<table>
<thead>
<tr>
<th>Year</th>
<th>Core</th>
<th>Additional</th>
<th>Electives</th>
</tr>
</thead>
</table>
| I    | 3 units from:  
☐ Math 1A03  
☐ Math 1LS3  
3 units from:  
☐ Chem 1A03  
6 units from:  
☐ Envir Sc 1C03  
☐ Earth Sc 1G03 | 12 units from:  
☐ Chem 1AA3  
☐ Biology 1A03  
☐ Biology 1M03  
☐ Math 1A03  
☐ Math 1B03  
☐ Math 1LT3  
☐ Physics 1A03  
☐ Physics 1A3  
☐ Physics 1C03  
☐ Physics 1CC3  
☐ Science 1A03 | 6 units from Level I electives; 3 units if Chem 1R03 is taken as an elective |
|      | 18 units  
☐ Envir Sc 2B03  
☐ Earth Sc 2E03  
☐ Earth Sc 2K03  
☐ Envir Sc 2Q03  
☐ Earth Sc 2T03  
☐ Envir Sc 2W03 | 3 units from Course List 1 | 9 units; (Note: Geog 3MB3 or Stats 2B03 must be completed by the end of Level II), |
|      | 9 units  
☐ Earth Sc 3FE3  
☐ Earth Sc 3RD3  
☐ Earth Sc 3Z03 | 9 units from Course List 2 | 12 units |
|      | 18 units from Course List 2  
☐ Envir Sc 4MI3 or Earth Sc 4MT6 | 0-3 units  
Physics 1A03 (1B03), 1C03 if not already completed | 9-12 units |

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

Course List 1  
☐ ENVIR SC 2C03  
☐ GEOG 2E3  
☐ EARTH SC 2FE3  
☐ GEOG 2G3  
☐ CHEM 2A03  
☐ BIOLOGY 2D03 or 2F03  
☐ STATS 2B03  

Course List 2  
☐ ENVIR SC 2C03  
☐ GEOG 2G3  
☐ ENVIR SC 2B03  
☐ EARTH SC 3CC3  
☐ EARTH SC 3DE3  
☐ GEOG 2G3  
☐ GEOG 3G3  
☐ EARTH SC 3K03  
☐ ENVR SC 3O03  
☐ GEOG 3S3  
☐ BIOLOGY 2F03  
☐ BIOLOGY 3D03  
☐ BIOLOGY 3SS3  
☐ CHEM 2A03  
☐ CHEM 2B03  
☐ CHEM 2C03  
☐ CHEM 2D03  
☐ CHEM 2G3

Course List 2(continued)  
☐ ENVIR SC 3A03  
☐ EARTH SC 3W03  
☐ EARTH SC 3D03  
☐ ENVIR SC 4B03  
☐ EARTH SC 4C03  
☐ EARTH SC 4CC3  
☐ ENVIR SC 4EA3  
☐ EARTH SC 4EF3  
☐ EARTH SC 4G03  
☐ GEOG 4GA3  
☐ EARTH SC 4H03  
☐ ENVIR SC 4N03  
☐ EARTH SC 4P03  
☐ EARTH SC 4Q03  
☐ EARTH SC 4V03  
☐ ENVIR SC 4W03  
☐ EARTH SC 4WB3  
☐ GEOG 4GA3  
☐ GEOG 4GB3  
☐ GEOG 4GT3
Notes Applicable to all Honours Earth and Environmental Sciences Programs

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 in the Undergraduate 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
EARTH SC 3CC3, 4CC3, 4NO3, ENVIR SC 2Q03, 3O03

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

ENVIRONMENTAL HYDROLOGY AND CLIMATE
EARTH SC 3CC3, 3W03, 4CC3, 4WB3, ENVIR SC 2B03, 2C03, 2W03, 3B03, 3U03, 4BB3, 4C03, 4W03

ENVIRONMENTAL POLICY
ENVIR SC 4EA3, GEOG 2EI3, 2EK3, 3EC3, 3EG3, 3EE3, 4ET3, 4HH3

GEOGRAPHIC INFORMATION SYSTEMS (G.I.S) AND SPATIAL ANALYSIS
GEOG 2GI3, 3GI3, 3SR3, 3GV3, 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. Both ENVIR SC 1C03 and EARTH SC 1G03 must be completed by the end of Level II and are recommended in Level I.
2. CHEM 1A03 must be completed by the end of Level II. Students who did not complete Grade 12 Chemistry U must complete CHEM 1R03 in Level I. Given CHEM 1R03 is considered elective, an additional three units from the Earth and Environmental Course List must be completed.
3. GEOG 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.
4. Students who did not complete Grade 12 Physics U must complete PHYSICS 1A03. While one of PHYSICS 1A03 (1B03) or 1C03 must be completed prior to graduation, completion by the end of Level II is strongly recommended.

ADMISSION
Completion of any Level I program with a Grade Point Average of at least 5.0 including:
6 units with a grade of at least C+ in two of ENVIR SC 1C03, EARTHSC 1G03 (See Admission Note 1 above.)

See front for complete set of course requirements

NOTE: Students who have satisfied all above admission criteria and have a Grade Point Average between 4.5 and 4.9 will be admitted to the program, on Program Probation. Students may be on Program Probation only once. Eligibility to continue in the program will require a Grade Point Average of at least 5.0 at the next academic review.

PROGRAM NOTES
1. 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.
2. There are Level III prerequisites for many Level IV courses. The prerequisites should be considered when selecting your courses.
3. The field components of EARTH SC 2FE3 AND 3FE3 are normally taken outside of the normal term. Details are announced December (EARTH SC 2FE3) or March (EARTH SC 3FE3).
4. A Minor in Geography and Earth Sciences, Earth Sciences or Environmental Science is not permitted in the Honours Earth and Environmental Sciences program. However, Minors in Environmental Studies, Geographic Information Systems and Geography are permitted.
5. Students entering this program in September 2012 will have to complete PHYSICS 1B03 as a program requirement. While it must be completed prior to graduation, completion by the end of Level II is strongly recommended.
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, EARTH SC 2E03, 2K03, 3FE3, 3Z03, MATH 1A03 or 1LS3, and PHYSICS 1A03 (1B03) or 1C03. Additional requirements are posted on the website: https://www.science.mcmaster.ca/geo/images/documents/APGO_Geology_Stream.pdf
7. Students who entered the program prior to September, 2015, may use ENVIR SC 1B03 as three units toward Course List 1.