

# Request for Calendar Change Form

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

Date:

To	Secretary of Senate	
From	Name(Dean):	Faculty
	Dr. Andrew Dean	Science and Environmental Studies
	Department the change relates to	
	Geology	
	Contact Person	
	Dr. Stephen A. Kissin	

Is the proposed calendar change Undergraduate

**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<br><input type="checkbox"/>            | No<br><input checked="" type="checkbox"/> |
| 2. Is a transition plan needed for student in progress?  | Yes<br><input type="checkbox"/>            | No<br><input checked="" type="checkbox"/> |
| 3. Are the proposed changes likely to affect student enrollment in your department/school/faculty?                                       | Yes<br><input checked="" type="checkbox"/> | No<br><input type="checkbox"/>            |
| 4. Are the proposed changes likely to affect student enrollment in other departments/schools/faculties at Lakehead University?           | Yes<br><input type="checkbox"/>            | No<br><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<br><input type="checkbox"/>            | No<br><input checked="" type="checkbox"/> |
| 6 Will the proposed changes affect existing teaching loads within your department/school/faculty?  | Yes<br><input type="checkbox"/>            | No<br><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<br><input type="checkbox"/>            | No<br><input checked="" type="checkbox"/> |
| 8. Will the proposed change require direct or in-kind support from outside the academic unit?  | Yes<br><input type="checkbox"/>            | No<br><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<br><input checked="" type="checkbox"/> | No<br><input type="checkbox"/>            |
| 10. Do the proposed changes include a change in course which is  | Yes  | No  |

- |  |  |   |
|--|--|---|
| 10. Do the proposed changes include a course(s) which is/are a service course(s) in your, or another, department?                    | Yes<br><input type="checkbox"/>            | No<br><input checked="" type="checkbox"/> |
| 11. Do the proposed changes include a course(s) which is/are an open elective available to any student in any program?               | Yes<br><input checked="" type="checkbox"/> | No<br><input checked="" type="checkbox"/> |
| 12. Do the proposed changes include a course(s) which is/are an elective in your major that is restricted to students in your major? | Yes<br><input type="checkbox"/>            | No<br><input checked="" type="checkbox"/> |

Signatures:

Date approved by faculty council  
07.12.2010

## Section 1

### Description of the Proposed Calendar Change:

1. Adds the option of Mathematics 1210 and 1230 to the mathematics requirement in the programs HBSc Geology and Geology with Major Concentration in Physics and the BSc-4year programs in Geology and Geology with Major Concentration in Physics.
2. Adds the option of Mathematics 1210 and 1230 to the mathematics requirement in the program HBESc (Earth Science).

### Rationale of the Proposed Calendar Change(s):

(Corresponding to Section 2 where required)

1

On a trial basis, we should like to introduce this option, adding an intermediate level course in order to fulfill the calculus requirement.

2

On a trial basis, we should like to introduce this option, adding an intermediate level course in order to fulfill the calculus requirement.

3

Adds the specification of a Geology minor, which has not been specified by the Department of Geology previously.

4

In the BSc Geology program one full credit equivalent is needed in order to replace the credit for HBSc thesis. A list of specified courses will be needed in order to meet requirements for registration with the APGO.

5

Renumbering of Engineering courses has altered the course number of this course.

6

It may not always be possible to conduct two Saturday field trips.

7

Experience has shown that more background in geology is necessary for most students to do well in this 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 pg553.html</p> <p>d) Mathematics 1160 or 1180</p> <p>Notes: 2. Mathematics Students who lack high school MHF4U (Advanced Functions) or its equivalent must register for Mathematics 1051 and 1077. Mathematics 1160 or 1180 is taken in Year 2.</p>	<p>d) Mathematics 1160 or 1180 or 1210 and 1230</p> <p>Notes: 2. Mathematics Students who lack high school MHF4U (Advanced Functions) or its equivalent must register for Mathematics 1051 and 1077. Mathematics 1160 or 1180 or 1210 and 1230 is taken in Year 2.</p>
<p>2 pg283.html</p> <p>d) Mathematics 1160 or 1180</p> <p>Note: 2. Mathematics Students who lack high school MHF4U (Advanced Functions) or its equivalent must register for Mathematics 1051 and 1077. Mathematics 1160 or 1180 is taken in Year 2.</p>	<p>d) Mathematics 1160 or 1180 or 1210 and 1230</p> <p>Note: 2. Mathematics Students who lack high school MHF4U (Advanced Functions) or its equivalent must register for Mathematics 1051 and 1077. Mathematics 1160 or 1180 or 1210 and 1230 is taken in Year 2.</p>
<p>3 pg553.html</p> <p>none</p>	<p>Minor in Geology: Geology 1111 and 1131 and three additional full-course equivalents in Geology, at least one full-course equivalent of which must be at Third-Year level or above.</p>
<p>4 pg553.html</p> <p>2. BSc (Geology Major) Four Year Non-Direct Entry program This program is designed for students who lack the required B major average to complete the four-year HBSc. Students may move to the four-year BSc as early as the commencement of Fourth Year. The program requirements for the first three years are the</p>	<p>2. BSc (Geology Major) Four Year Non-Direct Entry program This program is designed for students who lack the required B major average to complete the four-year HBSc. Students may move to the four-year BSc as early as the commencement of Fourth Year. The program requirements for the first three</p>

same as for the HBS (Geology Major) program. In order to remain in the program, students must maintain at least an overall C average in the major. All course choices in the fourth year must be approved by the department Chair.

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Fourth year:

(a) Geology 4137, 4161, 4215, 4313, 441.

(b) One FCE from: Biology, Chemistry, Computer Science, Mathematics or Physics.

(c) One FCE from\*: Engineering 2139, 2433, 3738; Forestry 2110, 2350; Geography 2211, 2331, 2351, 3251, 3311, 3313, 3315, 3317, 3331, 4211, 4231, 4333; Geology 4011 or any courses above first year level in Biology, Chemistry, Computer Science or Physics.

\*Permissions or prerequisite are required for some of these courses.

5

pg580.html

Geology 1111 Planet Earth with Laboratory  
Credit Weight: 0.5

Description: The course offers students the opportunity to better understand and appreciate the evolution and internal functions of the Earth through geological time. An overview of minerals and rocks is followed by discussion of internal processes including igneous activity, earthquakes and magnetism. The origin of continents, ocean basins and large scale structures is presented by applying the concepts of plate tectonics. Laboratory exercises will be devoted to the study of rocks and minerals.

Cross-List(s): Environmental Studies 1112

Offering: 3-2; 0-0

Notes: An additional fee (see Miscellaneous Fees) is required for this course. Students are required to attend two Saturday field trips.

6

pg 580.html

Geology 4015 Basic Scientific Methods in Geology  
Credit Weight: 0.5

Prerequisite(s): Geology 4010 or 1110 or 1130 or permission of the Department

Proposed Entry

Geology 1111 Planet Earth with Laboratory  
Credit Weight: 0.5

Description: The course offers students the opportunity to better understand and appreciate the evolution and internal functions of the Earth through geological time. An overview of minerals and rocks is followed by discussion of internal processes including igneous activity, earthquakes and magnetism. The origin of continents, ocean basins and large scale structures is presented by applying the concepts of plate tectonics. Laboratory exercises will be devoted to the study of rocks and minerals.

Cross-List(s): Environmental Studies 1112

Offering: 3-2; 0-0

Notes: An additional fee (see Miscellaneous Fees) is required for this course. Students are required to attend at least one Saturday field trip.

Geology 4015 Basic Scientific Methods in Geology  
Credit Weight: 0.5

Prerequisite(s): Geology 3015 or 1110 or 1130 or

Description: Specific topics concerned with problems and materials encountered by Civil and Environmental Engineers. Topics discussed may include: application of geometrical techniques to the solution of problems in structural geology, quarrying and mining; natural radioactivity, its causes and consequences (radon, groundwater chemistry); applications of mineralogical and geological principles to radioactive waste disposal; origin and nature of some industrial minerals (diamond, graphite, salt, gypsum, asbestos, silica); the mineralogy, composition and stability of natural and synthetic silicate and carbonate constructional materials (granite, sandstone, bricks, Portland cement).

Offering: 0-0; 3-0

Notes: Not for credit in the MSc, HBSoc or BSc Geology programs.

7

pg580.html

Geology 2318 Field Mapping  
Credit Weight: 0.5

Prerequisite(s): Geology 1111 and 1131 or permission of the Department

Description: Areas of bedrock outcrop will be visited the week following final spring examinations. These field areas will be utilized to teach the principles of basic mapping. Students will begin by constructing base maps using compass and pace techniques. Field identification of igneous, sedimentary and metamorphic rocks will be stressed and this information will be plotted on the base map to produce a geologic map. The final project will be a multi-day mapping exercise where the student will learn to utilize GPS (global positioning system) data to plot locations on topographic base maps.

Notes: An additional fee (see Miscellaneous Fees) is required for this course.

permission of the Department

Description: Specific topics concerned with problems and materials encountered by Civil and Environmental Engineers. Topics discussed may include: application of geometrical techniques to the solution of problems in structural geology, quarrying and mining; natural radioactivity, its causes and consequences (radon, groundwater chemistry); applications of mineralogical and geological principles to radioactive waste disposal; origin and nature of some industrial minerals (diamond, graphite, salt, gypsum, asbestos, silica); the mineralogy, composition and stability of natural and synthetic silicate and carbonate constructional materials (granite, sandstone, bricks, Portland cement).

Offering: 0-0; 3-0

Notes: Not for credit in the MSc, HBSoc or BSc Geology programs.

Geology 2318 Field Mapping  
Credit Weight: 0.5

Prerequisite(s): Geology 1111 and 1131 and Geology 2310 and/or 2217 or permission of the Department

Description: Areas of bedrock outcrop will be visited the week following final spring examinations. These field areas will be utilized to teach the principles of basic mapping. Students will begin by constructing base maps using compass and pace techniques. Field identification of igneous, sedimentary and metamorphic rocks will be stressed and this information will be plotted on the base map to produce a geologic map. The final project will be a multi-day mapping exercise where the student will learn to utilize GPS (global positioning system) data to plot locations on topographic base maps.

Notes: An additional fee (see Miscellaneous Fees) is required for this course.

Section 3

The Faculty(ies) affected by the proposed calendar change

Biology

Chemistry

Computer Sciences

Engineering

Mathematics

Physics

Geography

Forestry

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

I agree to this calendar change proposal

Yes  No

If you choose "No" please explain why in the box below

Name: Andrew P. Dean

Faculty: SES

Date: March 2 / 11

Signature of Dean

