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 acquires 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 Ordre 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 2024-2025 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:		3 Units
CHM 2330	Physical Chemistry: Introduction to the Molecular Properties of Matter	
CHM 2353	Descriptive Inorganic Chemistry	
6 course units from:		6 Units
GEO 2166	Oceanography	
GEO 2316	Introduction to Climate Science	
GEO 2334	Quaternary Geology and Climate Change	
3 course units from:		3 Units
GEO 2352	Geoscience Data Analysis	
MAT 2377	Probability and Statistics for Engineers	
MAT 2379	Introduction to Biostatistics	
One option from the following:		9 Units
Option 1: Honours Project		
GEO 4010	Honours Project	
Option 2: Honours Project Substitution		
3 optional course units in Geology (GEO) or in Environmental Science (EVS) at the 4000 level		
6 optional course units in Geology (GEO) or in Environmental Science (EVS) at the 3000 or 4000 level		
9 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 [1]		12 Units
15 elective course units [2]		15 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.