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, April 15, 2015, at 1 p.m. in C-2045.

AGENDA

1. Regrets
2. Adoption of the Minutes of March 18, 2015
3. Business Arising from the Minutes
4. Correspondence: None
5. Reports of Standing Committees:
   A. Undergraduate Studies Committee:
      b. Department of Physics and Physical Oceanography, calendar change, proposal to eliminate supplementary exams, paper 5.A.b (13 pages).
      c. Department of Biology, calendar changes, BIOL 3640 and 3710, paper 5.A.c (21 pages).
      d. Faculty of Science, new course proposal, Science 1807, paper 5.A.d (18 pages).
      e. Response to Senate Committee on Undergraduate Studies, Medical Certificates, paper 5.A.e (4 pages). Response to be approved by Faculty Council.
   B. Graduate Studies Committee: None
   C. Nominating Committee: None
   D. Library Committee: Report by Dr. Stephanie Cumoe
6. Proposed change to calendar change process in departments offering programs in both the Faculties of Arts and Science, paper 6 (4 pages).
7. Faculty of Science Strategic Plan - annual approval with amendment, paper 7 (5 pages).
8. Reports of Delegates from Other Councils
10. Question Period
11. Adjournment

Mark Abrahams
Dean of Science
FACULTY OF SCIENCE
FACULTY COUNCIL OF SCIENCE
MINUTES OF MEETING OF MARCH 18, 2015

A meeting of the Faculty Council of the Faculty of Science was held on Wednesday, March 18, 2015, at 1:00 p.m. in room C-2045.

FSC 2331 Present
Biochemistry
Booth, V. Cheema, S. Mulligan, M.

Biology
Innes, D.

Chemistry
Bottaro, C. Merschrod, E.

Computer Science
Byrne, R.

Earth Sciences
Hanchar, J.

Mathematics & Statistics
Sullivan, S.

Ocean Sciences
Fletcher, G.

Physics & Physical Oceanography
Morrow, M.

Psychology
Malsbury, C.

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

Geography
Edinger, E.
DELTAS
Todd, A.          Hajek, A.

Registrar's Office
Nolan, R.

School of Music
Cook, N.

Undergraduate Students
Doyle, K.

FSC 2332  Regrets:  None

FSC 2333  Adoption of Minutes
Moved: Minutes of the February 18, 2015, meeting be adopted.
(Sullivan/Hanchar).  Carried.  One abstention.

FSC 2334  Business Arising:  None

FSC 2335  Correspondence:  None

FSC 2336  Reports of Standing Committees:

A.  Undergraduate Studies Committee:
Report presented by Shannon Sullivan, Chair, Undergraduate Studies Committee. Council was notified that a proposal to amend Faculty Council by-laws will be circulated shortly for voting at the next meeting in April.

    a.  Moved: Department of Chemistry, calendar changes, amendment to the Chemistry major and honours programs: deletion of the language recommendations (Sullivan/Booth).  Carried.

B.  Graduate Studies Committee:
Report presented by Mark Abrahams, Dean, and Charles Malsbury, Psychology.

    a.  Grenfell Campus, new program proposal, Agriculture, Forest, and Environmental Science (MSc AFES), motion passed via email by Science Faculty Council, included for information only.

    b.  Moved: Department of Psychology, calendar changes, comprehensive exam process (Malsbury/Suprenant).  Carried. Discussion occurred related to the timing of comprehensive exams. SGS requires such exams to occur within seven months of the start of a program whereas the Department of Psychology conducts the
exams within the first year so the exam can form part of the screening process and also to allow students to begin their research earlier.

C. **Nominating Committee:** None

D. **Library Committee:** None

**FSC 2337**  
**SGS new program proposal:**  
**Moved:** Faculty Council does not support the proposed regulations governing 4+1 Accelerated Master's Programs (Mulligan/Edinger). **Carried.** Discussion took place about the pros and cons of such a program.

**FSC 2338**  
**Reports of Delegates from Other Councils**

**FSC 2339**  
**Report of the Dean**  
Presented by Mark Abrahams, Dean.

As an update on the Science building, the design and development phase has passed the 90% point, meaning that our design criteria are sufficient to begin issuing tenders for the initial phase of construction. This means that this project is currently on schedule and on budget with construction scheduled to begin this spring.

The Bonne Bay Marine Station in Norris Point was recognized at the Hospitality Newfoundland and Labrador’s Annual Conference in late February with the Sustainable Tourism Award. The Bonne Bay Marine Station is part of the Faculty of Science and operates in cooperation with the Gros Morne Cooperative Association. It receives approximately 10,000 visitors every year.

The VP (Finance and Administration) is investigating the feasibility of a campus shuttle system that should make it easier to physically get to and from locations such as Tiffany Court, the Marine Institute, the Battery Hotel, and Ocean Sciences.

The Dean participated in a debrief exercise of the fire that occurred in the Chemistry Physics building in November of last year. His concern was that decision-making associated with the recovery phase of that incident took place at a very senior level and did not include any dialogue with the Faculty of Science or the Departments of Chemistry and Physics. Kris Parsons, the Chief Risk Officer, has conceded that has to change.

On February 20, a federal senate committee led by Fabian Manning travelled to Newfoundland to learn more about aquaculture in this province. Their tour included federal and provincial government facilities, the Department of Ocean Sciences, and the Marine Institute. During their visit at Ocean Sciences, the President and the Dean made brief presentations that preceded their tour of the

At the March meeting of Senate, a proposal was presented for the creation of three Deans and Schools at the Grenfell campus. While both the Faculty of Arts and the Faculty of Science opposed the proposal, Senate approved it. We understand that the proposal approved was notional so we look forward to working with our colleagues at Grenfell as they develop the details.

We are currently in the early phase of work with our colleagues in the Faculty of Engineering and Applied Science to develop reciprocal minors. This has the benefit to the Engineering Students of more options in earning minors within the Faculty of Science while simultaneously providing our students with access to courses within the Engineering Faculty.

The Dean met recently with DELTS to discuss how the Faculty of Science can make better use of their resources. They want faculty to know that they are available to provide resources for use in not only distance courses, but also material for blended learning courses, supplementary teaching material such as Lightboard and wiz. With the library, they also maintain the learning object repository, known as stor that is meant to provide information that is freely available within the learning commons. Links to all these resources are below:

lightboard:  https://www.youtube.com/watch?v=N1I4Afti6XE

WizTeach:  http://www.wizteach.com

stor:  http://www.explorestor.mun.ca

FSC 2340  Question Period

FSC 2341  DELTS Professional Development Focus on Teaching, the teaching dossier
Presented by Allyson Hajek

Allyson Hajek, Instructional Design Specialist with DELTS, presented on the teaching dossier to promote awareness of how to document teaching activity and effectiveness.

FSC 2342  Adjournment
The meeting adjourned at 1:37 p.m.
April 2, 2015

TO: All Members, Faculty Council of Science

FROM: Rob Nolan, Secretary
       Committee on Undergraduate Studies, Faculty of Science

SUBJECT: Calendar Changes and New Course Proposals

At a meeting held on March 27, 2015, the Undergraduate Studies Committee of the Faculty of Science agreed that the following new program proposals and Calendar changes be forwarded to Faculty Council for approval:

1. Department of Ocean Sciences
   a. New course – Ocean Sciences 4100*

2. Department of Physics and Physical Oceanography
   a. Proposal to eliminate Supplementary exams in Physics

3. Department of Biology
   a. Proposal for Calendar Changes to Existing Courses
      i. Biology 3640
      ii. Biology 3710

4. Faculty of Science
   a. New course – Science 1807

[Signature]
Rob Nolan
Assistant Registrar and
Secretary, Committee
on Undergraduate Studies,
Faculty of Science
New Course Proposal
OCSC 4100 Marine Pelagic Food Webs

Executive summary

The Department of Ocean Sciences currently offers two undergraduate minors and is in the process of developing joint majors. This course will comprehensively address structure, function and dynamics of marine pelagic food webs and the relationships among marine food webs, biogeochemical cycles and climate. This course will provide critical course content at the senior undergraduate level for Ocean Sciences programs.

Resource implications

This course will use the teaching resources currently available in the Department of Ocean Sciences. The course could be taught by Dr. Richard B. Rivkin or Dr. Paul Snelgrove. 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
Sample Course Outline and Method of Evaluation

Marine Pelagic Food Webs will be taught in a lecture course format and will use a combination of lectures, discussions, student presentations and the analyses of representative data sets to study trophic interactions. Material for the readings and assignments will be from journals subscribed to by the QEII Library.

Lecture/Class Topics:

Week 1  Environmental characteristics of ocean regions
Week 2  Food web structure in coastal and temperate ocean regions
Week 3  Food web structure in tropical and polar ocean regions
Week 4  Food web and ocean biogeochemistry
Week 5  Bacteria
Week 6  Phytoplankton
Week 7  Zooplankton
Week 8  Harvestable marine resources
Week 9  Benthic pelagic coupling
Week 10  End-to-end food webs
Week 11  Food web modelling/Student presentations
Week 12  Food web and climate interactions/Student presentations

Evaluation:

10%  Participation and engagement during in-class discussions. It is expected that each student will contribute to in class discussions on the lecture topics and assigned readings. Participation in each class will be assessed (i.e. 1% of the final grade per class) and discussed weekly with the students.
30% In-class oral presentation. The purpose of the oral presentation is to provide the student with the experience of preparing for, presenting and defending an idea in front of a critical audience. The presentation will critically review or describe a topic or field, and represent some original thought and synthesis of ideas and concepts. Proposal and outline for the oral presentation topic will be due by week 6 and will represent 7.5% of the final grade (i.e. 25% of the oral presentation grade).

30% Final written paper/project. The purpose of this paper/project is to help the student develop an in-depth understanding of an area of research. The research paper should represent a critical review of a topic or field with some synthesis or extension of ideas or concepts. Proposal and outline for the final paper/project will be due by week 6 and will represent 7.5% of the final grade (i.e. 25% of the written paper/project grade).

30% Final exam

Texts:

There is no single suitable text book for a course with this scope. Course material for the readings and assignments will be from current and classic literature. The QEII Library currently subscribes to the journals that will be used for this course. These include, Nature, Science, Deep Sea Research, Limnology and Oceanography, Ecology, Proceedings of the National Academy of Science, Marine Ecology Progress Series, Marine Microbial Ecology, and ICES Marine Science.

Instructor(s):

Dr. Richard B. Rivkin and/or Dr. Paul Snelgrove, Department of Ocean Sciences

Prerequisites:

Biology 1002 Principles of Biology or Biology 2120 Biology for Students of Earth Sciences.

OCSC 2000 Introductory Biological Oceanography or Biology 3710 Biological Oceanography.
SUMMARY PAGE FOR SENATE

Approval Form

Course Number and Title: OCSC 4100 Marine Pelagic Food Webs

Calendar Description:
OCSC 4100 examines the structure, function and dynamics of pelagic food webs in the marine environment. The course will focus on the material and energy flows within and among trophic levels and the interactions with major biogeochemical cycles and climate.
PR: Biology 1002 or 2120, OCSC 2000 or Biology 3710.

Rationale:
The Department of Ocean Sciences currently offers undergraduate minors and a graduate programme and is in the process of developing a joint major. Currently there is no course offered through the Department Ocean Sciences, or by any department in the Faculty of Sciences that comprehensively considers structure, function and dynamics of marine pelagic food webs (i.e. food webs end-to-end) or the relationships among marine food webs, biogeochemical cycles and climate. This course will provide critical course content for the Ocean Sciences curriculum.

Consultations Sought From

1. Marine Institute
2. Grenfell campus
3. Department of Biochemistry
4. Department of Biology
5. Department of Chemistry
6. Department of Computer Sciences
7. Department of Economics
8. Department of Geography
9. Department of Mathematics and Statistics
10. Department of Physics and Physical Oceanography
11. Department of Psychology
12. Faculty of Business Administration
13. Faculty of Engineering and Applied Science
14. Faculty of Education
15. Faculty of Arts
16. Library Report Received

Comments Received
No
No
Yes
Yes
No
No
Yes
Yes
No
No
Yes
Yes

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

Name

APPROVAL GRANTED BY SENATE COMMITTEE ON UNDERGRADUATE
Appendix: Consultations
Comments from the Queen Elizabeth II Library
23 February 2015

To: Garth Fletcher  Department of Ocean Sciences
From: Erin Alcock, Science Research Liaison Librarian
Subject: New Course Proposal – OCSC 4100 Marine Pelagic Food Webs

I have reviewed the proposal for the new course, Marine Pelagic Food Webs and have
determined that the Memorial University Library system has ample resources to support
this course under existing budget allocations.

The summary of library holdings below indicates monograph titles in this subject area,
held both in the Queen Elizabeth II Library and the C.R. Barrett Library, as well as, more
than sufficient coverage from article indexes. Any additional resources required could
be purchased under allocations for biology, physics and physical oceanography, the
Marine Institute Library and other appropriate funds. The major journals in this area are
well covered, as noted in the proposal itself.

Library Holdings Summary

Table One: Weekly Course Topics

<table>
<thead>
<tr>
<th>Course Topic</th>
<th>As Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enviro$ AND ocean$</td>
<td>3497</td>
</tr>
<tr>
<td>&quot;Food webs&quot;</td>
<td>153</td>
</tr>
<tr>
<td>AND coast$</td>
<td>26</td>
</tr>
<tr>
<td>AND temperate</td>
<td>7</td>
</tr>
<tr>
<td>AND tropical</td>
<td>13</td>
</tr>
<tr>
<td>AND polar</td>
<td>6</td>
</tr>
<tr>
<td>AND bacteria</td>
<td>12</td>
</tr>
<tr>
<td>AND phytoplankton</td>
<td>17</td>
</tr>
<tr>
<td>AND zooplankton</td>
<td>12</td>
</tr>
<tr>
<td>AND model$</td>
<td>59</td>
</tr>
<tr>
<td>AND climate</td>
<td>33</td>
</tr>
<tr>
<td>Havestable marine resources</td>
<td>9</td>
</tr>
</tbody>
</table>

*as of date of memo

Table Two: Selected Article Indexes and Databases

**Article Indexes and Databases**
Comments from Business
From: Larry Bauer [mailto:lbauer@mun.ca]
Sent: February-20-15 2:17 PM
To: Fletcher, Garth
Subject: Re: FW: New course proposal

Hello:

Thank you for the opportunity to comment on this proposal. The Faculty of Business Administration has no concerns with the proposed changes.

--larry

Comments from Biology
From: Karen Morris [mailto:mmorris@mun.ca]
Sent: February-05-15 10:20 AM
To: Fletcher, Garth
Cc: David Innes
Subject: Re: Fwd: New course proposal

Hi Garth,

The Biology Undergraduate Studies Committee reviewed the new course proposal, OCSC 4100 Marine Pelagic Food Webs, and have some comments and concerns to pass on to you.

A concern that was raised is related to the 45% given for participation in discussions and an in-class oral presentation under the method of evaluation. The committee felt that it would be difficult to allocate such a large portion of the final grade objectively (not to mention that 20% of the mark should be allocated before the drop date). This could also cause problems if students challenge these grades. We suggest lowering the percentage value of these evaluations.

It also appears that a large portion of the class time would be taken up with presentations and discussions, leaving little time to cover the topics listed in the course outline. There does not appear to be an associated weekly 3 h lab/seminar - is the plan to have a 3 hour lecture time slot each week? How will the lectures, discussions, student presentations and analyses of data sets be scheduled in this time frame?
We also wondered why this is proposed as a 4th year course since the prerequisites are second year courses. It would be more appropriate as a third year course, with students in their second year able to take it based on the prerequisites currently proposed.

Thanks
Karen

Responses to Biology
From: Fletcher, Garth
Sent: Tuesday, March 10, 2015 12:25 PM
To: Karen Morris
Cc: David Innes; Parrish, Chris
Subject: New course proposal OCSC 4100

Thanks Karen for the Biology Undergraduate Committee’s response to our proposed new course OCSC 4100.

We have now received and collated comments from half of the academic units we consulted. We agree that 45% given for participation in discussions and an in-class oral presentation is high: the value has now been reduced to 32.5%. In addition the marking scheme has been adjusted so that 20% is allocated before the drop date. As to the class format, there is no lab and now that the emphasis on presentations and discussions has been substantially reduced there will be ample time to cover all topics. As to the level, the course format is designed for senior students and one of the prerequisites is a third year class: Biology 3710.

Best regards

Garth

Comments from Geography
From: Mercer, Stacey
Sent: January-29-15 3:36 PM
To: Fletcher, Garth
Subject: FW: New course proposal

Good afternoon,
See below. Thanks.

Stacey Mercer
Secretary to the Associate Deans
Faculty of Arts
Memorial University of Newfoundland
St. John's, NL A1C 5S7

Tel: (709) 864-8255
Fax: (709) 864-2135
staccym@mun.ca
www.mun.ca/arts

From: Catto, Norm
Sent: January 29, 2015 2:33 PM
To: Mercer, Stacey
Subject: RE: New course proposal

Dear Stacey:

Geography is supportive of this new course.

Comments from the Faculty of Arts
From: Mercer, Stacey
Sent: January-29-15 11:08 AM
To: Fletcher, Garth
Subject: FW: New course proposal

Good morning,
See below.

Thanks.

Stacey Mercer
Secretary to the Associate Deans
Faculty of Arts
Memorial University of Newfoundland
St. John's, NL A1C 5S7

Tel: (709) 864-8255
Fax: (709) 864-2135
staccym@mun.ca
www.mun.ca/arts

From: Cory W. Thorne [mailto:coryt2@mun.ca]
Sent: January 29, 2015 10:35 AM
To: Mercer, Stacey
Cc: Charles Mather
Subject: Re: New course proposal

Hi Stacey,
While there are several courses in folklore that deal with foodways, our emphasis is on the cultural aspects of food. I don’t see anything in this proposal which would overlap with or affect our courses.

Sincerely,
Cory Thorne

CORY W THORNE, Ph.D.
Head & Associate Professor, Department of Folklore
Memorial University of Newfoundland, Canada

coryt2@mun.ca · 709-864-6211 · www.mun.ca/folklore

On Jan 29, 2015, at 10:12 AM, Mercer, Stacey <staceym@mun.ca> wrote:

Good morning,
You are invited to give feedback on the attached proposal.
Thank you.

Stacey Mercer
Secretary to the Associate Deans
Faculty of Arts
Memorial University of Newfoundland
St. John's, NL A1C 5S7

Tel: (709) 864-8255
Fax: (709) 864-2135
staceym@mun.ca
www.mun.ca/arts

Comments from Biochemistry
From: Biochemistry Head
Sent: January-28-15 9:02 AM
To: Fletcher, Garth
Subject: RE: New course proposal

Hi Garth
No concerns from a Biochemistry perspective on this. Our undergraduate committee did however, point out that as currently written the evaluation scheme doesn’t comply with Regulation 6.6.6, and so in its current form the proposal will be sent back. Just a head’s up that will hopefully help smooth the passage by addressing it now.

On a separate, although partially related note, has there ever been any discussion on your end of a Marine Biochemistry course. It is something that is likely to be of interest at this end, but we don’t really have anyone with the appropriate expertise to take the lead on such a course in the Department. Anyway, that’s just a thought that I will leave with you to do with as you see fit.

All the best

Mark

Mark D. Berry Ph.D.
Professor and Head
Dept. Biochemistry
Memorial University of Newfoundland
St. John’s, NL, Canada A1B 3X9

Tel: (709) 864-8529
E-mail: biochead@mun.ca; mberry@mun.ca

Response to Biochemistry
From: Fletcher, Garth
Sent: Tuesday, March 10, 2015 2:09 PM
To: Biochemistry Head
Cc: Parrish, Chris
Subject: RE: New course proposal OCSC 4100

Thanks for your advice Mark.

We have now received and collated comments from half of the academic the units we consulted. We have now adjusted the marking scheme so that 20% of the total is allocated before the drop date.

Best regards

Garth

Comments from Engineering
From: Engineering Consultations [mailto:engrconsult@mun.ca]
Sent: January-27-15 9:01 AM
To: Fletcher, Garth
Cc: Fisher, Andrew; Edmonds, Jayde
Subject: Re: New course proposal OCSC 4100

Dear Dr. Fletcher,
Your request arrived six days after the January meeting of the Committee on Undergraduate Studies of the Faculty of Engineering and Applied Science. The next meeting is not for another three weeks.

Instead, Prof. Fisher, the Associate Dean (Undergraduate Studies) and I have reviewed the package and we find no impact on our Faculty.

Yours sincerely,

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

Math & Stats
From: Math Consult [mailto:mathconsult@mun.ca]
Sent: January-26-15 2:21 PM
To: Fletcher, Garth
Subject: Re: New course proposal

Hello Dr. Fletcher:

The Dept of Math & Stats has no objection to this proposal.

Harold Johnson
Undergraduate Officer in Mathematics

Education
From: Galway, Gerald J.
Sent: January-26-15 12:25 PM
To: Fletcher, Garth
Subject: Re: New course proposal

Hi Garth

I have reviewed the course syllabus for the proposed course. Thank you for the opportunity to comment.

The Faculty of Education is pleased to support the proposal.

Gerald

**

Dr. Gerald Galway
Associate Dean (Undergraduate Programs)
Associate Professor

Faculty of Education
Memorial University
St. John's, NL Canada, A1B 3X8
Tel 709.864.3315

ggalway@mun.ca
www.mun.ca/educ
From: <Fletcher>, Garth <fletcher@mun.ca>
Date: Monday, January 26, 2015 at 11:44 AM
To: Alex Marland <amarland@mun.ca>, Biochemistry Head <biochead@mun.ca>, 'Brad de Young' <bdeyoung@mun.ca>, Business Undergrad Help <busihelp@mun.ca>, "cs-chair@mun.ca" <cs-chair@mun.ca>, David Innes <dinburgh@mun.ca>, "Economics (wlocke@mun.ca)" <wlocke@mun.ca>, Gerald Galway <ggalway@mun.ca>, Engineering <engrconsult@mun.ca>, "Alcock, Erin" <ekalcock@mun.ca>, Geography <cmather@mun.ca>, Gerard Martin <Psychology.Head@mun.ca>, "gjiennor@mun.ca" <gjiennor@mun.ca>, "mathconsult@mun.ca" <mathconsult@mun.ca>, "miugconsultations@mi.mun.ca" <miugconsultations@mi.mun.ca>, "Pickup, Chemistry" <chemhead@mun.ca>, "ypoffice@grenfell.mun.ca" <ypoffice@grenfell.mun.ca>
Cc: "Parrish, Chris" <cparrish@mun.ca>
Subject: New course proposal

Colleagues: I have attached the Department of Ocean Sciences proposal for a new course “OCSC 4100 Marine Pelagic Food Webs” for you to review prior its submission to the Faculty of Science Undergraduate Studies Committee. Please send me your thoughts on this proposal as soon as you are able.

Best regards

Garth

Garth L. Fletcher
Head and Professor Emeritus
Department of Ocean Sciences
Ocean Sciences Centre
0 Marine Lab Road
St John’s NL
Canada
A1C 5S7

Tel: 709-864-3276
Fax: 709-864-3220
April 2, 2015

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

At a meeting held on March 27, 2015, the Undergraduate Studies Committee of the Faculty of Science agreed that the following new program proposals and Calendar changes be forwarded to Faculty Council for approval:

1. Department of Ocean Sciences
   a. New course – Ocean Sciences 4100

2. Department of Physics and Physical Oceanography
   a. Proposal to eliminate Supplementary exams in Physics

3. Department of Biology
   a. Proposal for Calendar Changes to Existing Courses
      i. Biology 3640
      ii. Biology 3710

4. Faculty of Science
   a. New course – Science 1807

Rob Nolan
Assistant Registrar and Secretary: Committee on Undergraduate Studies, Faculty of Science
Proposal
Calendar Change to Degree Regulations:
Faculty of Science

Executive Summary

It is proposed that the Faculty of Science regulation governing supplementary examinations be amended to indicate that supplementary examinations will no longer be available in courses delivered by the Department of Physics and Physical Oceanography.

Resource Implications: Instructional Costs

None

Consultations

Comments will be sought from the Marine Institute, Grenfell Campus, the Faculty of Engineering, the Faculty of Science, and other Faculties on the St. John’s Campus

Library Holdings and/or Other Resources Required

Consultation will be sought from the Library regarding implications for library holdings.

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

Program Title  N/A

Calendar Change(s)

Under the Faculty of Science, Calendar, 6 Degree Regulations, revise the title of Section 6.3 to read:

“6.3 Regulations to Govern Supplementary Examinations in the Departments of Biochemistry, Computer Science, and Mathematics and Statistics, and Physics and Physical Oceanography.”

And amend regulation 1 to read:

“1. Supplementary examinations will be allowed in certain of the Biochemistry, Computer Science, and Mathematics and Statistics, and Physics and Physical Oceanography courses which have written final examinations. In each course, students will be informed as to the possibility of a supplementary examination during the first week of classes. This information will be provided in writing, as part of the evaluation scheme for the course.”

Secondary Calendar Changes

None

Rationale

Within the Department of Physics and Physical Oceanography, the offering of a supplementary examination, primarily in first year courses, has been at the discretion of the instructor. In courses where supplementary examinations were offered, they were only available to students with final marks between 45-49% and with a term mark of 50% or higher. After having written a supplementary examination, a student’s final grade was then limited to the original term mark or less. One longstanding concern with these regulations has been that, in principle, they could give rise to anomalous situations where students getting a final grade in the low 50% range are unable to improve their marks while students with similar or lower terms marks might obtain a higher final grade by achieving a slightly lower mark on the final exam and thus being able to avail of the supplementary exam. Notwithstanding this concern, the experience in this department has been that when supplementary examinations were available in a course, roughly half of the eligible students opted to avail of them and outcomes, in the best cases, were rarely better than a change in grade from slightly below 50% to slightly above 50%. This apparent ineffectiveness may account for the fact that, from the Fall 2010 semester to Winter 2013, only 9 students wrote supplementary examinations. First year physics instructors concluded that supplementary examinations were not having a significant positive impact on student outcomes in their courses and, since the 2013-2014 academic year, supplementary examinations have not been offered in courses delivered by this department. Given this development, it is no longer appropriate to include Physics and Physical Oceanography in the list of departments covered by calendar regulation 6.3.
## Consultations Sought From

<table>
<thead>
<tr>
<th>Department/Institute</th>
<th>Comments Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Grenfell Campus</td>
<td>Yes</td>
</tr>
<tr>
<td>2. Marine Institute</td>
<td>No</td>
</tr>
<tr>
<td>3. Department of Biochemistry</td>
<td>Yes</td>
</tr>
<tr>
<td>4. Department of Biology</td>
<td>No</td>
</tr>
<tr>
<td>5. Department of Chemistry</td>
<td>No</td>
</tr>
<tr>
<td>6. Department of Computer Science</td>
<td>No</td>
</tr>
<tr>
<td>7. Department of Earth Sciences</td>
<td>No</td>
</tr>
<tr>
<td>8. Department of Mathematics and Statistics</td>
<td>No</td>
</tr>
<tr>
<td>9. Department of Ocean Sciences</td>
<td>No</td>
</tr>
<tr>
<td>10. Department of Psychology</td>
<td>No</td>
</tr>
<tr>
<td>11. Faculty of Engineering</td>
<td>Yes</td>
</tr>
<tr>
<td>12. Faculty of Arts</td>
<td>No</td>
</tr>
<tr>
<td>13. Faculty of Business</td>
<td>Yes</td>
</tr>
<tr>
<td>14. Faculty of Education</td>
<td>Yes</td>
</tr>
<tr>
<td>15. Faculty of Medicine</td>
<td>Yes</td>
</tr>
<tr>
<td>16. School of Human Kinetics and Recreation</td>
<td>Yes</td>
</tr>
<tr>
<td>17. School of Music</td>
<td>Yes</td>
</tr>
<tr>
<td>18. School of Nursing</td>
<td>No</td>
</tr>
<tr>
<td>19. School of Pharmacy</td>
<td>Yes</td>
</tr>
<tr>
<td>20. School of Social Work</td>
<td>Yes</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:
Consultations:

Messages sent:

Date: Tue, 17 Feb 2015 15:57:59 -0330
From: Michael Morrow <mmorrow@mun.ca>
To: staceym@mun.ca, fba.ad.undergrad@mun.ca, shicks@mun.ca, bfraize@mun.ca,
    engrconsult@mun.ca, associatevoffice@grenfell.mun.ca, mehickey@mun.ca,
    miugconsultations@mi.mun.ca, Dean@med.mun.ca, ellenw@mun.ca,
    deanNurse@mun.ca, pharminfo@mun.ca, deansocialwork@mun.ca,
    "Taylor-Harding, Dianne" <dtaylor@mun.ca>,
    "Dr. Shannon Sullivan" <shannon@mun.ca>, scienceRegistrar@mun.ca,
    Michael Morrow <mmorrow@mun.ca>
Subject: Consultation Request

Hello

Attached is a proposal to amend the Faculty of Science regulations pertaining to the offering of supplementary exams. The proposed calendar change would remove Physics and Physical Oceanography from the list of departments offering supplementary examinations.

We would welcome any comments on this proposal.

Thank you

Michael Morrow

Date: Mon, 23 Feb 2015 10:50:15 -0330
From: Michael Morrow <mmorrow@mun.ca>
To: deansci@mun.ca, Michael Morrow <mmorrow@mun.ca>
Subject: Consultation Request

Hello

Attached is a proposal to amend the Faculty of Science regulations pertaining to the offering of supplementary exams. The proposed calendar change would remove Physics and Physical Oceanography from the list of departments offering supplementary examinations.

We would welcome any comments on this proposal.

Thank you

Michael Morrow
Responses:

Library

Collection Development Division
Queen Elizabeth II Library
St. John's, Newfoundland, Canada
A1B 3Y1

12 March 2015

TO: Dr. Michael Morrow, Physics & Physical Oceanography

FROM: Alison Ambi, Liaison Librarian, Physics & Physical Oceanography

SUBJECT: Calendar change to degree regulations – terminating comprehensive exams

Upon review of the proposal to amend the Faculty of Science regulations to indicate that supplementary examinations will no longer be available in courses delivered by the Department of Physics and Physical Oceanography, I have determined that the changes will have no impact on the collections activities of the Memorial University Libraries.

Alison Ambi
Science Research Liaison Librarian
Grenfell Campus

Thu Mar 05 09:32:33 2015

From: "Gallant, Robert" <rgallant@grenfell.mun.ca>
To: "mmorrow@mun.ca" <mmorrow@mun.ca>
Subject: Consultation Request for supplementary exams for Physics and Physical Oceanography

Hello Dr. Morrow.

I have circulated your consultation request. The faculty that responded support the proposal.

Dr. R. Gallant
Head of Division of Science, Grenfell Campus, Memorial University

Biochemistry

Tue, 3 Mar 2015 15:32:39 -0330
From: Biochemistry Head <biohead@mun.ca>
To: "mmorrow@mun.ca" <mmorrow@mun.ca>
CC: Dean of Science <deansci@mun.ca>
Subject: RE: Consultation Request

Michael

The Biochemistry Department is supportive of this proposal, and notes that this mirrors our subjective experience with supplemental exams.

Mark

Mark D. Berry Ph.D.
Professor and Head
Dept. Biochemistry
Memorial University of Newfoundland
St. John's, NL, Canada A1B 3X9
Engineering

Date: Thu, 19 Feb 2015 12:51:44 -0330
From: Engineering Consultations <engrconsult@mun.ca>
To: Michael Morrow <mmorrow@mun.ca>
Cc: Andrew Fisher <adfisher@mun.ca>, Jayde Edmunds <edmundsij@mun.ca>
Subject: Re: Consultation Request (PHYS supplem. exams)

Dear Dr. Morrow,

Thank you for the opportunity to comment on the proposed Calendar change to remove Physics and Physical Oceanography from the list of departments offering supplementary examinations. This proposal was considered at yesterday's regular meeting of the Faculty's Committee on Undergraduate Studies.

All of our undergraduate students take PHYS 1050 and PHYS 1051 (or equivalent) and students in three majors (Computer, Electrical and Ocean and Naval Architectural) take a 3000-level Physics course. There is therefore the potential for impact on our students. However, very few (if any) of our students have ever availed of supplementary examinations in Physics courses. The practical impact of this change will be negligible for our Faculty. We have no objections to this change.

Yours sincerely,

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

Business

Date: Wed, 18 Feb 2015 09:25:08 -0330
From: FBA AD Undergrad <adundgradfba@mun.ca>
To: Michael Morrow <mmorrow@mun.ca>
Subject: Re: Consultation Request

Hello:

Thank you for the opportunity to comment on this proposal. The Faculty of Business Administration has no concerns with the proposed changes.

--larry
Education

Thu, 5 Mar 2015 11:43:19 -0330
From: "Collett, Meghan Jessica" <mcollett@mun.ca>
To: ""<mmorrow@mun.ca>
CC: "Galway, Gerald J." <ggalway@mun.ca>
Subject: Re: Consultation Request

Dr. Morrow,

This message is sent on behalf of Dr. Gerald Galway, Associate Dean (Undergraduate Programs), Faculty of Education, in response to the proposal sent from the Department of Physics and Physical Oceanography below. This response should be considered in addition to the response previously sent from Ms. Beverley Fraize of the Faculty of Education.

Thank you for giving the Faculty of Education the opportunity to provide feedback on this proposal. We have consulted with several faculty members in the Faculty of Education who specialize in the area of educational assessment. We offer several comments on the proposal:

(1) Generally we are concerned with any change in assessment policy that limits options to students who, due to extenuating circumstances, perform at a lower standard on examinations than they might otherwise.

(2) With respect to the statement "first year physics instructors concluded that supplementary examinations were not having a significant positive impact on student outcomes," we note that supplementary examinations are intended to provide the instructor with another sample of student work enabling the individual student the opportunity to demonstrate their understanding, at another time. We believe it is inappropriate to frame their use as a way of improving overall student outcomes.

(3) With respect to the issue of assessment error, for many reasons a score between 45-49% may not be an accurate measure of the achievement of course outcomes. A score typically contains a certain amount of error. Random error, for example, is caused by a range of factors including temporary fluctuations in memory, difference in motivation and concentration from time to time, marking error and the like. Therefore, a student writing the same, or a parallel form of the examination could possibly score 50% or more at another time, under different conditions. To deny a student the opportunity to sit for a supplementary examination, especially in cases of extenuating circumstances, is therefore a questionable evaluation practice.

(4) The information provided indicates that supplementary examinations are infrequently used; therefore, it does not seem to be much of a burden on the course instructor to provide this option.

(5) Finally, we note that the administration of a supplementary examination is at the discretion of the instructor. Should the Department decide to retain supplementary examinations, we recommend it review individual practices towards bringing greater consistency to the process.

Thank you,

Meghan Collett
Administrative Assistant
Undergraduate Programs
Faculty of Education
Wed Mar 11 10:16:30 2015
To: "Collett, Meghan Jessica" <mcollett@mun.ca>
CC: "Galway, Gerald J." <ggalway@mun.ca>, Brad deYoung <bdeyoung@mun.ca>
Subject: Re: Consultation Request

Dear Dr. Galway

Thank you for your response on this issue. As it turns out, I was also chair of the Physics undergraduate studies committee in 1994 when this department first proposed the introduction of supplementary examinations. At that time, our intent was to address situations where there was a significant discrepancy between a student’s performance on in-class tests and on the final exam. The rather restrictive regulations that currently exist represent the compromise that was required to gain approval for the idea of supplementary exams. A major source of concern is that these regulations could, in principle, result in some very anomalous situations where students getting a final grade in the low 50% range are unable to improve their marks while students with similar or lower term marks might be able to achieve a higher final grade by achieving a slightly lower mark on the final exam and thus being able to avail of the supplementary exam. Concern about such situations has contributed to the current situation where supplementary exams are no longer being offered widely in this department. The proposed change in regulation is intended to produce clarity and consistency on this point. The proposal is not motivated by a desire to reduce the burden on instructors since, in large classes such as those in question, deferred exams are largely inevitable.

First year Physics courses are now delivered in a way that provides the instructor with many samples of each student’s work. In addition to the final exam, there are at least two in-class tests, about 7 assignments, problem solving workshops, and laboratories. The final exam generally contributes 50% or less of the final grade. Our experience has been that with the marks available from the labs and assignments, students who have passed the two term tests and completed the other term work rarely end up with a final mark below 50%, and are thus ineligible for the deferred exam, even if their performance on the final exam is significantly worse than on the in-class tests. On the other hand, many of the students who do end up in the 40-45% final grade range have either failed their term, and are thus ineligible for the supplementary examination, or have failed at least one of the in-class tests and have a term mark only slightly above 50%. Since the regulation states that the final grade cannot exceed the term mark, students in this category may need to repeat the course anyway in order to achieve the grade required for acceptance into specific courses or programs.

Your comments have pointed out some points on which the rationale for the proposed change could be clarified and we are grateful for your considered input.

Thanks again

Michael Morrow
>>>>

Wed, 1 Mar 2015 14:15:49 -0230
From: "Galway, Gerald J." <ggalway@mun.ca>
To: Michael Morrow <mmorrow@mun.ca>
Subject: Re: Consultation Request

Michael, thanks for the response and clarification.

Best regards,
Gerald

Dr. Gerald Galway
Associate Dean
Faculty of Education

---------

Thu Feb 19 09:11:45 2015
From: cvardy@mun.ca
To: <mmorrow@mun.ca>
Subject: RE: Consultation Request

Good afternoon

I have reviewed the proposal from the Faculty of Science Department of Physics and Physical Oceanography and it appears fine from the Faculty of Medicine's point of view.

Cathy Vardy
Vice Dean
Faculty of Medicine

---------

Thu, 19 Feb 2015 10:36:47 -0330
From: "Rohr, Linda" <lerohr@mun.ca>
To: "mmorrow@mun.ca" <mmorrow@mun.ca>
Subject: changes to supplementary exams - Physics

Hi Michael
I have reviewed the proposed changes and have no concerns.

Linda

Linda E. Rohr PhD
Associate Professor
Associate Dean Undergraduate Studies
School of Human Kinetics and Recreation
Memorial University
St. John's, NL
Music

Tue, 17 Feb 2015 16:17:20 -0330
From: "Waterman, Ellen" <ellenw@mun.ca>
To: Michael Morrow <mmorrow@mun.ca>
Subject: RE: Consultation Request

Music has no problem with this.

Ellen Waterman
Dean and Professor
School of Music
Memorial University of Newfoundland
AIC 557

Pharmacy

Fri, 27 Feb 2015 11:14:41 -0330
From: "Glew, Csop" <cglew@mun.ca>
To: "mmorrow@mun.ca" <mmorrow@mun.ca>
CC: "Dillon, Carla" <cmdillon@mun.ca>
Subject: RE: Consultation Request

Good Morning,
We have reviewed the proposed calendar changes to the faculty of science regulations re: offering of supplementary exams in the department of Physics and Physical Oceanography and we have no concerns.

Regards,
Csop Glew

CSOP GLEW, Hon. B.A., M.U.P.  I  MANAGER OF ACADEMIC PROGRAMS
School of Pharmacy
Memorial University of Newfoundland
St. John’s, NL  I  A1B 3Y6
Health Sciences Centre  I  Room H3435
Social Work

Thu, 19 Feb 2015 10:24:35 -0330
From: "Sullivan, Michelle" <sullivan@mun.ca>
To: "mmorrow@mun.ca" <mmorrow@mun.ca>
Subject: Consultation

Hello Michael

I have reviewed your proposal and do not feel that this Calendar Change would raise any concerns for the programs of study of students in the School of Social Work programs.

Best of luck

Michelle
Michelle Sullivan, Ph.D., RSW
Associate Dean Undergraduate Studies (Acting)
School of Social Work
Memorial University of Newfoundland
E-mail: sullivan@mun.ca
Telephone: 709- 864-3057
April 2, 2015

TO: All Members, Faculty Council of Science

FROM: Rob Nolan, Secretary
Committee on Undergraduate Studies, Faculty of Science

SUBJECT: Calendar Changes and New Course Proposals

At a meeting held on March 27, 2015, the Undergraduate Studies Committee of the Faculty of Science agreed that the following new program proposals and Calendar changes be forwarded to Faculty Council for approval:

1. Department of Ocean Sciences
   a. New course – Ocean Sciences 4100

2. Department of Physics and Physical Oceanography
   a. Proposal to eliminate Supplementary exams in Physics

3. Department of Biology
   a. Proposal for Calendar Changes to Existing Courses
      i. Biology 3640
      ii. Biology 3710

4. Faculty of Science
   a. New course – Science 1807

Rob Nolan
Assistant Registrar and Secretary; Committee on Undergraduate Studies, Faculty of Science
TO: Rob Nolan, Secretary, Faculty of Science Undergraduate Studies Committee

FROM: Karen Morris, Undergraduate Officer, Biology

DATE: March 17, 2015

SUBJECT: Proposal for Calendar Changes to Existing Courses: Biology 3640 and 3710

Please find attached two proposals for calendar changes to existing courses Biology 3640 - Environmental Physiology of Animals and Biology 3710 - Biological Oceanography. The proposed changes were approved at a Faculty meeting on February 11, 2015.

The consultation request and responses received to date are attached.

The proposals are now being submitted to the Committee on Undergraduate Studies, Faculty of Science for consideration.

cc. D. Innes, Acting Head, Biology
Biology 3710 – Biological Oceanography

Proposal
Calendar Changes to Existing Course

Executive Summary
Biology 3710- Biological Oceanography is one of two additional core courses required by students majoring in the Marine Biology program. In 2014 The Department of Ocean Sciences developed a new program minor - Oceanography. One of the required courses for this minor is OCSC 2000- Introductory Biological Oceanography. Given the degree of overlap with Biology 3710 (since both cover the same general introductory concepts in biological oceanography) it is necessary to add a credit restriction of OCSC 2000 to Biology 3710.

Resource Implications: Instructional Costs
None since only an addition of a credit restriction

Consultations

St. John’s Campus,  
Grenfell Campus  
Marine Institute

Library Holdings and/or Other Resources Required
No change in existing holding

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

Signature of Unit Head (if appropriate): [Signature]
Date: March 17, 2015

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

Date: [Signature]
Biology 3710 - Biological Oceanography

SUMMARY PAGE FOR SENATE

Approval Form

Course Number and Title:  Biology 3710 - Biological Oceanography

Abbreviated Course Title: Biological Oceanography

Calendar Change(s)  3710

Biological Oceanography is an introductory course in biotic and abiotic factors controlling marine biomass and primary production, emphasizing plankton and fishes. It introduces students to major groups of marine phytoplankton, zooplankton, and fishes, emphasizing how the physical, chemical, and geological environments interact with biology to define processes and pattern in marine organisms.

CR: OCSC 2000

LC: either three hours of lecture and three hours of laboratory per week or a two-week field course that embodies equivalent instructional time

LH: either three hours of lecture and three hours of laboratory per week or a two-week field course that embodies equivalent instructional time

PR: BIOL 2122 and 2600

Secondary Calendar Changes

Add a credit restriction to the calendar description for OCSC 2000
CR: BIOL 3710

Rationale

Biology 3710- Biological Oceanography is one of two additional core courses required by students majoring in the Marine Biology program. In 2014 The Department of Ocean Sciences developed a new program minor - Oceanography. One of the required courses for this minor is OCSC 2000-Introductory Biological Oceanography. Given the degree of overlap with Biology 3710 (since both cover the same general introductory concepts in biological oceanography) it is necessary to add a credit restriction of OCSC 2000 to Biology 3710.
Biology 3710 – Biological Oceanography

<table>
<thead>
<tr>
<th>Consultations Sought From</th>
<th>Comments Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts</td>
<td>No</td>
</tr>
<tr>
<td>Business</td>
<td>Yes</td>
</tr>
<tr>
<td>Co-operative Education</td>
<td>No</td>
</tr>
<tr>
<td>Education</td>
<td>No</td>
</tr>
<tr>
<td>Engineering</td>
<td>Yes</td>
</tr>
<tr>
<td>Grenfell Campus</td>
<td>Yes</td>
</tr>
<tr>
<td>Human Kinetics and Recreation</td>
<td>Yes</td>
</tr>
<tr>
<td>Marine Institute</td>
<td>Yes</td>
</tr>
<tr>
<td>Medicine</td>
<td>Yes</td>
</tr>
<tr>
<td>Music</td>
<td>No</td>
</tr>
<tr>
<td>Nursing</td>
<td>No</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>Yes</td>
</tr>
<tr>
<td>Science -</td>
<td></td>
</tr>
<tr>
<td>Physics and Physical Oceanography</td>
<td>Yes</td>
</tr>
<tr>
<td>Social Work</td>
<td>Yes</td>
</tr>
<tr>
<td>Library Report Received</td>
<td>Yes</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:
Biology 3640- Environmental Physiology of Animals

Proposal
Calendar Changes to Existing Course

Executive Summary

It is proposed that Biology 3640 Environmental Physiology of Animals be cross listed as an Ocean Science course. Biology 3640 is taught every year by Dr Iain McGaw, (Department of Ocean Sciences). With the introduction of new minors in the Ocean Science Department it was felt that Biology 3640 would be a good addition as an elective in the Sustainable Aquaculture and Fisheries Ecology minor so cross listing this course with Ocean Science ensures that the course is available to students in both Departments.

It is also proposed that a change in prerequisites occur. It has been determined that Biology 2210 (Biology of Vertebrates) is not required for students to succeed in this course.

Resource Implications: Instructional Costs

This course is already on the books and has been taught by the instructor for 4 years. No new instructors are required. At present the course is capped at 40 students. The maximum enrollment will be increased to 50 to accommodate the proposed change.

Consultations

St. John's Campus,
Grenfell Campus
Marine Institute

Library Holdings and/or Other Resources Required

No new resources or costs are required or anticipated.

Signature of Unit Head (if appropriate):  

Date:  
March 17, 2015

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

Date:
Biology 3640- Environmental Physiology of Animals

SUMMARY PAGE FOR SENATE

Approval Form

Course Number and Title Biology 3640 – Environmental Physiology of Animals

Abbreviated Course Title - Environmental Physiology

Calendar Change(s)

3640 Environmental Physiology of Animals (same as OCSC 3640) covers physiological adaptations of animals facilitating their survival in natural environments with emphasis on physiological and biochemical responses of animals to extreme environments. Starting with the fundamental basis of physiological mechanisms, the course explores various aspects and the integration of major physiological processes (metabolism, respiration, osmoregulation) and how these relate to ecological niche.

CR: the former BIOL 3403 or the former BIOL 4455
PR: BIOL 2060; BIOL 2219 Biochemistry 3106
UL: may not be used to fulfill the physiology course requirement for a Biology major, honours or joint honours program.

Add under Ocean Sciences

3640 Environmental Physiology of Animals (same as BIOL 3640) covers physiological adaptations of animals facilitating their survival in natural environments with emphasis on physiological and biochemical responses of animals to extreme environments. Starting with the fundamental basis of physiological mechanisms, the course explores various aspects and the integration of major physiological processes (metabolism, respiration, osmoregulation) and how these relate to ecological niche.

CR: the former BIOL 3403 or the former BIOL 4455
PR: BIOL 2060; BIOL 2219 Biochemistry 3106
UL: may not be used to fulfill the physiology course requirement for a Biology major, honours or joint honours program.

Secondary Calendar Changes

Add BIOL/OCSC 3640 to the Ocean Sciences Course offerings and as an elective in the Sustainable Aquaculture and Fisheries Ecology minor.

Rationale

It is proposed that Biology 3640 Environmental Physiology of Animals be cross listed as an Ocean Science course. Biology 3640 is taught every year by Dr Iain McGaw, (Department of Ocean
Biology 3640- Environmental Physiology of Animals

Sciences). With the introduction of new minors in the Ocean Science Department it was felt that Biology 3640 would be a good addition as an elective in the Sustainable Aquaculture and Fisheries Ecology minor so cross listing this course with Ocean Science ensures that the course is available to students in both Departments.

It is also proposed that a change in prerequisites occur. It has been determined that Biology 2210 (Biology of Vertebrates) is not required for students to succeed in this course.

<table>
<thead>
<tr>
<th>Consultations Sought From</th>
<th>Comments Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts</td>
<td>No</td>
</tr>
<tr>
<td>Business</td>
<td>Yes</td>
</tr>
<tr>
<td>Co-operative Education</td>
<td>No</td>
</tr>
<tr>
<td>Education</td>
<td>No</td>
</tr>
<tr>
<td>Engineering</td>
<td>Yes</td>
</tr>
<tr>
<td>Grenfell Campus</td>
<td>Yes</td>
</tr>
<tr>
<td>Human Kinetics and Recreation</td>
<td>Yes</td>
</tr>
<tr>
<td>Marine Institute</td>
<td>Yes</td>
</tr>
<tr>
<td>Medicine</td>
<td>Yes</td>
</tr>
<tr>
<td>Music</td>
<td>No</td>
</tr>
<tr>
<td>Nursing</td>
<td>No</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>Yes</td>
</tr>
<tr>
<td>Science -</td>
<td></td>
</tr>
<tr>
<td>Physics and Physical Oceanography</td>
<td>Yes</td>
</tr>
<tr>
<td>Social Work</td>
<td>Yes</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:
Subject: Consultation re. Proposals for Calendar Changes to Existing Courses - Biology 3640 and Biology 3710
From: Karen Morris <morrisk@mun.ca>
Date: 17/02/2015 11:50 AM
To: stacey@mun.ca, shicks@mun.ca, engrconsult@mun.ca, associatevpoffice@grenfell.mun.ca, miugconsultation@mi.mun.ca, dean.medicine@mun.ca, ellenw@mun.ca, deanNurse@mun.ca, pharminfo@mun.ca, deansci@mun.ca, deansocialwork@mun.ca, smackinn@mun.ca, ibusby@mun.ca, lbauer@mun.ca

Hi,

Please find attached two proposals for calendar changes to existing courses for Biology 3640 - Environmental Physiology of Animals and Biology 3710 - Biological Oceanography.

Would you please review the proposal and forward any concerns and/or comments to me as soon as possible.

Thank you.
Karen

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

Attachments:

2015 Biology 3640 AMended Course Proposal.doc 35.5 KB
2015 Biology 3710 amended course.doc 33.0 KB
Subject: Re: Consultation re. Proposals for Calendar Changes to Existing Courses - Biology 3640 and Biology 3710
From: Larry Bauer <lbauer@mun.ca>
Date: 18/02/2015 9:20 AM
To: Karen Morris <morrisk@mun.ca>

Hello:

Thank you for the opportunity to comment on these proposals. The Faculty of Business Administration has no concerns with the proposed changes.

--larry

Karen Morris wrote:

Hi,

Please find attached two proposals for calendar changes to existing courses for Biology 3640 - Environmental Physiology of Animals and Biology 3710 - Biological Oceanography.

Would you please review the proposal and forward any concerns and/or comments to me as soon as possible.

Thank you.

Karen

Karen Morris
Undergraduate Officer
Department of Biology
Memorial University of Newfoundland
St. John's, NL A1B 3X9
709-864-8021
Larry Bauer, Ph.D.
Associate Professor of Finance
Associate Dean (Undergraduate Programs)
Faculty of Business Administration
Memorial University of Newfoundland
St. John's Nfld, A1B 3X5

www: http://www.business.mun.ca
e-mail: lbauer@mun.ca
Tel: (709) 864-8512
Fax: (709) 864-8954

Subject: Fw: Consultation re. Proposals for Calendar Changes to Existing Courses - Biology 3640 and Biology 3710  
From: "Gallant, Robert" <rgallant@grenfell.mun.ca>  
Date: 23/02/2015 12:32 PM  
To: "morrisk@mun.ca" <morrisk@mun.ca>

Dear Dr. Morris, I've received a few emails like the below -- No issues with the proposal.
Cheers,

Dr. R. Gallant  
Head of Division of Science, Grenfell Campus, Memorial University

---

From: Campbell, Christine  
Sent: Wednesday, February 18, 2015 2:56 PM  
To: Gallant, Robert  
Subject: Re: Consultation re. Proposals for Calendar Changes to Existing Courses - Biology 3640 and Biology 3710

Hi Rob,

Grenfell students often take Biol 3710 as a field course option in the Environmental Science program.  
Credit restriction with OSC 2000 seems sensible in this case.

Dr. Christine Campbell  
Environmental Science  
Grenfell Campus - Memorial Univ. of Newfoundland  
Corner Brook, NL  
Canada A2H 6P9  
phone (709) 639-6478  
fax (709) 639-8125  
ccampbell@grenfell.mun.ca

---

From: Gallant, Robert  
Sent: February 18, 2015 10:16 AM  
To: Division of Science Faculty  
Subject: Fw: Consultation re. Proposals for Calendar Changes to Existing Courses - Biology 3640 and Biology 3710

Colleagues, consultation requested re Biology courses.

Dr. R. Gallant  
Head of Division of Science, Grenfell Campus, Memorial University

---

From: Associate VP Office - Academic  
Sent: Tuesday, February 17, 2015 12:14 PM  
To: Gallant, Robert  
Cc: Naftall-Rennett Sharron; Daniels Karen
Subject: FW: Consultation re. Proposals for Calendar Changes to Existing Courses - Biology 3640 and Biology 3710

Good Afternoon,

Please see attached for consultation, thank you.

Nora Lundrigan for
Dr. David Peddle
Associate Vice-President (Grenfell Campus) Academic

From: Karen Morris [mailto:morrisk@mun.ca]
Sent: February-17-15 11:51 AM
To: staceyam@mun.ca; shicks@mun.ca; engrconsult@mun.ca; Associate VP Office - Academic; mlugconsultation@mi.mun.ca; dean.medicine@mun.ca; ellenw@mun.ca; deanNurse@mun.ca; pharminfo@mun.ca; Abrahams, Mark; deansocialwork@mun.ca; smackinn@mun.ca; Busby, Lorraine; lbauer@mun.ca
Subject: Consultation re. Proposals for Calendar Changes to Existing Courses - Biology 3640 and Biology 3710

Hi,

Please find attached two proposals for calendar changes to existing courses for Biology 3640 - Environmental Physiology of Animals and Biology 3710 - Biological Oceanography.

Would you please review the proposal and forward any concerns and/or comments to me as soon as possible.

Thank you.

Karen

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

This electronic communication is governed by the terms and conditions at http://www.mun.ca/cc/policies/electronic_communications_disclaimer_2011.php.
This electronic communication is governed by the terms and conditions at http://www.mun.ca/cc/policies/electronic_communications_disclaimer_2011.php.
This electronic communication is governed by the terms and conditions at http://www.mun.ca/cc/policies/electronic_communications_disclaimer_2011.php.
This electronic communication is governed by the terms and conditions at http://www.mun.ca/cc/policies/electronic_communications_disclaimer_2011.php.
Subject: Re: proposals for calendar changes - Biology 3640 and 3710  
From: "Rohr, Linda" <lerohr@mun.ca>  
Date: 18/02/2015 11:29 AM  
To: Karen Morris <morrisk@mun.ca>  

Perfect. Thanks for clarifying.  
Linda

Linda E. Rohr PhD  
Associate Professor  
Associate Dean Undergraduate Studies  
School of Human Kinetics and Recreation  
Memorial University  
St. John's, NL  
709.864.6202  
709.864.7531 (fax)  
PE 2025

From: Karen Morris <morrisk@mun.ca>  
Date: Wednesday, February 18, 2015 at 11:27 AM  
To: Linda Rohr <lerohr@mun.ca>  
Subject: Re: proposals for calendar changes - Biology 3640 and 3710

Hi Linda,  
Thank you for your response.  
The Department of Ocean Sciences is currently offering two undergraduate minors (just approved by Senate) and is working on a number of new joint majors programs so Physiology is not a requirement for either of the minors.  
Thank you for noting something that could have been missed.  
Many thanks  
Karen

On 18/02/2015 11:03 AM, Rohr, Linda wrote:

Hi Karen  
I have reviewed the proposed calendar changes for Biology 3640 and 3710. I have no concerns with the changes for BIOL 3710.

One question regarding BIOL 3640. There is a UL indicating that BIOL 3640 can not fulfill the physiology requirement for Biology majors. Does Ocean Sciences have a similar physiology requirement? If yes, then I assume there should also be a UL for 3640 not fulfilling the physiology requirement for Ocean Science majors.

Linda

Linda E. Rohr PhD  
Associate Professor  
Associate Dean Undergraduate Studies  
School of Human Kinetics and Recreation  
Memorial University  
St. John’s, NL  
709.864.6202  
709.864.7531 (fax)  
PE 2025
Subject: RE: Consultation re. Proposals for Calendar Changes to Existing Courses - Biology 3640 and Biology 3710
From: MIUG Consultations <MIUGconsultations@mi.mun.ca>
Date: 18/02/2015 1:37 PM
To: Karen Morris <morrisk@mun.ca>

Karen,

Thank you for the opportunity to review the proposed changes to the two courses Biology 3640 - Environmental Physiology of Animals and Biology 3710 - Biological Oceanography. These changes will have no impact on the programs here at the Marine Institute.

We are happy to support these changes as presented.

Derek

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

From: Karen Morris [mailto:morrisk@mun.ca]
Sent: Tuesday, February 17, 2015 11:54 AM
To: MIUG Consultations
Subject: Fwd: Consultation re. Proposals for Calendar Changes to Existing Courses - Biology 3640 and Biology 3710

-------- Forwarded Message --------
Subject: Consultation re. Proposals for Calendar Changes to Existing Courses - Biology 3640 and Biology 3710
Date: Tue, 17 Feb 2015 11:50:42 -0330
From: Karen Morris <morrisk@mun.ca>
To: staceym@mun.ca, shicks@mun.ca, engrconsult@mun.ca, associatetvice@grenfell.mun.ca, miugconsultation@mi.mun.ca, dean.medicine@mun.ca, ellenw@mun.ca, deanNurse@mun.ca, pharminfor@mun.ca, deansci@mun.ca, deansocialwork@mun.ca, smackinn@mun.ca, lbusby@mun.ca, lbauer@mun.ca

Hi,
Subject: Re: Consultation re. Biology 3640 and 3710
From: Engineering Consultations <engrconsult@mun.ca>
Date: 19/02/2015 12:48 PM
To: Karen Morris <morrisk@mun.ca>
CC: Andrew Fisher <adfisher@mun.ca>, Jayde Edmunds <edmundsj@mun.ca>

Dear Dr. Morris,

Thank you for the opportunity to comment on the proposed Calendar changes for the courses BIOL 3640 and BIOL 3710. At yesterday's regular meeting of the Faculty's Committee on Undergraduate Studies, no concerns were raised. These changes have no direct impact on our programs.

Yours sincerely,

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

Quoting Karen Morris <morrisk@mun.ca>:

Hi,
Please find attached two proposals for calendar changes to existing courses for Biology 3640 - Environmental Physiology of Animals and Biology 3710 - Biological Oceanography.

Would you please review the proposal and forward any concerns and/or comments to me as soon as possible.

Thank you.
Karen

*Karen Morris
Undergraduate Officer
Department of Biology
Memorial University of Newfoundland
St. John's, NL A1B 3X9
709-864-8021*
Subject: RE: Consultation re. Proposals for Calendar Changes to Existing Courses - Biology 3640 and Biology 3710
From: cvardy@mun.ca
Date: 18/02/2015 3:54 PM
To: <morrisk@mun.ca>

Dear Ms. Morris

I have reviewed the attached information regarding proposed calendar changes for the Department of Biology and they appear fine from the Faculty of Medicine's point of view.

Cathy Vardy
Vice Dean
Faculty of Medicine

From: Rourke, Dr. James: Dean of Medicine
Sent: February-17-15 4:07 PM
To: Vardy, Cathy
Cc: Corbett, Paula; Caines, Sherry; Fillier, Joan
Subject: FW: Consultation re. Proposals for Calendar Changes to Existing Courses - Biology 3640 and Biology 3710

From: Karen Morris [mailto:morrisk@mun.ca]
Sent: Tuesday, February 17, 2015 11:51 AM
To: staceyv@mun.ca; shicks@mun.ca; engrconsult@mun.ca; associatevpoffice@grenfell.mun.ca; miucconsultation@mi.mun.ca; Rourke, Dr. James: Dean of Medicine; ellenw@mun.ca; deanNurse@mun.ca; pharminfo@mun.ca; deansci@mun.ca; deansocialwork@mun.ca; smackinn@mun.ca; lbusby@mun.ca; lbauer@mun.ca
Subject: Consultation re. Proposals for Calendar Changes to Existing Courses - Biology 3640 and Biology 3710

Hi,

Please find attached two proposals for calendar changes to existing courses for Biology 3640 - Environmental Physiology of Animals and Biology 3710- Biological Oceanography.

Would you please review the proposal and forward any concerns and/or comments to me as soon as possible.

Thank you.

Karen

Karen Morris
Subject: RE: Consultation re. Proposals for Calendar Changes to Existing Courses - Biology 3640 and Biology 3710
From: "Glew, Csop" <cglew@mun.ca>
Date: 27/02/2015 11:09 AM
To: "morrisk@mun.ca" <morrisk@mun.ca>
CC: "Dillon, Carla" <cmdillon@mun.ca>

Good morning,
We have no concerns or comments with the proposed calendar changes to existing courses – BIOL 3640 and 3710.
Regards,
Csop Glew

CSOP GLEW, Hon. B.A., M.U.P. | MANAGER OF ACADEMIC PROGRAMS
School of Pharmacy
Memorial University of Newfoundland
St. John’s, NL | A1B 3V6
Health Sciences Centre | Room H3435
T 709 777 6963 | F 709 777 7044
www.mun.ca/pharmacy

Please note that the deadline to apply for admission for September 2015 was February 1, 2015.

Where people and ideas become.
Follow us: Facebook: www.facebook.com/schoolofpharmacy Twitter: www.twitter.com/schoolofpharm

From: Karen Morris [mailto:morrisk@mun.ca]
Sent: February-17-15 11:55 AM
To: Mercer, Stacey; Hicks, Sue; engrconsult@mun.ca; associatevpo@gresnelf.mun.ca; miugconsultation@mi.mun.ca; dean.medicine@mun.ca; Waterman, Ellen; DeanNurse; pharminfo@mun.ca; Dean of Science; deansocialwork; MacKinnon, Scott; Busby, Lorraine; Bauer, Larry
Subject: Consultation re. Proposals for Calendar Changes to Existing Courses - Biology 3640 and Biology 3710

Hi,

Please find attached two proposals for calendar changes to existing courses for Biology 3640 - Environmental Physiology of Animals and Biology 3710- Biological Oceanography.

Would you please review the proposal and forward any concerns and/or comments to me as soon as possible.

Thank you.

Karen

Karen Morris
Undergraduate Officer
Department of Biology
Subject: Consultation re. Proposals for Calendar Changes to Existing Courses - Biology 3640 and Biology 3710
From: Michael Morrow <mmorrow@mun.ca>
Date: 17/02/2015 3:02 PM
To: morrisk@mun.ca, deansci@mun.ca, Brad deYoung <bdeyoung@mun.ca>, Rick Goulding <rgoulding@mun.ca>

Dr. Morris

The proposed changes to the calendar descriptions for Biology 3640 and Biology 3710 do not raise any concerns in Physics and Physical Oceanography.

Michael Morrow

--

*********************************************************
Department of Physics and Physical Oceanography
Memorial University of Newfoundland
St. John's, Newfoundland          Phone: (709) 864 4361
Canada, A1B 3X7                  FAX:      (709) 864 8739
*********************************************************
Subject: Biology 3640 and 3710  
From: "Sullivan, Michelle" <sullivan@mun.ca>  
Date: 19/02/2015 10:20 AM  
To: "morrisk@mun.ca" <morrisk@mun.ca>

Hello Karen

I have reviewed your proposed Calendar Changes and do not see any issues of concern for programs of study at the School of Social Work.

Good luck with these developments.

Michelle Sullivan  
Michelle Sullivan, Ph.D., RSW  
Associate Dean Undergraduate Studies (Acting)  
School of Social Work  
Memorial University of Newfoundland  
E-mail: sullivan@mun.ca  
Telephone: 709- 864-3057

This electronic communication is governed by the terms and conditions at: http://www.mun.ca/cc/policies/electronic_communications_disclaimer_2012.php
Subject: FW: Consultation re. Proposals for Calendar Changes to Existing Courses - Biology 3640 and Biology 3710
From: "Alcock, Erin" <ekalcock@mun.ca>
Date: 04/03/2015 8:55 AM
To: "morrisk@mun.ca" <morrisk@mun.ca>

Hi Karen,

Just emailing as official notification that I have seen the two amended course proposals for Biology 3640 and Biology 3710 and note that these changes will have little impact on the library system.

Please get back to me if you have further questions.

Erin Alcock

Erin Alcock
Science Research Liaison Librarian
QE2 Library
Memorial University of Newfoundland
ekalcock@mun.ca
709-864-3316

From: <Busby>, Lorraine <lbusby@mun.ca>
Date: Tuesday, February 17, 2015 at 12:34 PM
To: Erin <ekalcock@mun.ca>
Cc: 'Chris Dennis' <cdennis@mun.ca>
Subject: FW: Consultation re. Proposals for Calendar Changes to Existing Courses - Biology 3640 and Biology 3710

There doesn’t appear to be library implications but I am forwarding on to you for information and “in case”.

Lorraine

From: Karen Morris [mailto:morrisk@mun.ca]
Sent: Tuesday, February 17, 2015 11:55 AM
To: Mercer, Stacey; Hicks, Sue; engrconsult@mun.ca; associatevpooffice@grenfell.mun.ca; mlugconsultation@ml.mun.ca; dean.medicine@mun.ca; Waterman, Ellen; DeanNurse; pharminfo@mun.ca; Dean of Science; deansocialwork; MacKinnon, Scott; Busby, Lorraine; Bauer, Larry
Subject: Consultation re. Proposals for Calendar Changes to Existing Courses - Biology 3640 and Biology 3710

Hi,

Please find attached two proposals for calendar changes to existing courses for Biology 3640 - Environmental Physiology of Animals and Biology 3710- Biological Oceanography.

Would you please review the proposal and forward any concerns and/or comments to me as soon as possible.
April 2, 2015

TO: All Members, Faculty Council of Science

FROM: Rob Nolan, Secretary
       Committee on Undergraduate Studies, Faculty of Science

SUBJECT: Calendar Changes and New Course Proposals

At a meeting held on March 27, 2015, the Undergraduate Studies Committee of the Faculty of Science agreed that the following new program proposals and Calendar changes be forwarded to Faculty Council for approval:

1. Department of Ocean Sciences
   a. New course – Ocean Sciences 4100

2. Department of Physics and Physical Oceanography
   a. Proposal to eliminate Supplementary exams in Physics

3. Department of Biology
   a. Proposal for Calendar Changes toExisting Courses
      i. Biology 3040
      ii. Biology 3710

4. Faculty of Science
   a. New course – Science 1807

Rob Nolan
Assistant Registrar and
Secretary; Committee
on Undergraduate Studies,
Faculty of Science
Proposal
New Course – Science 1807

Executive Summary

Science 1807 is a course of online training modules currently offered by the Department of Environmental Health and Safety via D2L. It is a mandatory course which students must complete prior to starting lab courses where hazards are present. This proposal makes the current Safety 1000, into a 0-credit, no fee, course, Science 1807. This proposal will allow 1807 to appear on the students’ transcripts and have the Registrar check that the course has been completed rather than relying on the students to keep a paper certificate and having to check all of them by hand. Although it would be best to have the course be called Safety 1000, the Registrar cannot use that designation because Environmental Health and Safety is not an academic unit. As this is the first academic offering of this unique course, the Department of Biochemistry is the sole department adding the course as a prerequisite for 2015-2016. They have volunteered to test this new process and if plans unfold as hoped, other Science departments will add 1807 as a prerequisite in 2016-2017.

Resource Implications: Instructional Costs

Because this course is already offered as a requirement for students, and has been for several years, there are no additional resources required.

Consultations

Consultation with appropriate academic units is now underway. See email attached.

Library Holdings and/or Other Resources Required

None. The library has been contacted. See email attached.

Signature of Unit Head (if appropriate):

Date:

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

Date:
Sample Course Outline and Method of Evaluation - Science 1807

Module 1 – WHMIS
In this module, students are trained on aspects of the Workplace Hazardous Materials Information System (WHMIS) including both general information that every student should know and specific information about the products in a science laboratory.

- Hazards - An overview of the different hazards found in a laboratory, and how various chemicals can harm you. Students learn the symbols for each laboratory hazard.
- Labels - WHMIS labels and other types of identification required on hazardous materials.
- MSDSs - Material Safety Data Sheets, what they are and what information they contain about chemical products, the hazards they represent, and safety measures to be taken.
- Protection - How you can protect yourself from hazards in a laboratory.
- Emergencies - What to do if there is an emergency involving a chemical product in a laboratory.
- Special Situations – An explanation of the situations where complete WHMIS labels and/or MSDS sheet might not be required.
- Regulations - Individual rights and responsibilities under the WHMIS regulations.

Module 2 – Laboratory Safety
In this module, students are trained on general laboratory safety specifications and requirements, they obtain primary information for various safety issues that may arise in a science laboratory, and the importance of a proper awareness on safety is emphasized.

- Role and Responsibilities of a Laboratory Supervisor: student and employee training; supervision of correct work practice; surveys and compliance with appropriate regulations.
- Role and Responsibilities of Students: learning all laboratory rules and regulations; carrying out only tests and procedures that they are qualified to do; proper reporting of hazards and accidents.
- Prior to beginning work in a laboratory: locating emergency phone numbers, and the reporting procedure to follow in case of accidents, escape routes in case of emergency, and the location of safety equipment.
- Spill procedures: what to do in case of a chemical spill.
- The do’s and don’ts of working with fume hoods.
- Personal protective equipment including safety glasses, goggles, face shields, head protection, gloves, and laboratory coats.
- Biological safety hazards.
- Proper pipetting practices.
- Policy and procedure on working alone in a laboratory.
- Proper procedures when leaving a laboratory: things to turn off; how to label and package waste; decontaminating work surfaces; washing hands.
- Safety checks on laboratory equipment.
- Laboratory housekeeping and the importance of a neat and tidy work area.
- Identification, labeling and storage of chemicals.

Method of Evaluation: Each module has an online multiple choice quiz.
Reading list: none, the course content is all online.
Instructor: This course, approximately two hours in duration, is offered online by the Department of Environmental Health and Safety through the use of existing safety videos and slides. There is no assigned instructor.
SUMMARY PAGE FOR SENATE

Approval Form

Course Number and Title
Science 1807 Safety in the Science Laboratory

Abbreviated Course Title
Safety in the Science Lab

Calendar Change – add to the Science courses listed in section 10.12 of the 2014-2015 calendar.

Science 1807 Safety in the Scientific Laboratory introduces students to safety practices required for working in science laboratories where hazards are present. Students complete individual online modules in Laboratory Safety and WHMIS. Normally, it will be taken before the start of the semester in which students take their first science laboratory course with this prerequisite, and it must be completed no later than the first Friday of the semester. Check department lists of courses to see where this is a prerequisite.

CH: 0
OR: only offered online; completion time estimated to be two hours

Secondary Calendar Changes
Add this course to the prerequisites for Biochemistry 2101, 2100, 3052, 3106, 3107, 3402, 499A, 499B (see specific calendar changes attached).

Rationale
This proposal makes the current Safety 1000, which is a prerequisite for lab courses, into a 0 credit course, Science 1807. This will allow 1807 to appear on the students’ transcripts and have the Registrar do a prerequisite check instead of the current practice of manual checks. Although it would be best to have the course offered as Safety 1000, the Registrar cannot use that designation because the Department of Environmental Health and Safety is not an academic unit.

Students will register for 1807, and then the registration system will link them to Safety 1000. Individuals who previously passed Safety 1000 will not be required to take 1807. Students will be permitted to repeat Safety 1000 by enrolling in 1807, if they wish.

As this is the first academic offering of this unique course, the Department of Biochemistry is the sole department adding the course as a prerequisite for 2015-2016. They have volunteered to test this new process and if plans unfold as hoped, other Science departments will add 1807 as a prerequisite in 2016-2017.

Consultations Sought From
Faculty of Science, Department of:

Biochemistry

Comments Received
yes
<table>
<thead>
<tr>
<th>Course Area</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>yes</td>
</tr>
<tr>
<td>Chemistry</td>
<td>yes</td>
</tr>
<tr>
<td>Computer Science</td>
<td>no</td>
</tr>
<tr>
<td>Earth Sciences</td>
<td>no</td>
</tr>
<tr>
<td>Mathematics and Statistics</td>
<td>no</td>
</tr>
<tr>
<td>Ocean Sciences</td>
<td>no</td>
</tr>
<tr>
<td>Physics and Physical Oceanography</td>
<td>yes</td>
</tr>
<tr>
<td>Psychology</td>
<td>no</td>
</tr>
</tbody>
</table>

Other Academic Units

<table>
<thead>
<tr>
<th>Unit</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty of Arts</td>
<td>yes</td>
</tr>
<tr>
<td>Faculty of Business</td>
<td>yes</td>
</tr>
<tr>
<td>Faculty of Education</td>
<td>no</td>
</tr>
<tr>
<td>Faculty of Engineering and Applied Science</td>
<td>yes</td>
</tr>
<tr>
<td>Grenfell Campus</td>
<td>yes</td>
</tr>
<tr>
<td>Human Kinetics and Recreation</td>
<td>yes</td>
</tr>
<tr>
<td>Marine Institute</td>
<td>yes</td>
</tr>
<tr>
<td>Medicine</td>
<td>yes</td>
</tr>
<tr>
<td>Music</td>
<td>yes</td>
</tr>
<tr>
<td>Nursing</td>
<td>no</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>yes</td>
</tr>
<tr>
<td>Social Work</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:
Secondary Calendar Changes:

2101 Introduction to Biochemistry is an introduction to the major organic substances of living organisms, proteins, carbohydrates and lipids: their structure, analysis and biochemical function. Other topics will include: enzymes; the biochemistry of membranes, including the plasma membrane and specialized intracellular membranes; and the biochemistry of selected differentiated cells.
CR: Pharmacy 2004, or the former Pharmacy 3110
LH: one three-hour laboratory period on alternate weeks
PR: Science 1807, Chemistry 2400 and 2401, or Chemistry 2440; and Physics 1020 or 1050, and 1021 (or 1051). Chemistry 2401 and Physics 1021 or 1051 can be done concurrently.

2100 Introduction to Molecular Biology and Genetics will cover the heritability of simple traits from phenotype to genotype; the discovery of DNA as the molecule of heredity; the structure and function of DNA; the elucidation of the genetic code; and the manipulation of DNA for recombinant DNA technology and biotechnology.
CO: BIOC 2101, Chemistry 2401, Physics 1021 or 1051. Students may replace the co-requisite Chemistry 2401 with Chemistry 2440 as a prerequisite. Chemistry 2440 may not be taken as a co-requisite of 2100
CR: Biology 2250
LH: up to four hours on alternate weeks which will normally consist of one three hour laboratory period plus one additional hour on the following day
PR: Science 1807, BIOC 2101, Chemistry 2401, Physics 1021 or 1051. Students may replace the co-requisite Chemistry 2401 with Chemistry 2440 as a prerequisite. Chemistry 2440 may not be taken as a co-requisite of 2100

3052 Food Microbiology (same as Biology 3052) is the study of the microbiology of water and food with regard to the beneficial and detrimental roles of microorganisms on interaction with these systems. Emphasis will be on the microbiology of food, fermentations, food spoilage and food borne vectors of human disease.
CR: Biology 3052, and the former BIOC 3054, BIOC 3401
LC: three hours per week
LH: three hours per week
PR: Science 1807, Biology 3050

3106 Metabolism examines the catabolism of carbohydrates, lipids and amino acids. Other topics will be: mitochondria, chloroplasts and ATP synthesis; biosynthesis of carbohydrates and lipids; metabolic specialization of differentiated cells and tissues; and, integration of metabolism.
CR: the former BIOC 3102 or Pharmacy 3111
LH: one three-hour laboratory or one-hour tutorial per week
OR: one-hour tutorial or one three-hour laboratory per week
PR: Science 1807, BIOC 2101

3107 Nucleic Acid Biochemistry and Molecular Biology examines the structure, function and biochemistry of DNA and RNA and the biochemical processes in the flow of information from the gene to protein. These will include: DNA replication, recombination and repair processes; transcription of RNA and RNA splicing; and protein synthesis. The regulation of gene expression will also be covered at an introductory level. The course will also include an introduction to cloning methodology.
LH: up to four hours per week which will normally consist of one three hour laboratory period plus one additional hour on the following day.
PR: **Science 1807**, BIOC 2101; and BIOC 2100 or Biology 2250

**3402 Food Chemistry** examines the following topics: water structure and the role of water in chemical reactions and mechanical properties of foods; chemistry and physical properties of carbohydrates, proteins and lipids; food dispersions; pigments and natural colorants; food flavour; enzyme properties and applications; vitamins and minerals; chemistry of enzymic and non-enzymic browning; characteristics of: muscle tissue, milk, eggs, bread and edible plant tissue; food additives; and, chemical changes in foods during processing.
LH: one period per week
PR: **Science 1807**, BIOC 2000 or 2005; BIOC 2101; Chemistry 2440 or Chemistry 2401

**499A and 499B Dissertation** is a two-semester linked course based on independent study of a problem in Biochemistry. The subject of study will be decided in consultation with Faculty advisors and must be approved in advance by the Department. This dissertation is obligatory for Honours students in Biochemistry. The dissertation will be submitted as a formal written report accompanied by appropriate illustration before the end of the tenth week of the second semester. Before the end of his/her final semester the student will give an oral presentation of his/her research.
CH: 6
PR: **Science 1807**, Honours students in their final year or permission of the Head

---

**Consultation feedback:**

Begin forwarded message:

**From:** "Associate Dean of Science (Undergraduate)" <adsu@mun.ca>

**Subject:** Re: Consultation on Science 1807

**Date:** February 23, 2015 at 12:50:10 PM NST

**To:** FBA AD Undergrac <adundgradfba@mun.ca>

Thanks for your suggestions Larry. We’ve been in discussions with the Registrar’s office about this and, it seems that we don’t have past history of using special designations for safety courses, so using any letter at all won’t mean much to our students. In contrast, there are very few SC courses—most are offered with departmental designations (BIOL, BIOC, etc.). That should make it ‘special’ as well. We also discussed the no fee, no load implications for this course with the registrar’s office. I am confident they have this in hand for proper treatment.

Thanks again,

Aimee

DR. AIMEE SURPRENANT | INTERIM ASSOCIATE DEAN OF SCIENCE
(Administration & Undergraduate)
Memorial University
On Feb 16, 2015, at 12:57 PM, FBA AD Undergrad <adundgradfba@mun.ca> wrote:
Hello:

The Faculty of Business Administration has no concerns with the substance of this proposal. I do have a couple of suggestions, though:
1. You might like to consider a slightly different approach to the numbering of the course. We recently made a similar change to the Professional Development seminars that all of our BComm students must complete before they participate in their first work term. Rather than using a conventional course number, we designated them as "BUSI 300W", which made their status more clear. Like the proposed Science 1807, BUSI 300W is now a prerequisite for the first Work Term, which means that we can enforce completion of the PD seminars.
2. You might want to confirm that the "0-credit" designation does all that you want it to do and nothing more, particularly from the point of view of fees and course-loads. We discovered that there were fee implications associated with the "W" in the course number for BUSI 300W that meant we had to specify that it was a, "non-credit, zero credit-hour, no fee course".
I hope this helps
--larry

Larry Bauer, Ph.D.
Associate Professor of Finance
Associate Dean (Undergraduate Programs)
Faculty of Business Administration
Memorial University of Newfoundland
St. John's Nfld, A1B 3X5

www: http://www.business.mun.ca
e-mail: lbauer@mun.ca
Tel: (709) 864-8512
Fax: (709) 864-8954


From: "Associate Dean of Science (Undergraduate)" <adsu@mun.ca>
Subject: Re: Consultation on Science 1807
Date: February 23, 2015 at 12:55:58 PM NST
To: MIUG Consultations <MIUGconsultations@mi.mun.ca>

Thanks for your comments, Derek.
First, thanks for catching the character limit. We’ve changed it to: Safety in the Science Lab.

Second, we modified the Executive Summary to address issues of fees and use of the term “Safety 1000”. Essentially, I’ve switched the order of the first two sentences and added one extra in between.

Safety 1000 is a course of online training modules currently offered by the Department of Environmental Health and Safety via D2L. It is a mandatory course which students must complete prior to starting lab courses where hazards are present. This proposal makes the current Safety 1000, into a 0-credit, no fee, course, Science 1807. This proposal will allow 1807 to appear on the students’ transcripts and have the Registrar check that the course has been completed rather than relying on the students to keep a paper certificate and having to check all of them by hand. Although it would be best to have the course be called Safety 1000, the Registrar cannot use that designation because Environmental Health and Safety is not an academic unit. As this is the first academic offering of this unique course, the Department of Biochemistry is the sole department adding the course as a prerequisite for 2015-2016. They have volunteered to test this new process and if plans unfold as hoped, other Science departments will add 1807 as a prerequisite in 2016-2017.

Thanks again, we appreciate the feedback. Aimee

DR. AIMMEE SURPRENANT | INTERIM ASSOCIATE DEAN OF SCIENCE
(Administration & Undergraduate)
Memorial University
St. John's, NL, Canada A1B 3X7
T 709-864-8155
adsu@mun.ca

On Feb 16, 2015, at 2:50 PM, MIUG Consultations <MIUGconsultations@mi.mun.ca> wrote:
Dr. Suprenant,

Thank you for the opportunity to review the proposed new course Science 1807 Safety in the Scientific Laboratory. This new course will have no impact on the programs at the Marine Institute.

A couple of comments regarding the proposal.

First, the abbreviated course title is longer than the 30 character limit.

Second, the course Safety 1000 is referenced several times and yet this course is not currently in the calendar. "WHMIS" turns up only in the Other Requirements of courses listed in the Faculty of Education courses. Safety 1000 is referenced as being part of the Department of Environmental Health and Safety but this is not, as correctly stated in the
Proposal for new course Science 1807
Page 9 of 17

proposal, part of the Calendar. Perhaps it would be a cleaner proposal to simply remove the references to Safety 1000? This would also mean that the Sample Course Outline should reference Science 1807 and not Safety 1000.

Thank you and good luck with this important proposal.

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

From: "Associate Dean of Science (Undergraduate)" <adsu@mun.ca>  
Subject: Re: Consultation on Science 1807  
Date: February 23, 2015 at 12:59:09 PM NST  
To: Engineering Consultations <engrconsult@mun.ca>  
Cc: "Wall, Mary" <maryw@mun.ca>, Andrew Fisher <adfisher@mun.ca>, "Jayde Edmunds" <edmundsj@mun.ca>

Thanks, Glynn. We have changed the abbreviated title to Safety in the Science Lab and added the ‘a’ in the calendar description. Thanks again. Aimee

DR. AIMEE SURPRENANT | INTERIM ASSOCIATE DEAN OF SCIENCE  
(Administration & Undergraduate)  
Memorial University  
St. John's, NL, Canada A1B 3X7  
T 709-864-8155  
adsu@mun.ca

On Feb 19, 2015, at 12:50 PM, Engineering Consultations <engrconsult@mun.ca> wrote:  
Dear Dr. Surprenant,

Thank you for the opportunity to comment on the proposed Calendar change to convert the non-transcript course Safety 1000 into a new course Science 1807 that will appear on students' transcripts. This change was considered at yesterday's regular meeting of the Faculty's Committee on Undergraduate Studies.

Our accreditation requirements include a strong emphasis on safety. It is vital to us that all of our students have documented
instruction on laboratory safety. This change to a course that appears on transcripts will make checking for such instruction much easier.

I have two minor points to raise, both on page 3 of 4:
1. The abbreviated course title has a limit of 30 characters (including spaces). "Safety in the Scientific Laboratory" has 35 characters.
2. At the end of the Calendar description, insert 'a', so that it reads: "... where this is a prerequisite."

The Faculty of Engineering and Applied Science strongly supports this proposed Calendar change.

Yours sincerely,

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

Begin forwarded message:
From: "Wall, Mary" <maryw@mun.ca>
Subject: FW: Consultation on Science 1807
Date: February 16, 2015 at 4:15:46 PM NST
To: "Associate Dean of Science (Undergraduate)" <adsu@mun.ca>

From: Waterman, Ellen
Sent: February-16-15 2:41 PM
To: Wall, Mary
Subject: RE: Consultation on Science 1807

Music has no problem with this change.

Ellen Waterman
Dean and Professor
School of Music
Memorial University of Newfoundland
A1C 5S7

T: 709-864-7486
F: 709-864-2666
ellenw@mun.ca

From: "Associate Dean of Science (Undergraduate)" <adsu@mun.ca>
Subject: Re: Consultation on Science 1807
Date: February 23, 2015 at 1:05:25 PM NST
To: "Mercer, Stacey" <staceym@mun.ca>

Hi Stacy,

Thanks for the comment. We went back and forth about this quite a bit trying to find the correct language and have settled on the following edited version of the description. Hopefully it alleviates Norm’s concerns. Thanks again, Aimee

Science 1807 Safety in the Scientific Laboratory introduces students to safety practices required for working in a science laboratories where hazards are present. Students complete individual online modules in Laboratory Safety and WHMIS. Normally, it will be taken before the start of the semester in which students take their first science laboratory course with this prerequisite, and it must be completed no later than the first Friday of the semester. Check department lists of courses to see where this is a prerequisite.
CH: 0
OR: only offered online; completion time estimated to be two hours

DR. AIMEE SURPRENANT | INTERIM ASSOCIATE DEAN OF SCIENCE
(Administration & Undergraduate)
Memorial University
St. John’s, NL, Canada A1B 3X7
T 709-864-8155
adsu@mun.ca

On Feb 16, 2015, at 4:29 PM, Mercer, Stacey <staceym@mun.ca> wrote:
Hi Dr. Suprenant:
Here is a comment from the head of Geography.
--

Dear Stacey:

Geography offers 2nd year Science courses with laboratory slots (Geog 2012, 2195), but which do not involve the use of hazardous materials. We therefore need clarification that this course requirement will not be applied, “before the start of the semester in which students take their first science laboratory
course”, if that first science laboratory course is in Geography. Our students would benefit from a module which emphasized safety while doing field research, but that is not proposed here.

Best wishes
Norm

--

Stacey Mercer
Secretary to the Associate Deans
Faculty of Arts
Memorial University of Newfoundland
St. John's, NL A1C 5S7

Tel: (709) 864-8255
Fax: (709) 864-2135
staceyym@mun.ca
www.mun.ca/arts

From: <cvardy@mun.ca>
Subject: FW: Consultation on Science 1807
Date: February 19, 2015 at 10:56:48 AM NST
To: <adsu@mun.ca>

Dear Dr. Surprenant

I have reviewed the proposal for the new Course-Science 1807 and it appears fine from the Faculty of Medicine's point of view.

Cathy Vardy
Vice Dean
Faculty of Medicine

From: "Walsh, Donna" <donnaw@mun.ca>
Subject: Science 1807
Date: February 16, 2015 at 6:32:38 PM NST
To: “Associate Dean of Science (Undergraduate)” <adsu@mun.ca>
Dear Dr. Surprenan,  
This proposed course or, more accurately, this proposed method of managing an existing course seems like a logical and sensible change. The course also seems like a very valuable one.  
Donna Walsh

Sent from my iPad

From: "Rohr, Linda" <lerohr@mun.ca>  
Subject: science 1807  
Date: February 18, 2015 at 10:48:31 AM NST  
To: "Associate Dean of Science (Undergraduate)" <adsu@mun.ca>

Hi Aimee
I have reviewed the proposal for Science 1807 and have no concerns.

Linda

Linda E. Rohr PhD  
Associate Professor  
Associate Dean Undergraduate Studies  
School of Human Kinetics and Recreation  
Memorial University  
St. John’s, NL  
709.864.6202  
709.864.7531 (fax)  
PE 2025

Begin forwarded message:  
From: Karen Morris <morrisdk@mun.ca>  
Subject: Re: FW: Consultation on Science 1807  
Date: February 24, 2015 at 10:20:31 AM NST  
To: "adsu >> Associate Dean of Science (Undergraduate)" <adsu@mun.ca>

Hi Aimee,
The Biology Undergraduate Studies Committee reviewed the Science 1807 new course proposal at our meeting on February 19th and are in support of the proposal. We are actually hoping that this will be a success as most of our course offerings currently require completion of Safety 1000. The current proposal would provide a better method of ensuring students have completed the course.
Thanks
Karen
Hi, we have made the requested changes. Thanks for your careful reading!

Best,

Aimée

DR. AIMÉE SURPRENANT | INTERIM ASSOCIATE DEAN OF SCIENCE
/Administration & Undergraduate
Memorial University
St. John’s, NL, Canada A1B 3X7
T 709-864-8155
adsu@mun.ca

On Feb 27, 2015, at 11:04 AM, Glew, Csop <cglew@mun.ca> wrote:
Good Morning,
We have reviewed the proposed calendar changes and would like to offer the following comments:
• We are in favour of the proposal.
• In the sample course outline, change title from "Safety 1000" to "Science 1807"
• In the sample course outline a couple of minor typos (see track changes attached)
• The abbreviated course title exceeds the 30 character limit.

Thanks for the opportunity to provide feedback.
Regards,
Csop Glew

_____________________________
CSOP GLEW, Hon. B.A., M.U.P.  |  MANAGER OF ACADEMIC PROGRAMS
School of Pharmacy
Memorial University of Newfoundland
St. John's, NL | A1B 3V6
Health Sciences Centre | Room H3435
T 709 777 6963 | F 709 777 7044
www.mun.ca/pharmacy

From: "Alcock, Erin" <ekalcock@mun.ca>
Subject: FW: Consultation on Science 1807
Date: March 4, 2015 at 10:05:25 AM NST
To: "Associate Dean of Science (Undergraduate)" <adsu@mun.ca>

Dr. Surprenant,

Apologies if you already have received correspondence from the library on Science 1807. I can’t find earlier record of this proposal and wanted to respond just in case.

This new course proposal will have little impact on the university library system. We would have served Safety 1000 where appropriate and therefore I don't anticipate any issues with support for Science 1807.

Please let me know if you have any further questions.

Best,

Erin

Erin Alcock
Science Research Liaison Librarian
QE2 Library
Memorial University of Newfoundland
ekalcock@mun.ca
709-864-8316

From: Michael Morrow <mmorrow@mun.ca>
Subject: Consultation on Science 1807
Date: March 5, 2015 at 9:59:57 AM NST
To: <adsu@mun.ca>, Brad deYoung <bdeyoung@mun.ca>, Rick Goulding <rgoulding@mun.ca>, Jolanta Lagowski <jolantal@mun.ca>, S H Curnoe <curnoe@mun.ca>, Entcho Koytchev Demirov <entcho@mun.ca>

Aimée

The responses that I got from faculty members in Physics were supportive of this proposal.

Mike
Proposal for new course Science 1807
Page 16 of 17

Department of Physics and Physical Oceanography
Memorial University of Newfoundland
St. John's, Newfoundland Phone: (709) 864 4361
Canada, A1B 3X7 FAX: (709) 864 8739

Science 1807 Comments from chemistry faculty March 6, 2015

Dear Aimée,
I would like to lend my strong support for the introduction of this course. The purpose of a safety course is to ensure that all students have a basic knowledge of the potential dangers that may arise during laboratory work. This course, as a prerequisite for all laboratory courses at MUN, will do its job, preventing students from undertaking lab work with little or no knowledge of safe laboratory practice. It will significantly reduce the workload for laboratory instructors and the frustration that often arises for the students who need to print their certificate to give to their lab instructors and often have trouble doing so.

Chris Flinn
Deputy Head, Undergraduate Studies
MUN Chemistry Department

YES PLEASE!!!!!!! Can we also have students register for this instead of SFTY1000?

Erika Merschrod

Chris,

Looks fine to me.

Bob Davis

Hi Chris,

I just wanted to get back to you regarding Science 1807. I was so very pleased to see the introduction of this course. I think that it will greatly ease the difficulties that we have experienced especially at the First Year Level with having students complete the Safety Course. I also strongly feel that the link to registration is absolutely essential to ensure students have gained this awareness to safety in the lab. I feel that having the course as a prerequisite is fantastic as long as it is truly treated that way and ensures that students are unable to register for any courses in a department that requires this as a prerequisite or that if students are allowed to still register for the course prior to completing this course that at least they would be deregistered from all lab courses that require this as a prerequisite if they have not completed Science 1807 prior to the start of the semester.

I would also like to see chemistry as one of the trial departments in this if possible.
Karen Hattenhauer
April 7, 2015

TO: Dr. M. Abrahams, Dean of Science
FROM: Rob Nolan, Secretary
       Committee on Undergraduate Studies, Faculty of Science
SUBJECT: SCUGS Recommendations for Medical Certificates

Members of the Undergraduate Studies Committee, Faculty of Science, have had the opportunity to review the recommendations put forth by the Senate Committee on Undergraduate Studies regarding medical certificates. At a meeting held on March 27th, discussion from Departmental representatives included:

- The definitions of “final examination” and “written notification” in this context appear to be vague. Clarification was requested.
- Committee members agreed it would be useful to develop a uniform request form to ensure consistent information and documentation is provided by students.
- There was general acknowledgement that the system of self-declaration could be open to abuse, and that the proposed communication strategy will be important to try to minimize that.
- In some cases, creative accommodations may need to be developed for parts of the evaluation. Faculty members should be encouraged to discuss possible strategies with their colleagues, both within their department and across the Faculty/University.

Rob Nolan
Assistant Registrar and
Secretary: Committee
on Undergraduate Studies
Faculty of Science
4 March 2015

TO: Secretaries, Academic Councils, Faculties/Schools/Grenfell Campus/Marine Institute, Student Unions (St. John’s Campus, Grenfell Campus, Marine Institute, Graduate Studies), Student Heath Services, DELTS, University Counselling Centre

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

SUBJECT: Medical Certificates

A decision by the Newfoundland and Labrador Medical Association (NLMA) in February 2014 resulted in the University adopting a short-term measure regarding sick notes for the Winter Semester 2014. Students prevented from completing term work and seeking an alternate evaluation were directed to verbally declare to relevant professors illness or medical conditions of less than five days duration that would affect their participation in classes, labs and/or evaluations related to their courses or programs. This short-term measure was announced to cover the period of time required for the University Senate to develop and approve policy changes with regard to sick notes that align with the new directive from the NLMA to all physicians. The Senate Committee on Undergraduate Studies was asked to review this matter and established a Sub-Committee in May 2014. In the meantime, the short-term measure regarding sick notes continued for the Spring and Fall Semesters 2014. For the Winter Semester 2015, a clarification of the interim measure was circulated to the university community - the interim measure has removed the requirement for supporting medical documentation; however, while students can self-declare to professors illness or medical conditions of less than five days duration that will affect their participation in classes, labs and/or evaluations related to their courses or programs, a professor can request that a student put his/her request in writing.

The Sub-Committee’s initial report and recommendations were considered at a meeting of the Senate Committee on Undergraduate Studies in October 2014. At that time, it was the decision of the Committee to seek input from the NLMA prior to the Sub-Committee’s report and recommendations being forwarded to the university community for feedback. A formal response was received from the NLMA on 29 January 2015 which acknowledged that there is a risk to academic integrity when students seek accommodation or deferral from a final examination without having proper medical documentation. As such, the External Relations Committee of the NLMA agreed to amend the NLMA policy on medical certificates by asking physicians to use their discretion when the patient requesting the medical certificate is a student seeking accommodation or deferral from a final examination that makes up a significant portion of the final grade. In light of the response received from the NLMA, the Senate Committee on Undergraduate Studies asked the Sub-Committee to reconvene and reconsider its original recommendations.

The Sub-Committee’s revised recommendations were approved by the Senate Committee on Undergraduate Studies at a meeting held on 19 February 2015 and are now being forwarded (see attached) to the university community for consideration and feedback.

Since the Senate Committee on Undergraduate Studies would like to deal with this matter as expeditiously as possible, I am requesting that a coordinated response from your academic council be submitted at your earliest possible convenience but no later than 31 May 2015.

Thank you for your timely assistance in this very important matter; input from the academic community is essential in completing this work. 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 to sguus@mun.ca.

Yours truly,

Jennifer Porter
Deputy Registrar and Secretary to the Committee

JP/ln

Attachment

cc: Committees on Undergraduate Studies
    Deans/Vice-Presidents
    Provost and Vice-President (Academic)
    Deputy Provost (Students) and Associate Vice-President (Academic)
    Undergraduate Studies
Summary of Main Calendar Changes (from 2014-2015 calendar entry):

- Inclusion of details on the type of supporting documents to be submitted by a student when seeking accommodation for a final exam or deferred final exam.

- Addition of tighter timelines for when a student is to submit a request for accommodation for a final exam and deferred final exams.

- Addition of a regulation to address self-declaration process for all forms of evaluation, excluding final exams and deferred final exams.

Recommendation #1:

6.7.3 Exemptions From Final Examinations and Procedures for Applying to Write Deferred 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. This application should be made via telephone or in writing through the student's @mun.ca email account in advance wherever possible, but no later than 48 hours after the original date of the examination, to the head of the appropriate academic unit and the course instructor. If application is made by telephone, written confirmation must then be received within one week of the original date of the examination by the head of the appropriate academic unit. The list below outlines the type of supporting documentation required:

   I. For illness or medical conditions, medical documentation from a health professional is required. Students should provide the health professional with a copy of the Student Medical Certificate (http://www.mun.ca/regoff/STUDENT_MEDICAL_CERTIFICATE.pdf)

   II. For bereavement or other acceptable cause, official documents or letters that support the reason for the request (i.e. death certificate, letter from employer, travel documents, etc.)

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 final examination by illness or 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 final examination further deferred. This application must be submitted within one week of the scheduled date of the deferred examination. This application should be made via telephone or in writing through the student's @mun.ca email account in advance wherever possible, but no later than 48 hours after the original date of the examination, to the head of the appropriate academic unit and the course instructor. If application is made by telephone, written confirmation must then be received within one week of the original date of the deferred final examination by the head of the appropriate academic unit. 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.

The list below outlines the type of supporting documentation required:

i. For illness or medical conditions, medical documentation from a health professional is required. Students should provide the health professional with a copy of the Student Medical Certificate (http://www.mun.ca/regoff/STUDENT_MEDICAL_CERTIFICATE.pdf)

ii. For bereavement or other acceptable cause, official documents or letters that support the reason for the request (i.e. death certificate, letter from employer, travel documents, etc.)

Recommendation #2:

New regulation to be added into Section 6.6 which would read as follows:

Students prevented from completing term work and seeking an alternate evaluation are directed to declare to relevant instructors illness or medical conditions of less than five days duration that will affect their participation in classes, labs and/or evaluations related to their courses or programs. This declaration should be made via telephone or in writing through the student's @mun.ca email account in advance, wherever possible, but no later than 48 hours following the date of the evaluation. If the declaration is made by telephone, written confirmation must then be received within 7 days of the original date of the evaluation by the relevant instructor.

Recommendation #3:

Ensure that all course syllabi include a statement that indicates the alternate form of evaluation that will be available to the student should something be missed due to illness or bereavement or other acceptable cause.

Recommendation #4:

The Office of the Registrar will work with the student unions on all campuses of Memorial and the Division of Marketing and Communications to develop an educational campaign for students. The campaign will strive to inform students of the benefits of completing evaluations in a timely manner, in hopes of improving overall academic success.

Recommendation #5:

The Office of the Registrar will work with the Office of Faculty Relations and the Division of Marketing and Communications to develop an educational campaign for instructors around the regulation change. The campaign will work to highlight best practices and novel approaches to the variety of evaluation accommodations which may be applied by instructors in their course(s).
From: Wall, Mary
Sent: March 18, 2015 3:58 PM
To: Biochemistry Head; Brad de Young; Chris Radford, Math & Stats; David Innes, Biology; Fletcher, Garth; Gerard Martin; John Hanchar, Earth Sciences; Peter Pickup, Chemistry; Wolfgang Banzhaf, Computer Science; Collins, Rosalind (Chemistry); Coombs, Donna Geraldine; Edwards, Regina (Computer Science); Guzzwell, Diane (Earth Sciences); Kenny, Shirley; Lewis, Betty Ann; Morrissey, Leonce (Math & Stats); Psychology; Sparkes, Winnie; Todd, Amy M.; Baiyu Zhang, Engineering & Applied Science; Cynthia Priddle, QEII Library; Cyr Couturier, Marine Institute; Dean Bavington, Geography; Stapleton, Donna; Alcock, Erin; Evan Edinger, Geography; GSU; Katie Doyle, MUNSU; Leah Robertson, MUNSU; MUNSU; Nathan Cook, Music; Catto, Norm; Murphy, Pamela; Ratana Chuenpaqdee, Geography; Ray Roche, MI; Nolan, Robert; Sharon Penney, Education; Thomas Southall, MUNSU; James, Valarie; Wade Locke, Economics
Cc: Abrahams, Mark; Kenny, Gall; Rideout, Julie D.; Associate Dean of Science (Research); Associate Dean of Science (Undergraduate); shuelin@mun.ca; oscar@mun.ca; Foss, Kelly; allison.eaton@mun.ca; Hopkins, Janice; Bennett, Dion; MacNab, Victor Gordon; Porter, Denise; whumphries@mun.ca; Newhook, Rebecca; Roberts, Kristen Leigh; Taylor-Walsh, Trudy (taylorwalsh@grenfell.mun.ca); Shannon Patrick Sullivan
Subject: Memo - Calendar Change Process Proposal
Importance: High

Please see email below from Dr. Surprenant regarding a proposal for a change in the Faculty of Science by-laws.

Dear members of Faculty of Science Council,

Attached please find a proposal for a change in the by-laws of the Faculty of Science. This change has been endorsed by the FOS undergraduate committee. According to the FOS Constitution (http://www.mun.ca/science/faculty_staff/faculty_council/constitution.php):

Section 5.1 By-laws may be drawn up and amended by a two-thirds majority of those present and voting at a meeting of the Council, providing that the proposed by-law or amendment has been submitted in writing and circulated to all members of the Council not less than fourteen days prior to the meeting.

Thus, this email serves as a notice of the motion and the council will vote on the motion during the April 15, 2015 meeting scheduled for 1:00 pm.

Thanks,
Aimée

DR. AIMEE SURPRENANT | INTERIM ASSOCIATE DEAN OF SCIENCE
(Administration & Undergraduate)
Memorial University
St. John's, NL, Canada A1B 3X7
T 709-864-8155
adsu@mun.ca
March 6, 2015

TO: All Members of Council,  
Faculty of Science

FROM: Robert Nolan, Secretary  
Committee on Undergraduate Studies, Faculty of Science

SUBJECT: Proposed Changes to Calendar Change Process of Departments Offering Programs in Both Faculties of Arts & Science

At a meeting of the Committee on Undergraduate Studies, Faculty of Science held on March 6, 2015, the Committee considered the attached proposal regarding the process for calendar changes in Departments for which major programs are offered in both the Faculty of Arts and the Faculty of Science. The Committee endorsed the proposal for submission to Faculty Council.

Robert M. Nolan  
Assistant Registrar/  
Graduation Manager and  
Secretary: Committee on  
Undergraduate Studies,  
Faculty of Science
The Arts/Science Calendar Change Process

At present there are five Memorial University departments which offer both programs leading to the awarding of the degree of Bachelor of Arts and programs leading to the awarding of the degree of Bachelor of Science. Three of these departments have the Faculty of Science as their "home" unit: the Department of Computer Science, the Department of Mathematics and Statistics, and the Department of Psychology. The other two departments have the Faculty of Arts as their "home" unit: the Department of Economics and the Department of Geography.

Under the current process for Calendar changes, all such proposals emanating from these five departments must be approved by the Committees on Undergraduate Studies and the Faculty Councils of both the Faculty of Arts and the Faculty of Science before they can be considered by the Senate Committee on Undergraduate Studies. However, the two faculties operate under somewhat dissimilar protocols and timeframes for Calendar changes. For example, committees in the Faculty of Arts tend to meet throughout the summer months while committees in the Faculty of Science usually do not.

This creates several procedural issues; for instance, depending on meeting schedules, an amendment requested by the Committee on Undergraduate Studies of the Faculty of Science may not be reflected in the document considered by the Faculty Council of the Faculty of Arts. More broadly, the current process places a more substantial administrative burden on the Offices of the Deans of the two Faculties, as well on the academic unit from which the Calendar change proposal originates, than is the case with Calendar changes emanating from other departments in the Faculty of Arts and the Faculty of Science. Furthermore, debate on such proposals within the Committee on Undergraduate Studies and Faculty Council of the "non-home" faculty has historically been extremely limited — rarely encompassing discussion beyond that which could be accomplished via the standard consultation process required of all Calendar changes.

As such, the Faculty of Arts and the Faculty of Science propose to amend the existing procedure for approval of Calendar changes originating from these five departments, as follows:
1. All such Calendar changes shall be considered by the Committee on Undergraduate Studies and the Faculty Council of the “home” faculty before they can be forwarded for consideration by the Senate Committee on Undergraduate Studies.

2. All such Calendar changes shall include the “non-home” faculty amongst the list of units consulted.

3. The Chairman of the Faculty Council (i.e., the Dean, as per the current Constitutions of both Faculty Councils) of the “non-home” faculty shall have the right to invoke an additional requirement for approval of the Calendar changes by the Committee on Undergraduate Studies and the Faculty Council of the “non-home” faculty before they can be forwarded for consideration by the Senate Committee on Undergraduate Studies. In such cases, the Chairman of the Faculty Council of the “non-home” faculty shall so inform (a) the Chairman of the Faculty Council of the “home” faculty, (b) the head of the department proposing the Calendar changes, and (c) the secretary of the Senate Committee on Undergraduate Studies, in writing, within the normal four-week consultation period. If this right is not invoked, then formal approval by the Faculty Council of the “non-home” faculty shall not be a requirement for consideration of the Calendar changes by the Senate Committee on Undergraduate Studies.

Effectively, then, we propose to allow the existing procedure to be maintained at the discretion of the Office of the Dean of the “non-home” faculty. Under normal circumstances, however, bicameral approval of Calendar changes would not be a requirement, and such proposals would follow the same procedure as for other departments in the Faculty of Arts and the Faculty of Science.

In order to implement this policy within the Faculty of Science, and in accordance with advice received from the Registrar, we propose that the Faculty Council of the Faculty of Science adopt the following as a new By-Law 6.4:

*The Chairman of the Faculty Council is authorised to approve, for recommendation to the Senate and on behalf of the Faculty Council, the addition, modification, or deletion of courses, programmes and departmental regulations proposed by the Departments of Economics and Geography. If this approval is not granted by the Chairman, such proposals shall be referred to the Undergraduate Studies Committee.*

A parallel change with respect to the Departments of Computer Science, Mathematics and Statistics, and Psychology will be proposed for adoption by the Faculty Council of the Faculty of Arts.
Strategic Plan for the Faculty of Science  
Memorial University of Newfoundland  
Fall 2011

The province of Newfoundland and Labrador, and Memorial University are currently undergoing a period of rapid change. As the province’s role within the country has changed, so too has the role of Memorial University and the Faculty of Science. The purpose of this document is to anticipate and plan for research, teaching, and service in this environment and to provide guidance to the Faculty of Science for the next decade.

Anticipated Challenges for the Faculty of Science from 2011 to 2021

- Memorial University will continue to shift its focus to become a more research-intensive university.
- Tri-council (NSERC, CIHR, SSHRC) funding will continue to be a basic operating resource for many faculty members. However, competition for these sources will only increase in the future. While tri-council funding will be fundamental to the research mission of the Faculty of Science, other agencies such as The Atlantic Canada Opportunities Agency, the Atlantic Innovation Fund, Canada Foundation for Innovation, Genome Canada, Genome Atlantic and the Newfoundland and Labrador Research and Development Corporation will continue to provide the financial resources that will allow us to significantly transform research. For the Faculty of Science to thrive in the next decade, we must pre-position ourselves to take full advantage of these and other opportunities.
- Graduate student numbers will continue to increase.
- Undergraduate student numbers will remain stable or increase modestly. This student population will become more ethnically diverse. Engagement of faculty in undergraduate recruitment activities will need to be increased.
- The numbers of students registering for distance education courses will continue to increase. With this growth, we will need to reconsider the blend of on-campus and distance courses acceptable for a MUN degree, and the extent to which the Faculty of Science should be offering courses to other institutions and accepting courses from other institutions.
- We will continue to be challenged by our infrastructure, but a revitalized provincial economy means that it is reasonable to assume that significant new construction will take place within the next 10 years.
- The Faculty of Science has not fully engaged its alumni. They are a critical resource for this Faculty so establishing this connection will be a major new undertaking.

Vision
A research-intensive Faculty that is renowned both for the caliber of our research and the quality of our graduates
Mission
Consistent with the mission of Memorial University, the Faculty of Science is dedicated to international excellence in research, teaching and engagement to the benefit of people locally, nationally, and internationally.

Mandate

Research
The Faculty of Science is responsible for the provision of a broad spectrum of basic science knowledge and as such serves as the foundation upon which more applied disciplines are based. It is our responsibility to further knowledge within specific science disciplines, as well as to create the conditions that facilitate interdisciplinary research.

Teaching
The Faculty of Science is intended to be broadly accessible to students. Emphasis is placed on creating an environment that encourages and supports the learning process, while also challenging our students to achieve goals they might not have thought possible.

The Plan

Research Goals:
The Faculty of Science will enhance its stature globally as a leading research-intensive faculty that advances knowledge and produces high calibre graduates. Research within the Faculty of Science is primarily devoted to questions of fundamental importance, but also includes applied research relevant locally, nationally, and internationally. To achieve this we will:

1. Support and promote basic and applied research excellence in areas of established strength and emerging opportunity while recognizing the freedom of the faculty to pursue individual research interests based on their judgement, skill, and curiosity. The hiring of faculty will be primarily driven by our research agenda.
2. Attract and retain world-class faculty, students, postdoctoral fellows and staff to engage in cutting edge research activity.
3. Foster an intellectual environment conducive to research excellence and to the training and mentoring of highly qualified personnel.
4. Provide the infrastructure and services essential to support the training of undergraduate and graduate students and leading-edge research.
5. Engage with partners within and outside of Memorial to promote and support interdisciplinary research, research networking, and research collaborations.
6. Promote the high caliber of our research. This can be achieved by more aggressively preparing and nominating our faculty and graduate students for national and international awards.
Current Strengths and Emerging Opportunities in Research.

The Faculty of Science currently has substantial and diverse research strength, the greatest being our faculty, staff, and students. Within academic departments research agendas are driven by the discipline-specific departmental strategic plans. Beyond those, the Faculty of Science engages in interdisciplinary research that crosscuts individual departments and serves to synergize the research endeavor in the Faculty as a whole. The current research strengths include Marine Sciences; Natural Resources; Biomedical Sciences and Health; Materials Science; and Mathematical and Computational Sciences.

While the Faculty of Science is committed to maintaining its core areas, there are also particular areas of emerging opportunity generated by the expertise of our faculty, our research infrastructure, and our geographical position with its associated climate, resources, and ecology that distinguish us from other faculties of Science. We therefore provide diverse opportunities that will draw researchers and students here in preference to other universities in Canada or internationally. The areas also crosscut most of the departments and are consistent with the priority and strategic areas that federal and provincial government agencies target for funding as well as Memorial’s special obligation to the people of Newfoundland and Labrador. They also reflect areas in which we have made recent new hires. For the Faculty of Science, these strategic research areas are:

Marine Sciences

Research activities in this area includes, for example: biological, chemical, physical, and geological oceanography and oceanographic modeling; ocean acoustics; ocean data visualization; ocean sensor and instrumentation development; physiology, molecular biology, and biochemistry of aquatic species; aquaculture and fisheries science; marine ecology; cognitive and behavioural ecology of marine species; conservation and climate change; glacial climate systems; harsh environments.

Natural Resources and Energy

Research activities in this area include the discovery, production and monitoring of non-renewable and renewable natural resources as well as traditional and alternative sources of energy. Some examples are: petroleum reservoir characterization and modeling; mineralogy; stratigraphy; sedimentology; exploration geophysics; tectonics; environmental impact and monitoring of resource extraction; biofuels and materials; energy sustainability, cognitive and behavioural ecology; landscape ecology and conservation; plant ecology; environmental geology; sustainable/green chemistry; alternative energy sources; geochemistry; biogeochemistry; contaminant hydrology; environmental chemistry.
Mathematical and Computational Sciences

Mathematical and Computational models are pervasive in modern science. Research ranges from theoretical computer science, pure mathematics, applied mathematics, mathematical physics and statistics to the more applied areas such as: nature and bio-inspired computing, autonomous robotics, complex systems and their simulation, mathematical and computational biology and chemistry, fluid dynamics, geophysical modeling, ocean and atmosphere modeling.

Teaching Goals:

The Faculty of Science is dedicated to providing our undergraduate and graduate students with the best possible educational experience, acknowledging the needs and interests of our province.

1. All decisions involving the education of our students will be designed to uphold the value of a Memorial University Science degree.
2. Students will be provided with the highest quality of instruction. To ensure this, faculty members will receive constructive feedback, and be provided with the opportunity and the means to improve and enhance their teaching and to develop innovations in teaching. Graduate students will have opportunities for developing their teaching skills.
3. We will maintain an infrastructure appropriate for contemporary learning. Undergraduate laboratory equipment will have technology consistent with that used in the modern research environment.
4. Undergraduate students will be involved in the research environment. Our undergraduates will be given the opportunity to participate in research and such experience should be credited on their transcripts. Undergraduate students will be encouraged to present their research findings at regional and national scholarly conferences.
5. We will incorporate technological advancements into our curricula whenever it is appropriate to do so. In particular, an increase in the scope of distance course offerings here and elsewhere will create challenges and opportunities.
6. Teaching excellence will be recognized and rewarded by actively nominating faculty for local and national teaching awards.

Current Strengths and Emerging Opportunities in Teaching

The Faculty of Science has a strong reputation of excellence in teaching that is a consequence of the skill and dedication of our faculty and staff. Our instruction ranges from the traditional lecture format, to learning opportunities that place greater emphasis on experiential learning (e.g., field schools and courses and clinical training), to award winning distance education courses. While the Faculty of Science includes a diverse range of disciplines, we are committed to providing students with both the opportunity to learn and the opportunity to apply their knowledge. Coop programs are a relatively small component of our programs within the Faculty of Science, and they provide a learning opportunity that should grow in the future. Likewise, there are also opportunities for expanding the range of options for our students through partnerships with other faculties (e.g., life science and engineering science).
Priorities for most of our undergraduate and graduate programs are provided by our departmental strategic plans. The Faculty of Science is home to our interdisciplinary graduate programs (Aquaculture, Cognitive and Behavioural Ecology, Computational Science, Environmental Science, and Theoretical Physics). As our graduate programs reflect our research expertise, we expect growth in our graduate programs to be fueled by growth in our research programs.

Engagement:

As one of the largest academic units at Memorial University, we tend to be modest about our achievements. However, such modesty means that most outside the Faculty of Science do not know who we are, what we do, and how we contribute to both the university and the province. We therefore do not get the recognition we deserve in terms of the excellence of our teaching programs, and the accomplishments of our students, faculty and staff.

1. We will better engage with the community to make clear our contribution to society and our contribution to the success of the province.
2. We will make a strong connection with our alumni so that they remain engaged with the Faculty of Science after they graduate.
3. The Faculty of Science at Memorial will establish a national profile that distinguishes it from science at other universities in Canada. This will be informed by our research and teaching goals.
4. We will be proactive in our use of technology in order to have a presence in a variety of different media.
5. Our faculty are encouraged to be more engaged with the media and they will be assisted with media training.
6. Students will be encouraged to participate in national and international competitions to both inform ourselves and others of the strengths of our programs.