New Program/Major or Minor/Concentration Proposal Form

1.0 Degree Title
Please specify the two degrees for concurrent degree programs

| B.Sc. |

2.0 Administering Faculty/Unit

| Science |

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

Core Science Component in Earth & Planetary Sciences

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

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

2.0 Offering Faculty/Department

| Science/Earth & Planetary Sciences |

3.0 Effective Term of Implementation
(Ex. Sept. 2004 = 200409)
Term

| 200709 |

4.0 Rationale for new proposal

During the discussions in the program review of the Faculty, Major and Honours programs, two important themes are emerging:
- replacing (improving) the Faculty program with a more general-purpose and more clearly defined B.Sc. Liberal degree
- ensuring that all B.Sc. degrees have appropriate programs which have a core plus depth or a core plus breadth

Our Majors and Honours programs already provide excellent programs with core plus depth, but we do not have an adequate program for core plus breadth. By replacing the Faculty programs with a new B.Sc. Liberal program, we can provide a very flexible system that provides core plus breadth in a systematic and modular way. Full description of the B.Sc. Liberal, please see Document AC-06-19.

5.0 Program Information
Please check appropriate box(es)

5.1 Program Type
- Bachelor's Program
- Master's
- M.Sc. (Applied) Program
- Dual Degree/Concurrent Program
- Certificate
- Diploma
- Graduate Certificate
- Graduate Diploma
- Ph.D. Program
- Doctorate Program
- (Other than Ph.D.)
- Private Program
- Off-Campus Program
- Distance Education Program
- (By Correspondence)
- Other (Please specify)

| Core Science Component |

5.2 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

5.3 Level
- Undergraduate
- Dentistry/Law/Medicine
- Continuing Ed (Non-Credit)
- Collegial
- Masters & Grad Dips & Certs
- Doctorate
- Post-Graduate Medicine/Dentistry
- Graduate Qualifying
- Postdoctoral Fellows

5.4 Core Science Component

Science/Earth & Planetary Sciences

5.5 Core Science Component in Earth & Planetary Sciences

B.Sc.

5.6 Core Science Component

B.Sc.

5.7 Core Science Component

B.Sc.

5.8 Core Science Component

B.Sc.

5.9 Core Science Component

B.Sc.

5.10 Core Science Component

B.Sc.

5.11 Core Science Component

B.Sc.

5.12 Core Science Component

B.Sc.

5.13 Core Science Component

B.Sc.

5.14 Core Science Component

B.Sc.

5.15 Core Science Component

B.Sc.

5.16 Core Science Component

B.Sc.

5.17 Core Science Component

B.Sc.

5.18 Core Science Component

B.Sc.

5.19 Core Science Component

B.Sc.

5.20 Core Science Component

B.Sc.

5.21 Core Science Component

B.Sc.

5.22 Core Science Component

B.Sc.

5.23 Core Science Component

B.Sc.

5.24 Core Science Component

B.Sc.

5.25 Core Science Component

B.Sc.

5.26 Core Science Component

B.Sc.

5.27 Core Science Component

B.Sc.

5.28 Core Science Component

B.Sc.

5.29 Core Science Component

B.Sc.

5.30 Core Science Component

B.Sc.

5.31 Core Science Component

B.Sc.

5.32 Core Science Component

B.Sc.

5.33 Core Science Component

B.Sc.

5.34 Core Science Component

B.Sc.

5.35 Core Science Component

B.Sc.

5.36 Core Science Component

B.Sc.

5.37 Core Science Component

B.Sc.

5.38 Core Science Component

B.Sc.

5.39 Core Science Component

B.Sc.

5.40 Core Science Component

B.Sc.

5.41 Core Science Component

B.Sc.

5.42 Core Science Component

B.Sc.

5.43 Core Science Component

B.Sc.

5.44 Core Science Component

B.Sc.

5.45 Core Science Component

B.Sc.

5.46 Core Science Component

B.Sc.

5.47 Core Science Component

B.Sc.

5.48 Core Science Component

B.Sc.

5.49 Core Science Component

B.Sc.

5.50 Core Science Component

B.Sc.

5.51 Core Science Component

B.Sc.

5.52 Core Science Component

B.Sc.

5.53 Core Science Component

B.Sc.

5.54 Core Science Component

B.Sc.

5.55 Core Science Component

B.Sc.

5.56 Core Science Component

B.Sc.

5.57 Core Science Component

B.Sc.

5.58 Core Science Component

B.Sc.

5.59 Core Science Component

B.Sc.

5.60 Core Science Component

B.Sc.

5.61 Core Science Component

B.Sc.

5.62 Core Science Component

B.Sc.

5.63 Core Science Component

B.Sc.

5.64 Core Science Component

B.Sc.

5.65 Core Science Component

B.Sc.

5.66 Core Science Component

B.Sc.

5.67 Core Science Component

B.Sc.

5.68 Core Science Component

B.Sc.

5.69 Core Science Component

B.Sc.

5.70 Core Science Component

B.Sc.

5.71 Core Science Component

B.Sc.

5.72 Core Science Component

B.Sc.

5.73 Core Science Component

B.Sc.

5.74 Core Science Component

B.Sc.

5.75 Core Science Component

B.Sc.

5.76 Core Science Component

B.Sc.

5.77 Core Science Component

B.Sc.

5.78 Core Science Component

B.Sc.

5.79 Core Science Component

B.Sc.

5.80 Core Science Component

B.Sc.

5.81 Core Science Component

B.Sc.

5.82 Core Science Component

B.Sc.

5.83 Core Science Component

B.Sc.

5.84 Core Science Component

B.Sc.

5.85 Core Science Component

B.Sc.

5.86 Core Science Component

B.Sc.

5.87 Core Science Component

B.Sc.

5.88 Core Science Component

B.Sc.

5.89 Core Science Component

B.Sc.

5.90 Core Science Component

B.Sc.

5.91 Core Science Component

B.Sc.

5.92 Core Science Component

B.Sc.

5.93 Core Science Component

B.Sc.

5.94 Core Science Component

B.Sc.

5.95 Core Science Component

B.Sc.

5.96 Core Science Component

B.Sc.

5.97 Core Science Component

B.Sc.

5.98 Core Science Component

B.Sc.

5.99 Core Science Component

B.Sc.

6.0 Total Credits

| 45 |

7.0 Consultation with Related Units

Yes ☐ No ☐

Financial Consult

Yes ☐ No ☐

Attach list of consultations.
8.0 Program Description (Maximum 150 words)

The program described below is the Core Science Component in Earth & Planetary Sciences for the B.Sc. Liberal.

9.0 List of proposed program for the New Program/Major or Minor/Concentration.

If new concentration (option) of existing Major/Minor (program), please attach a program layout (list of all courses) of existing Major/Minor.

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

**Core Science Component in Earth & Planetary Sciences (45 credits)**

**Required Courses (21 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 320 (3) Elementary Earth Physics

**Complementary Courses (3 credits, one of)**

- EPSC 331 (3) Field School 2
- EPSC 341 (3) Field School 3

**Complementary Courses (21 credits)**

- EPSC 312 (3) Spectroscopy of Minerals
- EPSC 330 (3) Earthquakes and Earth Structure
- EPSC 334 (3) Invertebrate Paleontology
- EPSC 350 (3) Tectonics
- EPSC 423 (3) Igneous Petrology
- EPSC 425 (3) Sediments to Sequences
- EPSC 435 (3) Geophysical Applications
- EPSC 445 (3) Metamorphic Petrology
- EPSC 451 (3) Hydrothermal Mineral Deposits
- EPSC 452 (3) Mineral Deposits 2
- EPSC 455 (3) Sedimentary Geology
- EPSC 501 (3) Crystal Chemistry
- EPSC 519 (3) Isotope Geology
- 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
- ESYS 300 (3) Investigating the Earth System
- ESYS 301 (3) Earth System Modelling
- ESYS 500 (3) Earth Systems Applications

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.
## 10.0 Approvals

<table>
<thead>
<tr>
<th>Routing Sequence</th>
<th>Name</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curric/Acad Committee</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCTP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senate</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Submitted by
Name
Phone
Email
Submission Date

To be completed by ARR:

CIP Code