<table>
<thead>
<tr>
<th>Year</th>
<th>Core</th>
<th>Additional</th>
<th>Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>3 units from:</td>
<td>12 units from:</td>
<td>6 units from Level I electives; 3 units if Chem 1R03 is taken as an elective</td>
</tr>
<tr>
<td></td>
<td>□ Math 1A03</td>
<td>□ Chem 1AA3</td>
<td>□ Math 1A03</td>
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<tr>
<td></td>
<td>□ Math 1LS3</td>
<td>□ Biology 1A03</td>
<td>□ Biology 1M03</td>
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<tr>
<td></td>
<td>□ Chem 1A03</td>
<td>□ Math 1AA3</td>
<td>□ Math 1B03</td>
</tr>
<tr>
<td></td>
<td>6 units from:</td>
<td>□ Math 1LT3</td>
<td>□ Math 1LT3</td>
</tr>
<tr>
<td></td>
<td>□ Envir Sc 1C03</td>
<td>□ Physics 1A03</td>
<td>□ Physics 1A03</td>
</tr>
<tr>
<td></td>
<td>□ Earth Sc 1G03</td>
<td>□ Physics 1AA3</td>
<td>□ Physics 1C03</td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Physics 1CC3</td>
<td>□ Science 1A03</td>
</tr>
</tbody>
</table>

| II   | 18 units | 3 units from Course List 1 | 9 units; (Note: ENVSOCTY 3MB3 or Stats 2B03 must be completed by the end of Level II). |
|      | □ Envir Sc 2B03 | □ _________ | □ _________ |
|      | □ Earth Sc 2E03 | □ _________ | □ _________ |
|      | □ Earth Sc 2K03 | □ _________ | □ _________ |
|      | □ Envir Sc 2Q03 | □ _________ | □ _________ |
|      | □ Earth Sc 2T03 | □ _________ | □ _________ |
|      | □ Envir Sc 2W03 | □ _________ | □ _________ |

| III  | 9 units | 9 units from Course List 2 | 12 units |
|      | □ Earth Sc 3FE3 | □ _________ | □ _________ |
|      | □ Earth Sc 3RD3 | □ _________ | □ _________ |
|      | □ Earth Sc 3Z03 | □ _________ | □ _________ |

| IV   | 18 units from Course List 2 | 0-3 units Physics 1A03 (1B03), 1C03 if not already completed | 9-12 units |
|      | □ Envir Sc 4MI3, Earth Sc 4MT6 or Envir Sc 4EA3 | □ _________ | □ _________ |
|      | □ _________ | □ _________ | □ _________ |
|      | □ _________ | □ _________ | □ _________ |
|      | □ _________ | □ _________ | □ _________ |

Please note: No more than 48 units may be Level I courses.

Course List 1
- ENVIR SC 2C03
- ENVSOCTY 2E13
- EARTH SC 2FE3
- ENVSOCTY 2GI3
- CHEM 2A03
- CHEM 2AA3
- CHEM 2E03
- BIOLOGY 2D03
- BIOLOGY 2F03
- STATS 2B03

Course List 2
- ENVIR SC 2C03
- ENVSOCTY 2GI3
- ENVIR SC 3B03
- EARTH SC 3CC3
- EARTH SC 3E03
- ENVSOCTY 3GI3
- ENVSOCTY 3GV3
- EARTH SC 3K03
- ENVSOCTY 3MB3
- ENVIR SC 3O03
- ENVSOCTY 3SR3
- ENVIR SC 3U03
- EARTH SC 3V03
- EARTH SC 3W03
- BIOLOGY 2F03
- BIOLOGY 3DD3
- BIOLOGY 3SS3

Course List 2(continued)
- ENVIR SC 4BB3
- ENVIR SC 4C03
- EARTH SC 4CC3
- ENVIR SC 4EA3
- EARTH SC 4FF3
- EARTH SC 4G03
- ENVSOCTY 4GA3
- EARTH SC 4J03
- ENVIR SC 4N03
- EARTH SC 4P03
- EARTH SC 4T03
- EARTH SC 4VV3
- ENVIR SC 4WB3
- ENVSOCTY 4GS3
- ENVSOCTY 4GT3
- ENVIROC 4MI3
Notes Applicable to the Honours Earth and Environmental Sciences program

Earth and Environmental Sciences at McMaster encompass five major themes: Aqueous Environmental Geochemistry, Earth Sciences, Environmental Hydrology and Climate, Environmental Policy, GIS and Spatial Analysis. It should be noted that each thematic area has its own sequence of courses and prerequisites (See the Course Listings section of this Calendar). Students may elect to take some or all of the upper level courses from different areas. In addition, there is a set of courses encompassing research design, field work, internships, and the senior thesis or review paper.

AQUEOUS ENVIRONMENTAL GEOCHEMISTRY
EARTHSC 3CC3, 4CC3, 4N03, ENVIRSC 2Q03, 3Q03

EARTH SCIENCES
EARTHSC 2E03, 2FE3, 2K03, 2T03, 3E03, 3K03, 3Z03, 4G03, 4J03, 4P03, 4T03, 4VV3, ENVSOCTY 3SR3

ENVIRONMENTAL HYDROLOGY AND CLIMATE
EARTHSC 3CC3, 3W03, 4CC3, 4WB3, ENVIRSC 2B03, 2C03, 2W03, 3B03, 3U03, 4BB3, 4C03, 4W03

ENVIRONMENTAL POLICY
ENVIRSC 4EA3, ENVSOCTY 2EI3, 2EK3, 3EC3, 3EE3, 3EG3, 4ET3, 4HH3

GEOGRAPHIC INFORMATION SYSTEMS (GIS) AND SPATIAL ANALYSIS
ENVSOCTY 2GI3, 3GI3, 3GV3, 3SR3, 4GA3, 4GS3, 4GT3

Students aiming to meet the academic requirements for professional registration of Geoscientists in Ontario can find additional information on these requirements on the website: https://www.science.mcmaster.ca/geo/undergraduate.html. Students are encouraged to consult with the academic advisor in the School of Geography and Earth Sciences to ensure proper selection of courses for professional registration.

ADMISSION NOTES
1. Students who did not complete Grade 12 Chemistry U must complete CHEM 1R03 in Level I. Given this course is considered elective, an additional three units from the Science I Course List must be completed. CHEM 1A03 must be completed by the end of Level II.
2. One of PHYSICS 1A03 or 1C03 must be completed prior to graduation. Completion by the end of Level II is recommended. Students who did not complete Grade 12 Physics U must register in PHYSICS 1A03.

ADMISSION
Completion of any Level I program with a Grade Point Average of at least 5.0 including:
6 units with an average of at least C+ in ENVIRSC 1C03, EARTHSC 1G03.

See front for complete set of course requirements

PROGRAM NOTES:
1. Students aiming to meet the academic requirements for professional registration of Geoscientists (PGeo) in Ontario can find additional information on these requirements on the website: https://www.science.mcmaster.ca/geo/undergraduate/undergrad-welcome.html. Students are encouraged to consult with the academic advisor in the School of Geography and Earth Sciences to ensure proper selection of courses for professional registration. The Honours programs offered by the School of Geography and Earth Sciences may not fulfill professional registration requirements.
2. All students are strongly encouraged to meet with the academic advisor in the School of Geography and Earth Sciences to discuss program requirements and course selections.
3. There are Level III prerequisites for many Level IV courses. The prerequisites should be considered when selecting your courses.
4. The field components of EARTHSC 2FE3 and 3FE3 are normally taken outside of the normal term. Details are announced in December (EARTHSC 2FE3) or March (EARTHSC 3FE3).
5. A Minor in Geography and Earth Sciences, Earth Sciences, Environment & Society or Environmental Sciences is not permitted in the Honours Earth and Environmental Sciences program. However, Minors in Environmental Studies, Geographic Information Systems and Geography are permitted.
6. In order to meet the Compulsory Foundation Science and Geoscience requirements for the Professional Geoscientist Certification, completion of the following courses is required: CHEM 1A03, EARTHSC 2E03, 2K03, 3E03, 3Z03, MATH 1A03 or 1LS3, and PHYSICS 1A03 or 1C03. Additional requirements are posted on the website https://www.science.mcmaster.ca/geo/images/documents/APGO_Environmental_Geoscience_Stream.pdf.
7. Students who entered the program prior to September 2015, may use ENVIRSC 1B03 as three units toward Course List 1.
8. ENVSOCTY 3MB3 (or GEOG 3MB3, EARTHSC 3MB3 or ENVIRSC 3MB3) or STATS 2B03 must be completed by the end of Level III. Students who entered the program prior to September 2018, may use one of MATH 1AA3, 1B03 or 1LT3 to satisfy the Statistics requirement.