HONOURS BSC GEOLOGY

Geology is a modern, dynamic and diverse science that involves investigating the composition and evolution of Earth and other planetary bodies.

Geologists and Earth scientists study the Earth, including its chemical, physical and biological evolution. Our programs teach students how to analyze Earth materials, probe the Earth from surface to core and model the processes that produced and shape its oceans and continents. The Ottawa region is a natural laboratory where students investigate resources (water, metals, minerals, petroleum), hazards (earthquakes, tsunamis, eruptions, landslides) and a variety of geological environments.

The Department of Earth and Environmental Sciences offers programs in geology and, along with the Department of Physics, a program in geology-physics. These programs balance field-based learning with theoretical and analytical investigations directly relevant to the needs of society. The final year involves an independent research project or equivalent units (credits) in advanced courses in the discipline.

The honours requirements meet the professional accreditation requirements of the Association of Professional Geoscientists of Ontario and l'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 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		
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		
GEO 3163	Igneous Petrology	3 Units
GEO 3164	Metamorphic Petrology	3 Units
GEO 3167	Mineral Deposits	3 Units
GEO 3342	Introduction to Hydrogeology	3 Units
GEO 3920	Field Studies II	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	
3 course units from:		3 Units
GEO 2113	Paleontology	
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	
3 course units from:		3 Units
GEO 3165	Carbonate Sedimentology	
GEO 3166	Siliciclastic Sedimentology	
3 course units from:		3 Units
GEO 3191	Applied Geophysics	
GEO 3382	Geochemistry	
One option from the following:		6 Units
Option 1: Honours Project		
GEO 4010	Honours Project	
Option 2: Honours Project Substitution		
3 optional course units in Geology (GEO) at the 4000 level		
3 optional course units in Geology (GEO) at the 3000 or 4000 level		
12 optional course units in geology (GEO) at the 3000 or 4000 level		12 Units
3 optional course units in biology (BIO), chemistry (CHM), mathematics (MAT) or physics (PHY) at the 2000, 3000 or 4000 level		3 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
18 elective course units		18 Units
Total:		**120 Units**

Note(s)

1

A language course at the 1000 or 2000 level is strongly recommended.

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.