HONOURS BSC
ENVIRONMENTAL GEOSCIENCE

Investigate Earth as a professional environmental geoscientist to understand environmental interactions between geology, biology and hydrology.

The Environmental Geoscience program integrates the Environmental Science and Geology programs in one stream that balances biology and chemistry-oriented courses with solid Earth-based courses. Environmental geoscience requires multidisciplinary study — students acquire a wide range of expertise to understand the environmental interactions between solid Earth, the biosphere, the atmosphere and the oceans.

The combination of analytical courses and frequent field trips gives students hands-on exposure to all aspects of environmental geoscience. The final year involves an independent research project or equivalent units (credits) in advanced environmental geoscience courses in the specialization.

Students who follow the suggested course sequence can meet professional accreditation requirements of the Association of Professional Geoscientists of Ontario and the Orde des géologues du Québec.

This program is offered in English and in French.

Program Requirements
Co-operative education is available with this program.

The French immersion stream is available with this program.

Requirements for this program have been modified. Please consult the 2022-2023 calendars (http://catalogue.uottawa.ca/en/archives/) for the previous requirements.

Compulsory Courses at the 1000 level
BIO 1130 Introduction to Organismal Biology 3 Units
CHM 1311 Principles of Chemistry 3 Units
EVS 1101 Introduction to Environmental Science 3 Units
GEO 1111 Introduction to Earth Systems 3 Units
GEO 1115 Introduction to Earth Materials 3 Units
MAT 1330 Calculus for the Life Sciences I 3 Units
MAT 1332 Calculus for the Life Sciences II 3 Units
PHY 1121 Fundamentals of Physics I 3 Units
PHY 1122 Fundamentals of Physics II 3 Units

Compulsory Courses at the 2000 level
BIO 2129 Ecology 3 Units
GEG 2320 GIS and the Digital Earth 3 Units
GEO 2020 Field Studies I 3 Units
GEO 2163 Introduction to Mineralogy 3 Units
GEO 2165 Stratigraphy and Sedimentation 3 Units
GEO 2321 Structural Geology and Tectonics 3 Units

Compulsory Courses at the 3000 level
EVS 3120 Environmental Microbiology 3 Units
GEO 3163 Igneous Petrology 3 Units
GEO 3191 Applied Geophysics 3 Units
GEO 3342 Introduction to Hydrogeology 3 Units
GEO 3382 Geochemistry 3 Units

Compulsory Courses at the 4000 level
EVS 4010 Field Course in Environmental Science 3 Units

Optional Courses
3 course units from:
CHM 2330 Physical Chemistry: Introduction to the Molecular Properties of Matter 3 Units
CHM 2353 Descriptive Inorganic Chemistry 3 Units

6 course units from:
GEO 2166 Oceanography 6 Units
GEO 2316 Introduction to Climate Science 3 Units
GEO 2334 Quaternary Geology and Climate Change 3 Units

3 course units from:
GEO 2352 Geoscience Data Analysis 3 Units
MAT 2377 Probability and Statistics for Engineers 3 Units
MAT 2379 Introduction to Biostatistics 3 Units

One option from the following:
6 Units

Option 1: Honours Project
GEO 4010 Honours Project 6 Units

Option 2: Honours Project Substitution
3 optional course units in Geology (GEO) or in Environmental Science (EVS) at the 4000 level 9 Units
3 optional course units in Geology (GEO) or in Environmental Science (EVS) at the 3000 or 4000 level 9 Units

Elective Courses
12 elective course units from the Faculty of Arts, the Faculty of Education, the Faculty of Law, the Faculty of Social Sciences or the Telfer School of Management 12 Units

18 elective course units 2 18 Units

Total: 120 Units

Note(s)
1 A language course at the 1000 or 2000 level is strongly recommended.
2 Suggested elective courses: EVS 4904, GEG 3102, GEG 3105, GEG 3312, GEO 3167, GEO 4301, GEO 4342, GEO 4382.

This program can satisfy the academic requirements of the Association of Professional Geoscientists of Ontario. Check APGO's website for current eligible courses which can be used for accreditation.