Program/Major or Minor/Concentration Revision Form

(07/2004)

1.0 Degree Title
Specify the two degrees for concurrent degree programs

B.Sc. (Hon)

1.1 Major (Legacy= Subject) (30-char. max.)

1.2 Concentration (Legacy = Concentration/Option)
If applicable (30 char. max.)

1.3 Minor (with Concentration, if applicable)
(30 char. max.)

1.4 Category

- ☐ Faculty Program (FP)
- ☐ Major
- ☐ Joint Major
- ☐ Major Concentration (CON)
- ☐ Minor
- ☐ Minor Concentration (CON)
- ☒ Honours (HON)
- ☐ Joint Honours Component (HC)
- ☐ Internship/Co-op
- ☐ Thesis (T)
- ☐ Non-Thesis (N)
- ☐ Other

Please specify

1.5 Complete Program Title

Honours in Earth Sciences

2.0 Administering Faculty/Unit

Science

Offering Faculty/Department

Earth & Planetary Sciences

3.0 Effective Term of revision or retirement
Please give reasons in 5.0 "Rationale" in the case of retirement
(Ex. Sept. 2004 = 200409) ☐ Retirement

Term: 200809

4.0 Existing Credit Weight: 75

Proposed Credit Weight: 75

5.0 Rationale for revised program

A new required course has been introduced: Earth and Planetary Inference (EPSC 340), replacing the "approved statistics course". One course, Isotope Geology (EPSC 519) has been moved from a required to a complementary course. U1 required credit weighting has been reduced to allow for some flexibility. Complementary credit weighting has been increased.

Two new complementary courses are listed: Subsurface Mapping (EPSC 525), Geodynamics and Geomagnetism (EPSC 510).

Housekeeping: Structural Geology (EPSC 203) and Mineral Deposits (EPSC 452) have been renamed, dropping the now-unneeded numerical appendix.

6.0 Revised Program Description (Maximum 150 words)

The program curriculum is designed to provide a rigorous foundation in physical sciences and the flexibility to create an individualized program in preparation for careers in industry, teaching and research. It is intended to provide an excellent preparation for graduate work in the Earth Sciences. The program is accepted for professional qualification in most Canadian provinces.

7.0 List of existing program and proposed program

Existing program (list courses as follows: Subj Code/Crse Num, Title, Credit weight, under the headings of: Required Courses, Complementary Courses, Elective Courses)

U1 Required Courses
(27 credits)

EPSC 203 (3) Structural Geology 1
EPSC 210 (3) Introductory Mineralogy
EPSC 212 (3) Introductory Petrology
EPSC 220 (3) Principles of Geochemistry
EPSC 231 (3) Field School 1
EPSC 233 (3) Earth and Life History
EPSC 312 (3) Spectroscopy of Minerals
MATH 222 (3) Calculus 3
approved (3) statistics course

Note: Students who have not had the following course or its equivalent in CEGEP or the Freshman Program may be required to take MATH 133 Vectors, Matrices and Geometry.

U2 and/or U3 Required Courses
(33 credits)

EPSC 320 (3) Elementary Earth Physics
EPSC 350 (3) Tectonics
EPSC 423 (3) Igneous Petrology
EPSC 445 (3) Metamorphic Petrology
EPSC 452 (3) Mineral Deposits 2
EPSC 455 (3) Sedimentary Geology
EPSC 480D1 (3) Honours Research Project
EPSC 480D2 (3) Honours Research Project
EPSC 519 (3) Isotope Geology
MATH 314 (3) Advanced Calculus
MATH 315 (3) Ordinary Differential Equations

Complementary Courses
(15 credits)

3 credits, one of:

EPSC 331 (3) Field School 2
EPSC 341 (3) Field School 3
plus 12 credits (4 courses) chosen from the following:
EPSC 330 (3) Earthquakes and Earth Structure
EPSC 334 (3) Invertebrate Paleontology
EPSC 425 (3) Sediments to Sequences
EPSC 435 (3) Geophysical Applications
EPSC 451 (3) Hydrothermal Mineral Deposits
EPSC 501 (3) Crystal Chemistry
EPSC 530 (3) Volcanology
EPSC 542 (3) Chemical Oceanography
EPSC 547 (3) High Temperature Geochemistry
EPSC 548 (3) Processes of Igneous Petrology
EPSC 549 (3) Hydrogeology
EPSC 550 (3) Selected Topics 1
EPSC 551 (3) Selected Topics 2
EPSC 552 (3) Selected Topics 3
EPSC 561 (3) Ore-forming Processes 1
EPSC 562 (3) Ore-forming Processes 2
EPSC 570 (3) Cosmochemistry
EPSC 580 (3) Aqueous Geochemistry
EPSC 590 (3)Applied Geochemistry Seminar

Note: Courses at the 300 or higher level in other departments in the Faculties of Science and Engineering may also be used as complementary credits, with the permission of the Director of Undergraduate Studies.

Proposed program (list courses as follows: Subj Code/Crse Num, Title, Credit weight, under the headings of: Required Courses, Complementary Courses, Elective Courses)

U1 Required Courses
(24 credits)

EPSC 203 (3) Structural Geology
EPSC 210 (3) Introductory Mineralogy
EPSC 212 (3) Introductory Petrology
EPSC 220 (3) Principles of Geochemistry
EPSC 231 (3) Field School 1
EPSC 233 (3) Earth and Life History
EPSC 312 (3) Spectroscopy of Minerals
MATH 222 (3) Calculus 3

U2 and/or U3 Required Courses
(33 credits)

EPSC 320 (3) Elementary Earth Physics
EPSC 340 (3) Earth and Planetary Inference
EPSC 350 (3) Tectonics
EPSC 423 (3) Igneous Petrology
EPSC 445 (3) Metamorphic Petrology
EPSC 452 (3) Mineral Deposits
EPSC 455 (3) Sedimentary Geology
EPSC 480D1 (3) Honours Research Project
EPSC 480D2 (3) Honours Research Project
MATH 314 (3) Advanced Calculus
MATH 315 (3) Ordinary Differential Equations

Complementary Courses
(18 credits)

3 credits, one of:

EPSC 331 (3) Field School 2
EPSC 341 (3) Field School 3
plus 15 credits (5 courses) chosen from the following:
EPSC 330 (3) Earthquakes and Earth Structure
EPSC 334 (3) Invertebrate Paleontology
EPSC 425 (3) Sediments to Sequences
EPSC 435 (3) Geophysical Applications
EPSC 451 (3) Hydrothermal Mineral Deposits
EPSC 501 (3) Crystal Chemistry
EPSC 510 (3) Geodynamics and Geomagnetism
EPSC 519 (3) Isotope Geology
EPSC 525 (3) Subsurface Mapping
EPSC 530 (3) Volcanology
EPSC 542 (3) Chemical Oceanography
EPSC 547 (3) High Temperature Geochemistry
EPSC 548 (3) Processes of Igneous Petrology
EPSC 549 (3) Hydrogeology
EPSC 550 (3) Selected Topics 1
EPSC 551 (3) Selected Topics 2
EPSC 552 (3) Selected Topics 3
EPSC 561 (3) Ore-forming Processes 1
EPSC 562 (3) Ore-forming Processes 2
EPSC 570 (3) Cosmochemistry
EPSC 580 (3) Aqueous Geochemistry
EPSC 590 (3)Applied Geochemistry Seminar
Note: Courses at the 300 or higher level in other departments in the Faculties of Science and Engineering may also be used as complementary credits, with the permission of the Director of Undergraduate Studies.

Attach extra page(s) as needed

8.0 Consultation with Related Units ☐ Yes ☐ No

Financial Consult ☐ Yes ☐ No

Attach list of consultations

9. Approvals

Routing Sequence	Name	Signature	Date
Department	John Stix		
Curric/Acad Committee			
Faculty 1			
Faculty 2			
Faculty 3			
SCTP			
GS			
APPC			
Senate			

Submitted by

Name	
Phone	
Email	
Submission Date	

To be completed by ARR:

CIP Code