

Request for Calendar Change Form

Tracking No:
(Senate Secretary's Office
use only)
Date:

To	Secretary of Senate	
From	Name(Dean): Andrew P. Dean	Faculty Science and Environmental Sciences
	Department the change relates to Mathematical Sciences	
	Contact Person Adam Van Tuyl	

Is the proposed calendar change Select...

Instructions:

1. In all cases please complete and attach section 1 and 2
2. If the calendar change affect other departments/schools/faculties complete and attach section 3
3. If the answer to any of the questions below is yes, explain. Attach separate sheets with reference to the question

- | | | |
|--|--|---|
| 1. Do the proposed changes affect other departments/ schools/faculties in terms of their calendar change? | Yes
<input checked="" type="checkbox"/> | No
<input type="checkbox"/> |
| 2. Is a transition plan needed for student in progress? | Yes
<input type="checkbox"/> | No
<input checked="" type="checkbox"/> |
| 3. Are the proposed changes likely to affect student enrollment in your department/school/faculty? | Yes
<input type="checkbox"/> | No
<input checked="" type="checkbox"/> |
| 4. Are the proposed changes likely to affect student enrollment in other departments/schools/faculties at Lakehead University? | Yes
<input type="checkbox"/> | No
<input checked="" type="checkbox"/> |
| 5. Will the proposed changes require additional teaching space and/or teaching staff and/or equipment and/or other resources? | Yes
<input type="checkbox"/> | No
<input checked="" type="checkbox"/> |
| 6 Will the proposed changes affect existing teaching loads within your department/school/faculty? | Yes
<input type="checkbox"/> | No
<input checked="" type="checkbox"/> |
| 7. Will the proposed changes increase demand for teaching support services such as the library, computing services and technical staff ? | Yes
<input type="checkbox"/> | No
<input checked="" type="checkbox"/> |
| 8. Will the proposed change require direct or in-kind support from outside the academic unit? | Yes
<input type="checkbox"/> | No
<input checked="" type="checkbox"/> |
| 9. Do the proposed changes include change in course(s) which is/are required core course(s) for a major? | Yes
<input checked="" type="checkbox"/> | No
<input type="checkbox"/> |
| 10. Do the proposed changes include a change in course which is service/required course(s) in another program? | Yes | No |

	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Do the proposed changes include change in course(s) which is/are open elective available to any student in any program?	Yes	No
	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12. Do the proposed changes include change in course(s) which is/are elective in a major i.e. restricted to students in a major?	Yes	No
	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Signatures:

Date approved by faculty council

Section 1

Description of the Proposed Calendar Change:

Splitting Math 2321 into two 0.5FCE courses

Rationale of the Proposed Calendar Change(s):

(Corresponding to Section 2 where required)

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RATIONALE

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Math 2321 (Statistics) is a full year course offered by the Department of Mathematical Sciences. It is a service course because mathematics majors cannot use this course towards their major. We wish to split the course into two half year courses. Reasons to do this include:

1. Splitting our year-long courses into half-year courses was recommend in our previous program review. This is the last course to be split.
2. Students who drop out after the mid-point currently receive no credit. By splitting the course in two, they may be able to receive some form of credit.
3. The first half of the new course may be attractive as an elective to students from other areas.
4. Gives the chair more flexibility in teaching assignments.

As part of the split, we are also changing and updating the content. This is in response to requests from other departments which use this course. The major changes are:

1. We have changed the prerequisites so that students either need MHF4U or one FCE of university mathematics. [The prerequisites for the current version of the course were seen as a barrier; in addition, in some programs it was not possible for students to take the prerequisites. This change will make registration easier for the students and the Chair of the department.]
2. The first course will now focus on theory. The second course will now focus on application, including how to use statistical software. This was at the request of the departments that we serve. We have also changed the offering of the second course.

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EXPLANATION OF QUESTIONS WITH A YES

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1. For every program that uses Math 2321, a program change will need to be made. [Note: we have combined all the program changes into this calendar change; individual departments will be asked to approve the calendar changes within their department. The Department of Mathematical Sciences is then bringing forward all calendar changes.]

9. and 10. Math 2321 is a required course for a major in a number of programs. We offer this course as a service course.

Section 2

Existing Calendar Entries: (Page reference based on hard copy or URL based on electronic version of calendar)	Proposed Calendar Entries/Addition/ Deletion -If only addition, specify page number and placement in university calendar -If only deletion, write Deleted
<p>1</p> <p>http://mycoursecalendar.lakeheadu.ca/pg180.html</p> <p>Mathematics 2321 Statistics</p> <p>Credit Weight: 1.0</p> <p>Prerequisite(s): Mathematics 1152</p> <p>Description: Probability; discrete and continuous probability distributions; sampling distributions; chi-square, t and f tests of hypotheses; regression and correlation; analysis of variance.</p> <p>Offering: 3-1; 3-1</p> <p>Notes: Not recognized as a mathematics credit for Mathematics or Computer Science majors.</p>	<p>Mathematics 2AAA Elementary Probability and Statistics</p> <p>Credit Weight: 0.5</p> <p>Prerequisite: MHF4U or 1 FCE of mathematics courses</p> <p>Description. Sample space and events, elementary probability. Descriptive statistics using tables and charts. Measures of central tendency, variability and association. Basic discrete and continuous distributions. Hypothesis testing and confidence intervals. Simple linear regression and correlation.</p> <p>Offering: 3-1;0-0</p> <p>Notes: Not recognized as a mathematics credit for Mathematics or Computer Science majors.</p> <p>-----</p> <p>Mathematics 2BBB Elementary Statistical Methods</p> <p>Credit Weight: 0.5</p> <p>Prerequisite(s): 2AAA</p> <p>Description: An introduction to statistical methods. Techniques include estimation, tests of hypothesis, analysis of variance and topics in experimental design. Students will also work with statistical software for data analysis.</p> <p>Offering: 3-1 or 3-1</p> <p>Notes: Not recognized as a mathematics credit for Mathematics or Computer Science majors.</p>

APPLIED BIO-MOLECEULAR SCIENCE

2

<http://mycoursecalendar.lakeheadu.ca/pg544.html>

1. HBSc (Applied Bio-Molecular Science Major)

Four Year program

2. BSc (Applied Bio-Molecular Science Major)
Four Year Non-Direct Entry program

Third Year:

(c) Mathematics 2321 or Kinesiology 3030
and one half-course elective

1. HBSc (Applied Bio-Molecular Science Major)
Four Year program

2. BSc (Applied Bio-Molecular Science Major)
Four Year Non-Direct Entry program

Third Year:

(c) Mathematics 2AAA and 2BBB or Kinesiology
3030 and one half-course elective

BIOLOGY

3

<http://mycoursecalendar.lakeheadu.ca/pg273.html>

1. BSc (Biology Major)
Three Year program

2. Honours BSc (Biology Major)
Four Year program

3. BSc (Biology Major)
Four Year Non-Direct Entry program

Second Year:

(c) Mathematics 2321 or the combination of
Mathematics 2331 and 2333

1. BSc (Biology Major)
Three Year program

2. Honours BSc (Biology Major)
Four Year program

3. BSc (Biology Major)
Four Year Non-Direct Entry program

Second Year:

(c) Mathematics 2AAA and 2BBB or the
combination of Mathematics 2331 and 2333

CHEMISTRY

4

<http://mycoursecalendar.lakeheadu.ca/pg275>

html

3. Honours BSc (Biology and Chemistry Major)
Four Year program

3. Honours BSc (Biology and Chemistry Major)
Four Year program

4. BSc (Biology and Chemistry Major)
Four Year Non-Direct Entry program

4. BSc (Biology and Chemistry Major)
Four Year Non-Direct Entry program

Third Year:
(f) Mathematics 2321

Third Year:
(f) Mathematics 2AAA and 2BBB

ENVIRONMENTAL STUDIES/SCIENCES PROGRAMS

5

<http://mycoursecalendar.lakeheadu.ca/pg283.html>

1. HBESc (Biology Major)
Four Year program

1. HBESc (Biology Major)
Four Year program

Second Year:
(e) Mathematics 2321

Second Year:
(e) Mathematics 2AAA and 2BBB

2. HBESc (Earth Science Major)
Four Year program

2. HBESc (Earth Science Major)
Four Year program

Third Year:
(d) Mathematics 2321

Third Year:
(d) Mathematics 2AAA and 2BBB

GEOARCHAEOLOGY PROGRAMS

6

<http://mycoursecalendar.lakeheadu.ca/pg561.html>

1. BSc (Geoarchaeology Major)
Three Year program

1. BSc (Geoarchaeology Major)
Three Year program

(e) One full course equivalent elective
(Mathematics 2321 or Geography 2271 and a
half-course elective is recommended)

(e) One full course equivalent elective
(Mathematics 2AAA and 2BBB or Geography 2271
and a half-course elective is recommended)

GEOLOGY

7

<http://mycoursecalendar.lakeheadu.ca/pg553.html>

1. Honours BSc (Geology Major)
Four Year program

2. BSc (Geology Major)
Four Year Non-Direct Entry program

Third Year:
(b) Mathematics 2321

1. Honours BSc (Geology Major)
Four Year program

2. BSc (Geology Major)
Four Year Non-Direct Entry program

Third Year:
(b) Mathematics 2AAA and 2BBB

WATER RESOURCE SCIENCE

8

<http://mycoursecalendar.lakeheadu.ca/pg559.html>

1. Honours BSc (Water Resource Science Major)
Four Year program

2. BSc (Water Resource Science Major)
Four Year Non-Direct Entry program

Second Year:
(d) Mathematics 2321

1. Honours BSc (Water Resource Science Major)
Four Year program

2. BSc (Water Resource Science Major)
Four Year Non-Direct Entry program

Second Year:
(d) Mathematics 2AAA and 2BBB

EDUCATION

9

<http://mycoursecalendar.lakeheadu.ca/pg825.html>

2. BSc, BEd (Biology and Chemistry Majors) I/S
Five Year program

Third Year:
(e) Mathematics 2321

2. BSc, BEd (Biology and Chemistry Majors) I/S
Five Year program

Third Year:
(e) Mathematics 2AAA and 2BBB

10

<http://mycoursecalendar.lakeheadu.ca/pg837.html>

21. BSc, BEd (Psychology Major) I/S
Four Year program

Second Year:

(a) Psychology 2101 (Mathematics 2321 may be taken instead, in which case, one of the courses in (c) must be replaced by another Psychology course)

21. BSc, BEd (Psychology Major) I/S
Four Year program

Second Year:

(a) Psychology 2101 (Mathematics 2AAA and 2BBB may be taken instead, in which case, one of the courses in (c) must be replaced by another Psychology course)

PSYCHOLOGY

11

<http://mycoursecalendar.lakeheadu.ca/pg254.html>

5. BSc (Psychology Major)
Three Year program

6. BSc (Psychology Major)
Four Year program

7. Honours BSc (Psychology Major)
Four Year program

Second Year:

(a) Psychology 2101 (Mathematics 2321 may be taken instead, in which case, one FCE in (c) must be replaced by another FCE in Psychology)

8. Honours BSc (Specialized Honours in Psychology)
Four Year program

Second Year:

(a) Psychology 2101 (Mathematics 2321 may be taken instead, in which case, one FCE in (c) must be replaced by another FCE in Psychology)

5. BSc (Psychology Major)
Three Year program

6. BSc (Psychology Major)
Four Year program

7. Honours BSc (Psychology Major)
Four Year program

Second Year:

(a) Psychology 2101 (Mathematics 2AAA and 2BBB may be taken instead, in which case, one FCE in (c) must be replaced by another FCE in Psychology)

8. Honours BSc (Specialized Honours in Psychology)
Four Year program

Second Year:

(a) Psychology 2101 (Mathematics 2AAA AND 2BBB may be taken instead, in which case, one FCE in (c) must be replaced by another FCE in Psychology)

Section 3

The Faculty(ies) affected by the proposed calendar change

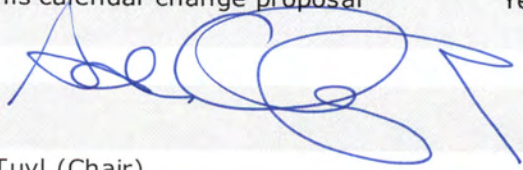
SES (Math, ABMS, Biology, Chemistry, Evt. Studies, Geoarchaeology, Geology, Water Resource Sci.)

Education

Health and Behavioural Sciences (Psychology)

I have been consulted regarding the attached calendar change and understand the academic and budgetary implication on my Dept./School/Faculty.

I agree to this calendar change proposal Yes No



Name:

Adam Van Tuyl (Chair)

Faculty:

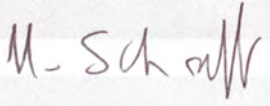
Dept. of Math. Sci.

Date:

15/09/2011

Signature of Dean

I agree to this calendar change proposal Yes No



Name:

H. Schraft (Program Coordinator)

Faculty:

ABMS

Date:

Oct. 6, 2011

Signature of Dean

I agree to this calendar change proposal

Yes

No

P. New.

Name:

D. Law (Chair)

Faculty:

Biology

Date:

2011-09-30

Signature of Dean

I agree to this calendar change proposal

Yes

No

C. Gottardo

Name:

C. Gottardo (Chair)

Faculty:

Chemistry

Date:

Oct 6/11

Signature of Dean

I agree to this calendar change proposal

Yes

No

Name:

A.P. Dean (Dean and Program Advisor)

Faculty:

Envt. Studies

Date:

Oct. 13/11

Signature of Dean

AP Dean

I agree to this calendar change proposal Yes No

Name: *J. R. Varney* Acting Chair
M.J. Boyd (Program Coordinator)

Faculty:
Geoarchaeology

Date:
5 Oct 11

Signature of Dean

I agree to this calendar change proposal Yes No

Name: *Stephen A. Kissin*
S.A. Kissin (Chair)

Faculty: *SES*
Geology

Date:
30 September 11

Signature of Dean

I agree to this calendar change proposal Yes No

Name:

P. Fralick (Program Coordinator)

Faculty:

Water Resource Sciences

Date:

Sept 30/2011

Signature of Dean

I agree to this calendar change proposal

Yes

No

Name:

T. Socha (Chair, Undergraduate) and John O'Meara (Dean)

Faculty:

Education

Date:

Oct 12/11

Signature of Dean

I agree to this calendar change proposal

Yes

No

Name:

Gord Hayman (Chair of Psychology) Lori A. Livingston (Dean)

Faculty:

Psychology and Health and Behavioural Sciences

Date:

October 6/11

Signature of Dean

I agree to this calendar change proposal

Yes

No

Name:

A.P. Dean (Dean)

Faculty:

Science and Env't. Studies

Date:

Oct. 13 / 11

Signature of Dean

