIONS. At a meeting of the Undergraduate Studies Committee, Faculty of Science, held on December 2, 2013, it was agreed that the following criticisms and suggestions should go forward from the Faculty of Science.

General Regulation 5.6 EVALUATION

1. With respect to the proposal to delete the word “approximate” in (current) Regulation 5.6.3, it was felt that making known the specific dates of all methods of evaluation is unduly restrictive and not always possible. For example, topics may not have been covered as originally scheduled, due to illness, weather or other delays. It was also suggested that this change is not student-friendly as faculty would not have the option of tailoring exam dates to suit the wishes of the majority of their students.

2. Use of D2L should be included as a method to inform students of the Method of Evaluation

3. Under (new) Regulation 5.6.4 Scheduling of Forms of Evaluation, #3, units requested that “oral presentations” be included in the list of exemptions from the regulation preventing evaluation in the last two weeks of the semester. As well, it should be made clear that laboratory reports can be required.

4. Although SCUGS did not propose any change to 5.6.6 Correction and Return of Student Work, almost all science departments expressed opposition to the “20% rule” as it is now written. Suggestions for change include reducing the percentage to 15%, excluding senior level courses from the rule, and extending the deadline to drop courses without academic prejudice by one week.

General Regulation 5.7 EXAMINATIONS

Departments were against the proposed changes to the regulation governing rereads of final examinations: units felt that a refund was warranted for any increase in the final mark, whether or not the letter grade changed.
10 October 2013

TO:  
Secretaries, Academic Councils, Faculties/Schools/Grenfell Campus/Marine Institute  
Student Unions (St. John’s Campus, Grenfell Campus, Marine Institute)  
DETS, Division of Co-operative Education

FROM:  
Jennifer Porter, Secretary, Senate Committee on Undergraduate Studies

SUBJECT: General Academic Regulations 5.6 EVALUATION and 5.7 EXAMINATIONS

As you are aware, Senate approved General Academic Regulation 5.6.6 CORRECTION AND RETURN OF STUDENT WORK in February 2012. Since that time, the Senate Committee on Undergraduate Studies has received requests for waiver of the regulation and documentation related to its implications. The Committee has approved waivers where a sound pedagogical rationale has been provided and has engaged in discussions of this regulation.

At a meeting held in June 2013, the Senate Committee on Undergraduate Studies recognized the need to not only ensure that the spirit of Regulation 5.6.6 is being adhered to, but also to review General Academic Regulations 5.6 EVALUATION and 5.7 EXAMINATIONS in their entirety. As such, a Sub-Committee was established to review this matter. The Sub-Committee has completed its review and the proposed revisions to these regulations have been endorsed by the Senate Committee on Undergraduate Studies.

These revisions are now being forwarded to you for consideration and feedback. The Committee also suggests that Academic Councils forward these proposed calendar changes to all faculty for consideration.

Since the Senate Committee on Undergraduate Studies would like to deal with this matter as expeditiously as possible, I am requesting that you respond by 30 November 2013.

Thank you for your timely assistance in this very important matter; input from the academic community is essential in completing these revisions.

If you have any questions or require clarification regarding the above, please get in touch with me by phone at 864-4410 or by e-mail at jporter@mun.ca.

Yours truly,

Jennifer Porter
Deputy Registrar (Acting) and Secretary to the Committee

Attachment

cc: Committees on Undergraduate Studies  
Deans/Vice- Presidents  
Deputy Provost (Students) and Associate Vice-President (Academic)  
Undergraduate Studies
5.6 Evaluation of Student Work

5.6.1 Method of Evaluation

1. The method of evaluation in any course shall be determined by the academic unit subject to all University regulations.

5.6.2 Informing Students of the Method of Evaluation

1. The method of evaluation and required prerequisites or co-requisites shall be made known to students before the end of the first week of lectures in any semester or session.

2. This information shall be in typewritten or computer-generated format and shall be provided: i) in paper form to the students present; or ii) in electronic form via Memorial University’s approved email account. The method of evaluation must be provided by the end of the first week of lectures. In the case of Web-based courses, this information may be provided electronically.

3. As early as possible following the start of lectures in each semester/session, and no later than the end of the first week of lectures, the course instructor shall file with the appropriate academic unit, a copy of the method of evaluation.

4. The following shall be included in the explanation of the method of evaluation:
   - the allocation of marks for all parts of the evaluation, e.g., assignments, laboratory projects, presentations, tests, mid-term examinations, final examinations;
   - the approximate dates of all parts of the method of evaluation that will take place in class, e.g., tests, mid-term examinations, presentations, and assignments;
   - the dates on which all parts of the evaluation to be completed out of class are due; and
   - whether deferred tests or mid-term examinations, another alternate form of evaluation, or extensions of deadlines for out-of-class work are permitted.

A student who is prevented from writing a test or mid-term examination or completing assigned work by the deadline, by illness or bereavement or other acceptable cause, duly authenticated in writing, may apply, in writing and with supporting documents, for an alternate evaluation. Normally, this application must be made within one week of the original date of the examination or deadline to the course instructor.

Methods used for notification of grades earned in all parts of the method of evaluation and for the return of graded evaluative instruments will be in keeping with the Access to Information and Privacy Act.

When it is determined that there will be a common final examination for day and evening sections of a course, students must be so informed in the explanation of the method of evaluation for the course and prior to the end of the registration period.

5.6.3 Changing the Method of Evaluation

1. The explanation of the method of evaluation, as made available to the class in the first week of lectures, shall be changed only if:
   - exceptional circumstances warrant the change; and
   - the head of the academic unit approves the proposed change; and
   - accommodation is made for students who demonstrate to the faculty member that they are disadvantaged by the change.
5.6.4 Scheduling of Forms of Evaluation

1. No laboratory examinations totaling more than one laboratory period in length shall be given in any laboratory course in any week during a lecturing period in any semester or session. Such examinations shall be administered in the laboratory time period assigned for that course section. The application of this clause in the Faculty of Engineering and Applied Science and the Faculty of Medicine is subject to interpretation by the appropriate committee on undergraduate studies. The Senate Committee on Undergraduate Studies may grant a waiver of this clause for laboratory examinations in individual courses in a given term upon recommendation of the appropriate committee on undergraduate studies. Such waivers will be considered only if it can be shown that such laboratory examinations do not conflict with regularly scheduled sessions of another course for any student involved.

2. Any other examinations shall not extend beyond the class period assigned to that course section in any week during a lecturing period in any semester or session. The application of this clause in the Faculty of Engineering and Applied Science and the Faculty of Medicine is subject to interpretation by the appropriate committee on undergraduate studies. The Senate Committee on Undergraduate Studies may grant a waiver of this clause for examinations in individual courses in a given term upon recommendation of the appropriate committee on undergraduate studies. Such waivers will be considered only if it can be shown that such examinations do not conflict with regularly scheduled sessions of another course for any student involved.

3. No form of evaluation shall take place or be due during the last two weeks of the lecturing period in any semester or the last week of the lecturing period in any session, with the exception of oral exams, laboratory exams, and evaluation to be completed out of class which has been made available to students earlier in the lecturing period. Courses taught outside the regular time-frame are exempt from the application of this regulation. In exceptional circumstances, the undergraduate studies committee of the appropriate faculty or school may, upon recommendation of the head of an academic unit, grant a waiver of this regulation with the proviso that the total value of all forms of evaluation thereby permitted shall not exceed 25% of the final mark in that course. At the end of each semester, the Senate Committee on Undergraduate Studies shall be notified of waivers granted.

4. No examinations of any nature shall be held between the last day of lectures and the start of the formal examination period in any semester or session. The application of this clause to the Faculty of Education (with respect to accelerated courses), the Faculty of Medicine, the School of Human Kinetics and Recreation (with respect to accelerated courses and courses offered outside the normal time frame during the Spring semester) and the School of Nursing is subject to interpretation by the appropriate committee on undergraduate studies.

4.1. In the event of an officially declared emergency which results in the cancellation or interruption of in-class examinations or tests previously scheduled and notified to be held in the final class period of the third last week of lectures of a semester or the second last week of lectures of a session, teaching units may reschedule such examinations or tests in the next regularly scheduled class or as early as possible in the second last week of lectures of a semester or the last week of lectures of a session. In no circumstances can the rescheduled examinations or tests be held in the last week of lectures of a semester.

5.6.4 Good Writing Skill
1. Regardless of the method of evaluation, good writing skills are required for effective communication. Students are, therefore, expected to demonstrate proficiency in logical organization, clarity of expression, and grammatical correctness in their writing. For further information, refer to Grading—Good Writing.

5.6.5 Completing a Course

1. When it is prescribed that students, once registered, must complete a particular course, it is understood that they shall, when required, attend lectures given in the course, perform laboratory projects, and exercises that may be assigned and any other written or oral exercises prescribed, write or otherwise answer tests and examinations given in the course throughout the semester or session, including any final examinations, and shall obtain an overall passing grade in the course in accordance with the prescribed evaluation procedures.

5.6.6 Correction and Return of Student Work

1. Provided that students submit work by the due date outlined in the method of evaluation, instructors shall mark and return work that is worth a total of 20% of the final grade before the last day to drop courses without academic prejudice. This excludes practicums, placements, internships, theses, and courses where a single piece of work is used to determine the entire mark for the course.

2. In courses where evaluation includes a final examination, provided that students submit work by the due date outlined in the method of evaluation, instructors shall make all reasonable efforts to mark and return all work before the beginning of the examination period.

5.7 Final Examinations

5.7.1 Scheduling of Examinations

5. Laboratory examinations totaling more than one laboratory period in length shall be given in any laboratory course in any week during a teaching period in any semester or session. Such examinations shall be administered in the laboratory time period assigned for that course section. The application of this clause in the Faculty of Engineering and Applied Science and the Faculty of Medicine is subject to interpretation by the appropriate committee on undergraduate studies. The Senate Committee on Undergraduate Studies may grant a waiver of this clause for laboratory examinations in individual courses in a given term upon recommendation of the appropriate committee on undergraduate studies. Such waivers will be considered only if it can be shown that such laboratory examinations do not conflict with regularly scheduled sessions of another course for any student involved.

6. Any other examinations shall not extend beyond the class period assigned to that course section in any week during a teaching period in any semester or session. The application of this clause in the Faculty of Engineering and Applied Science and the Faculty of Medicine is subject to interpretation by the appropriate committee on undergraduate studies. The Senate Committee on Undergraduate Studies may grant a waiver of this clause for examinations in individual courses in a given term upon recommendation of the appropriate committee on undergraduate studies. Such waivers will be considered only if it can be shown that such examinations do not conflict with regularly scheduled sessions of another course for any student involved.
7. During the last two weeks of the lecturing period in any semester or the last week of the lecturing period in any session, no examinations or assignments—whether in-class or take-home—shall be administered or assigned. However, assignments of which students have been notified under Evaluation may be submitted and oral and laboratory examinations may be administered. Courses taught outside the regular time frame are exempt from the application of this regulation. The appropriate faculty or school undergraduate studies committee may, upon the recommendation of the head of an academic unit, grant a waiver of this clause with the proviso that the total value of all examinations or assignments thereby permitted in a course shall not exceed 20% of the final mark in that course. Such waivers will be considered only in exceptional circumstances or in the case of particular courses where it can be shown that the nature of the course determines the need for evaluation during the normally prohibited period. In the latter case, students must be notified of the method of evaluation in accordance with Evaluation. At the end of each semester, the Senate Committee on Undergraduate Studies must be notified of waivers granted.

8. No examinations of any nature shall be held between the last day of lectures and the start of the examination period in any semester or session. The application of this clause to the Faculty of Education (with respect to accelerated courses), the Faculty of Medicine, the School of Human Kinetics and Recreation (with respect to accelerated courses and courses offered outside the normal time frame during the Spring semester), and the School of Nursing is subject to interpretation by the appropriate committee on undergraduate studies.

9. In the event of an officially declared emergency which results in the cancellation or interruption of in-class examinations or tests previously scheduled and notified to be held in the final class period of the third last week of lectures of a semester or the second last week of lectures of a session, teaching units may reschedule such examinations or tests in the next regularly scheduled class or, as early as possible in the second last week of lectures of a semester or the last week of lectures of a session, in no circumstances can the rescheduled examinations or tests be held in the last week of lectures of a semester.

5.7.21 Scheduling of Final Examinations

1. Final examinations, if any, whether of the normal two-hour duration or longer, shall be held in each course at the end of the semester during which it was given in accordance with the schedule of examinations published by the Office of the Registrar. The application of this clause to the Bachelor of Education (Intermediate/Secondary) and all degree programs offered by the School of Human Kinetics and Recreation is subject to interpretation by the appropriate committee on undergraduate studies.

2. Normally, course sections offered during the day will have their final examinations, if any, scheduled in the day, and course sections offered in the evening will have their final examinations, if any, scheduled in the evening. When a student is unable for good reason to write a final examination scheduled outside the provisions of this clause, the student will be entitled to write a deferred examination. For further information refer to Exemptions From Final Examinations and Procedures for Applying to Write Deferred Final Examinations.

3. When an academic unit determines that there will be a common final examination for day and evening sections of a course, students must be so informed in the explanation of the method of evaluation for the course and prior to the end of the registration period.

4. Where possible, academic units should inform the Office of the Registrar when they submit their class schedules if it is anticipated that a common final examination will be required for day and
evening sections of a course, so that this information can be publicized in the class schedule for the appropriate semester. Academic units should indicate whether the examination is to be held during the day or the evening.

5.7.32 Exemptions From Final Examinations and Procedures for Applying to Write Deferred Final Examinations

1. A student who is prevented from writing a final examination by illness or bereavement or other acceptable cause, duly authenticated in writing, may apply, with supporting documents, to have the course graded or have the final examination deferred. This application must be made within one week of the original date of the examination to the head of the appropriate academic unit.

2. The decision regarding the request of the student to have a course graded or have the final examination deferred, including information on the appeals route open to the student in the case of a negative decision, must be communicated in writing to the student and to the Registrar within one week of the receipt of the student’s complete application. For further information refer to Appeal of Decisions.

3. In those cases where the academic unit accepts the extenuating circumstances the student may be permitted to write a deferred examination or, with the consent of both the academic unit and the student, the grade submitted may be based on term work alone. An interim grade of ABS will be assigned by the academic unit in the case of a student granted a deferred examination. This grade will be replaced by the final grade which must be received by the Registrar within one week following the start of classes in the next academic semester or session.

4. A student who is prevented from writing a deferred examination by illness, bereavement, or other acceptable cause, duly authenticated in writing, may apply, with supporting documents, to the head of the appropriate academic unit to have the deferred examination further deferred. This application must be submitted within one week of the scheduled date of the deferred examination. The examination will be postponed to a time not later than the last date for examinations in the semester following that in which the student was enrolled in the course.

4.5. A student who is scheduled to write three final examinations which start and complete in a twenty-four-hour period, may request for the second examination to be deferred.

5.7.43 Access to Final Examination Scripts

1. A student has a right to see his or her final examination script. However, the script is the property of the university and the University retains full possession and control of the script at all times. This regulation upholds the authority and judgement of the examiner in evaluation.

2. To access a final examination script, a student must make a written request to the head of the academic unit in which a course is offered. This request is subject to the following conditions:
   a. Any such request must be made following release of examination results for the semester in which the course was taken and within one month of the official release of grades by the University.
   b. The final examination script must be viewed in the presence of the course instructor or other person delegated by the head of the academic unit. Both the instructor and the student have the right to be accompanied by a registered student or a member of the faculty or staff of the University.

3. The final examination script must not be taken away or tampered with in any way.

5.7.54 Rereading of Final Examination Scripts
1. A student may apply to have a final examination script reread whether or not he or she has obtained a passing grade in that course.

2-2. A student is encouraged to request to access the final examination script prior to submitting a request to have the final examination reread. For further information refer to Access to Final Examination Scripts.

2-3. A student who wishes to have a final examination script reread must make application in writing to the Office of the Registrar within one month of the official release of grades by the University. When a rereading is requested, the University will make every reasonable attempt to have the rereading conducted by a faculty member(s) other than the original marker(s). Students are advised to refer to relevant academic units for policies and procedures governing re-reads of examinations.

3-3. An appropriate fee per course must be paid at the time of application. For further information refer to Fees and Charges - Reread of Final Examination Fee. If the final numeric-letter grade in the course is raised after rereading, the fee is refunded. If the final numeric-letter grade in the course is unchanged or lowered, the fee is forfeited.
Proposal  
Calendar Change(s) to Existing Program(s)

Executive Summary

The following calendar changes are proposed based on a review of the PsyD program description carried out in the spring of 2013.

31.1 Administration
The proposed changes
- a. clarify that the director must be a registered psychologist and a fulltime faculty member of the Department of Psychology; and
- b. expand the membership of the administrative committee to include representatives from Eastern Health and the PsyD student body.

31.2 Admission Criteria
The proposed changes provide more specific detail for applicants about which courses they need to have completed

31.3 Program of Study
We propose removing this section from the calendar, since the sequence of courses is subject to change from year to year based on faculty availability. The information will instead be made available to students in the PsyD program description.

31.4 Courses
Two new courses are proposed:
Psychology 6623: Child Psychopathology, Assessment and Diagnosis.
This course combines material previously offered through two existing courses (Psychology 6613 and Psychology 6621).
Psychology 7022: Practicum in Child Assessment
This course replaces Psychology 7021. In addition, the word “adult” should be inserted in the title of Psychology 7020. This change results in a sequence of adult and child material rather than a parallel offering which makes it easier to find appropriate instructors.

Resource Implications: Instructional Costs

The only proposed change associated with instructional costs is the new course offering. The new course will be offered in place of other courses currently listed and will in fact result in one fewer course needing to be taught.

Consultations

Approval is being sought from the two units associated with the program, the Department of Psychology and the University Counselling Centre.

Resource Implications: Library Holdings and/or Other Resources Required

No library resources beyond those already available for the PsyD program will be required for the new course.
The costs, if any, associated with this change/these changes can be met from within the existing budget allocation or authorized new funding for the Department of Psychology

Signature of Unit Head (if appropriate): ____________________________
Date: 12 Nov 2013

Signature of Dean/Associate Vice-President (Academic)/Vice-President:

Date: ____________________________
Proposed Calendar Changes

31.1 Administration

1. The Director, who must be a registered Psychologist and hold a full-time faculty position in the Department of Psychology at Memorial University, is appointed by the Head of the Psychology Department following a consultative process that includes the faculty most directly associated with the Psy.D. program.

2. The Psy.D. Administrative Committee consists of the Director and representatives from academic units involved in the program, Eastern Health, and a representative from the Association of Newfoundland Psychologists and the PsyD student body. The Psychology Department Head, on the recommendation of the Director, appoints Committee members. The student representative is elected by the PsyD students.

31.2 Admission Criteria

1. Students with Master’s level degrees who wish to be considered for the program must have completed the undergraduate degree in Psychology and the undergraduate course requirements described below.

2. Applicants are required to have an undergraduate Honours degree in psychology that includes an Honour’s thesis as well as includes senior courses in each of the following areas:
   a. abnormal psychology
   b. developmental psychology
   c. neuroscience
   d. cognition
   e. learning theory
   f. social psychology
   g. history and systems
   h. statistics
   i. research design

   2. biological bases of behaviour, cognitive-affective bases of behaviour, social bases of behaviour, individual behaviour, and historical foundations of psychology, as well as an Honour’s thesis.

3. Admission to the program is competitive. Applicants will be ranked according to academic aptitude, personal and interpersonal competence, clinical and professional potential, and availability of a supervisor. The application shall include academic transcripts, results of the Graduate Record Examination (verbal, quantitative and analytical subtests), three letters of recommendation and a statement of interests and objectives. One letter of recommendation must specifically address the suitability of the applicant for clinical work. Applicants who are short-listed will be interviewed, either in person or via telephone. Work experience, research experience, extra-curricular activities, and clinically relevant public service will be taken into consideration.

31.3 Program of Study

Students are required to successfully complete at least 66 credit hours in regulation graduate courses. These include:

- 9 credit hours in statistics and research design courses (6000, 6001, 6602)
- 30 credit hours in core courses (6611, 6612, 6620, 6623, 6613, 6630, 6631, 6632, 6633, 6650)
- 27 credit hours in practicum courses (7010, 7020, 7021, 7030, 7031, 7032, 7033, 7034, 7035)

Students must also complete a year-long internship, pass a comprehensive exam and successfully complete a research thesis.
<table>
<thead>
<tr>
<th>Year</th>
<th>Semester</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>Fall</td>
<td>Psychology 6000 Advanced-Statistics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Psychology 6610 Principles of Effective Relationships</td>
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<td></td>
<td></td>
<td>Psychology 6611 Ethics of Professional Practice</td>
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<tr>
<td></td>
<td></td>
<td>Psychology 6620 Principles of Adult-Assessment and Diagnosis</td>
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<tr>
<td></td>
<td>Winter</td>
<td>Psychology 7010 Practicum in Ethics and Relationship Skills</td>
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<tr>
<td>Year 2</td>
<td>Fall</td>
<td>Psychology 6001 Research Design</td>
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<tr>
<td></td>
<td></td>
<td>Psychology 6612 Adult Psychopathology</td>
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<tr>
<td></td>
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<td>Psychology 6621 Principles of Child Assessment and Diagnosis</td>
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<td>Psychology 7020 Practicum in Assessment and Diagnosis</td>
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<tr>
<td>Year 2</td>
<td>Spring</td>
<td>Psychology 7021 Practicum in Clinical Assessment and Diagnosis</td>
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<tr>
<td></td>
<td></td>
<td>Thesis Research</td>
</tr>
<tr>
<td>Year 3</td>
<td>Fall</td>
<td>Psychology 6602 Research Design in Clinical Psychology</td>
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<tr>
<td></td>
<td></td>
<td>Psychology 6613 Child Psychopathology</td>
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<td>Psychology 6630 Principles of Intervention with Adults</td>
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<td>Psychology 7030 Practicum in Assessment and Intervention I</td>
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<tr>
<td>Year 3</td>
<td>Winter</td>
<td>Psychology 6631 Principles of Intervention with Children</td>
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<tr>
<td></td>
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<td>Psychology 6632 Community Interventions</td>
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<td></td>
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<td>Psychology 6640 Consultation Processes</td>
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<td></td>
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<td>Psychology 7031 Practicum in Assessment and Intervention II</td>
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<tr>
<td>Year 4</td>
<td>Spring</td>
<td>Psychology 7032 Practicum in Community Intervention and Interprofessional Practice</td>
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<tr>
<td></td>
<td></td>
<td>Thesis Research</td>
</tr>
<tr>
<td>Year 3</td>
<td>Fall</td>
<td>Psychology 6633 Clinical Psychopharmacology</td>
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<td></td>
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<td>Psychology 6650 Supervision</td>
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<td></td>
<td></td>
<td>Psychology 6xxx Non-clinical elective</td>
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<td></td>
<td></td>
<td>Psychology 7033 Practicum in Advanced Assessment and Intervention I</td>
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<tr>
<td></td>
<td></td>
<td>Psychology 7050 Practicum in Supervision I</td>
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<tr>
<td>Year 3</td>
<td>Winter</td>
<td>Clinical Elective</td>
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<tr>
<td></td>
<td></td>
<td>Clinical Elective</td>
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<tr>
<td></td>
<td></td>
<td>Psychology 6xxx Non-clinical elective (if required)</td>
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<td></td>
<td></td>
<td>Psychology 7034 Practicum in Advanced Assessment and Intervention II</td>
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<td></td>
<td>Psychology 7051 Practicum in Supervision II</td>
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<tr>
<td>Year 3</td>
<td>Spring</td>
<td>Psychology 7035 Practicum in Rural Intervention and Interprofessional Practice</td>
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<tr>
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<td></td>
<td>Comprehensive Exam</td>
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<td></td>
<td></td>
<td>Thesis Research</td>
</tr>
<tr>
<td>Year 4</td>
<td></td>
<td>Predoctoral Internship</td>
</tr>
</tbody>
</table>

31.4 Courses
6000 Advanced Statistics
6001 Research Design
6602 Research Design in Clinical Psychology
6610 Principles of Effective Relationships
6611 Ethics of Professional Practice
6612 Adult Psychopathology
6613 Child Psychopathology
6614 Selected Topics in Psychopathology
6620 Principles of Adult Assessment and Diagnosis
6621 Principles of Child Assessment and Diagnosis
6622 Selected Topics in Assessment and Diagnosis
6623 Child Psychopathology, Assessment and Diagnosis
6630 Principles of Intervention with Adults
6631 Principles of Intervention with Children
6632 Community Interventions
6633 Clinical Psychopharmacology
6634 Selected Topics in Intervention
6640 Consultation Processes
6650 Supervision
6660-6669 Special Topics in Clinical Psychology
7010 Practicum in Ethics and Relationship Skills
7020 Practicum in Adult Assessment and Diagnosis
7021 Practicum in Clinical Assessment and Diagnosis
7022 Practicum in Child Assessment and Diagnosis
7030 Practicum in Assessment and Intervention I
7031 Practicum in Assessment and Intervention II
7032 Practicum in Community Intervention and Interprofessional Practice
7033 Practicum in Advanced Assessment and Intervention I
7034 Practicum in Advanced Assessment and Intervention II
7035 Practicum in Rural Intervention and Interprofessional Practice
7050 Practicum in Supervision I
7051 Practicum in Supervision II
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  Biochemistry
Subject: ☑ Regular Course    ☐ Special/Selected Topics Course

Course No.: Biochemistry 6000

Course Title: Lipid and Lipoprotein Metabolism

I. To be completed for all requests:

A. Course Type:
   ☑ Lecture course
   ☐ Laboratory course
   ☐ Directed readings
   ☐ Lecture course with laboratory
   ☐ Undergraduate course
   ☐ 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. Credit hours for this course: three

E. Estimated number of contact hours per semester: 36

F. Course description (reading list required):

   See attached course description and reading list. This course was formerly a special topics course and we are now regularizing it.

G. Method of evaluation:

   Percentage

<table>
<thead>
<tr>
<th>Written</th>
<th>Oral</th>
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</thead>
<tbody>
<tr>
<td>Class tests</td>
<td></td>
</tr>
<tr>
<td>Assignments</td>
<td>60</td>
</tr>
<tr>
<td>Other (specify): participation</td>
<td></td>
</tr>
<tr>
<td>Final examination:</td>
<td>Total</td>
</tr>
</tbody>
</table>

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

2. double credit

3. work that is a faculty research product

4. overlap with existing courses

Recommended for offering in the  □ Fall  □ Winter  □ Spring  20____

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.

Course instructor

[Signature]

Date  11/11/13

Approval of the Head of the academic unit

[Signature]

Date  11/21/13

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

Secretary, Faculty/School/Council

[Signature]

Date

Updated October 2011
BIOCHEMISTRY 6000 (Graduate)

Lipid and Lipoprotein Metabolism

This course is offered as a crosslisting with Biochemistry 4230, an undergraduate course. Different evaluation requirements are in place for each course and only those for 6000 are outlined here.

Prerequisites:

**BIOC 6000:** Completion of all Hon. B.Sc. requirements for Biochemistry, Biology, or Nutrition; or completion of an undergraduate course in metabolism plus enrollment in the M.Sc. or Ph.D. program in biological or biomedical sciences

Class schedule and attendance:
The course will be held in slot 06. Attendance at all classes is expected, including attendance to any “make-up” classes. Absence from a class without a timely-provided physician note will result in no marks assigned toward any participation or presentation for the day in question. In the event of a class cancellation due to unforeseen circumstances, a “make-up” class will be scheduled in order to complete all sections of the course.

Instructor and general course content:

Dr. R. Brown (Office BT-3013, rbrown@mun.ca): *Metabolism of complex lipids and their biological roles; and lipoprotein metabolism in health and disease*

Instruction:

**Section 1 (Weeks 1 to 4):**
An overview of the topics outlined above will be given. Students will be assigned four papers – one per week. Each critique for BIOC 6000 will be due by 11:59pm one week later. Without exception, a critique not turned in when it is due will receive a mark of zero. In addition, all students will be assigned a current research paper that students will present in a journal club (oral) format during Section 3. At the start of Section 1, students will be provided a list of topics to choose from for writing a research proposal; research proposal topics shall not be directly related to the student’s research.

**Section 2 (Week 5, class 1):**
A 10 page single-spaced draft of the assigned research proposal must be submitted by end of day; references and figures are not inclusive of the 10 pages. Students will be given feedback within two weeks. Failure to meet this deadline will result in a 20% deduction per day.

**Section 3 (Week 5, class 2, to Week 9):**
Papers assigned for oral presentations will be presented (as described under Section 1). Each presentation will be 15 minutes, where the student will highlight the findings and provide a critique. The presentation will be followed by a discussion that may last up to 15 minutes. BIOC 6000 students are expected to read each paper and to electronically submit 3-4 thoughtful questions for each orally presented paper prior to the class of its presentation; these questions should be asked during the discussion of a paper.

The final research proposal must be submitted no later than 11:59pm on March 7th. Failure to meet this deadline will result in a 20% deduction per day. The final proposal from each student will be provided to all students. Students will prepare a 15 minute oral presentation for Section 4 of their research proposal that will be followed by a discussion that may last up to 15 minutes.

Section 4 (Weeks 10 - 13):
All students are expected to read the summaries for the BIOC 4230 independent studies and the summaries for the BIOC 6000 research proposals. All BIOC 4230 students will present their independent study work to the class, followed by all BIOC 6000 students presenting their research proposal to the class. All students are expected to participate in a discussion for each presentation. Students may ask questions related to the independent study / research proposal, in the general areas of basic biochemistry or nutrition.

Student evaluation:

Written Critiques: 5% per paper (x4) = 20%
Research Proposal: 1st draft: 15%; Final version: 25%
Oral Presentations of Papers: 5% per paper (x4) = 20%
Participation: 20% - 10% for written questions in Section 3; 5% for oral participation in Section 3; 5% for oral participation in Section 4.
Biochemistry Graduate Calendar Changes for 2014-2015
proposed changes as of November 4, 2013
passed at faculty meeting TBA

1. CHANGES TO COURSE LIST
two existing graduate programs

Rationale: The course is designed to provide current knowledge about advances and controversies in lipid and lipoprotein metabolism in the context of health and disease. The topics are at present not available in other courses at Memorial University. It has formerly been offered as a Special Topics course, but is now being converted to a regular course due to the demand for the course.

Summary of Changes

I) Under the heading Regulations governing the degree of Master of Science, subsection Biochemistry, subheading Courses, section 24.6.2, p.606 of the 2013-2014 calendar

i) Add 6000 Lipid and Lipoprotein Metabolism (*Credit restricted with Biochemistry 4230*) to the top of the list

ii) Change the current first line of the list from 6000-6009 Special Topics in Biochemistry to 6001-6009 Special Topics in Biochemistry

II) Under the heading Regulations governing the degree of Doctor of Philosophy, subsection Biochemistry, subheading Courses, section 30.3.2, p.633 of the 2013-2014 calendar

i) Add 6000 Lipid and Lipoprotein Metabolism (*Credit restricted with Biochemistry 4230*) to the top of the list

ii) Change the current first line of the list from 6000-6009 Special Topics in Biochemistry to 6001-6009 Special Topics in Biochemistry

REVISED CALENDAR ENTRY ATTACHED
24.6 Biochemistry

24.6.2 Courses
A series of advanced courses in the areas outlined below will be offered. Normally only one course will be offered per semester.

- **6000 Lipid and Lipoprotein Metabolism** (*Credit restricted with Biochemistry 4230*)
- **6000 6001-6009 Special Topics in Biochemistry**
- **6010-6019 Special Topics in Nutrition and Metabolism**
- **6020-6029 Special Topics in Food Science**
- **6400 Control of Intermediary Metabolism**
- **6460 Structural Biochemistry**
- **6520 Nutritional Biochemistry**
- **6530 Food Biochemistry**
- **6590 Cellular, Molecular and Developmental Biology** (*Credit restricted with Biology 6590 and Medicine 6590*)
- **6630 Marine Biochemistry**
- **6680 Processing and Quality of Foods**

30.3 Biochemistry

30.3.2 Courses
A series of advanced courses in the areas outlined below will be offered. Normally only one course will be offered per semester.

- **6000 Lipid and Lipoprotein Metabolism** (*Credit restricted with Biochemistry 4230*)
- **6000 6001-6009 Special Topics in Biochemistry**
- **6010-6019 Special Topics in Nutrition and Metabolism**
- **6020-6029 Special Topics in Food Science**
- **6400 Control of Intermediary Metabolism**
- **6460 Structural Biochemistry**
- **6520 Nutritional Biochemistry**
- **6530 Food Biochemistry**
- **6590 Cellular, Molecular and Developmental Biology** (*Credit restricted with Biology 6590 and Medicine 6590*)
- **6630 Marine Biochemistry**
- **6680 Processing and Quality of Foods**