



<p><b>1.0 Degree Title</b> Specify the two degrees for concurrent degree programs</p> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">B.Sc. (Hons)</div> <p><b>1.1 Major (Legacy= Subject) (30-char. max.)</b></p> <div style="border: 1px solid black; height: 20px; margin-bottom: 5px;"></div> <p><b>1.2 Concentration (Legacy = Concentration/Option)</b> If applicable (30 char. max.)</p> <div style="border: 1px solid black; height: 20px; margin-bottom: 5px;"></div> <p><b>1.3 Minor (with Concentration, if applicable)</b> (30 char. max.)</p> <div style="border: 1px solid black; height: 20px; margin-bottom: 5px;"></div> <p><b>1.4 Category</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Faculty Program (FP)  <input type="checkbox"/> Major  <input type="checkbox"/> Joint Major  <input type="checkbox"/> Major Concentration (CON)  <input type="checkbox"/> Minor  <input type="checkbox"/> Minor Concentration (CON)         </td> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Honours (HON)  <input type="checkbox"/> Joint Honours Component (HC)  <input type="checkbox"/> Internship/Co-op  <input type="checkbox"/> Thesis (T)  <input type="checkbox"/> Non-Thesis (N)  <input type="checkbox"/> Other              Please specify  <div style="border: 1px solid black; height: 20px; margin-left: 20px;"></div> </td> </tr> </table> <p><b>1.5 Complete Program Title</b></p> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Honours in Planetary Sciences</div>	<input type="checkbox"/> Faculty Program (FP) <input type="checkbox"/> Major <input type="checkbox"/> Joint Major <input type="checkbox"/> Major Concentration (CON) <input type="checkbox"/> Minor <input type="checkbox"/> Minor Concentration (CON)	<input checked="" type="checkbox"/> Honours (HON) <input type="checkbox"/> Joint Honours Component (HC) <input type="checkbox"/> Internship/Co-op <input type="checkbox"/> Thesis (T) <input type="checkbox"/> Non-Thesis (N) <input type="checkbox"/> Other Please specify <div style="border: 1px solid black; height: 20px; margin-left: 20px;"></div>	<p><b>2.0 Administering Faculty/Unit</b></p> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Science</div> <p><b>Offering Faculty/Department</b></p> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Earth &amp; Planetary Sciences</div> <p><b>3.0 Effective Term of revision or retirement</b> Please give reasons in 5.0 "Rationale" in the case of retirement (Ex. Sept. 2004 = 200409)    <input type="checkbox"/> Retirement</p> <p>Term: <div style="border: 1px solid black; padding: 2px; display: inline-block;">200809</div></p> <p><b>4.0 Existing Credit Weight</b>      <b>Proposed Credit Weight</b></p> <table style="width: 100%; border: none;"> <tr> <td style="border: 1px solid black; padding: 2px; width: 50%; text-align: center;">81</td> <td style="border: 1px solid black; padding: 2px; width: 50%; text-align: center;">81</td> </tr> </table> <p><b>5.0 Rationale for revised program</b></p> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>A new required course has been introduced: Earth and Planetary Inference (EPSC 340). One course, Isotope Geology (EPSC 519) has been moved from a required to a complementary course. One new complementary course is listed: Subsurface Mapping (EPSC 525).</p> <p>The dual listing of Cosmochemistry (EPSC 570) has been corrected.</p> </div>	81	81
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**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 and Planetary Sciences.

## 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  
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  
MATH 223 (3) Linear Algebra

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 (42 credits)

EPSC 320 (3) Elementary Earth Physics  
EPSC 330 (3) Earthquakes and Earth Structure  
EPSC 350 (3) Tectonics  
EPSC 423 (3) Igneous Petrology  
EPSC 480D1 (3) Honours Research Project  
EPSC 480D2 (3) Honours Research Project  
EPSC 510 (3) Geodynamics and Geomagnetism  
EPSC 570 (3) Cosmochemistry  
MATH 314 (3) Advanced Calculus  
MATH 315 (3) Ordinary Differential Equations  
MATH 317 (3) Numerical Analysis  
MATH 319 (3) Partial Differential Equations  
PHYS 340 (3) Electricity and Magnetism

### Complementary Courses (12 credits)

3 credits, one of:

PHYS 251 (3) Classical Mechanics 1  
PHYS 230 (3) Dynamics of Simple Systems  
plus 9 credits (3 courses) chosen from the following:  
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 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 (27 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  
MATH 223 (3) Linear Algebra

### U2 and/or U3 Required Courses (42 credits)

EPSC 320 (3) Elementary Earth Physics  
EPSC 330 (3) Earthquakes and Earth Structure  
**EPSC 340 (3) Earth and Planetary Inference**  
EPSC 350 (3) Tectonics  
EPSC 423 (3) Igneous Petrology  
EPSC 480D1 (3) Honours Research Project  
EPSC 480D2 (3) Honours Research Project  
EPSC 510 (3) Geodynamics and Geomagnetism  
EPSC 570 (3) Cosmochemistry  
MATH 314 (3) Advanced Calculus  
MATH 315 (3) Ordinary Differential Equations  
MATH 317 (3) Numerical Analysis  
MATH 319 (3) Partial Differential Equations  
PHYS 340 (3) Electricity and Magnetism

### Complementary Courses (12 credits)

3 credits, one of:

PHYS 251 (3) Classical Mechanics 1  
PHYS 230 (3) Dynamics of Simple Systems  
plus 9 credits (3 courses) chosen from the following:  
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 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 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.

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