GEOLOGICAL SCIENCES AND GEOLOGICAL ENGINEERING

Departmental Notes

Subject Code for Geological Sciences: **GEOL**
Subject Code for Geological Engineering: **GEOE**
World Wide Web Address: http://www.queensu.ca/geol/

Head of Department: Vicki Remenda (geolhead@queensu.ca)

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Chair of Undergraduate Studies (GEOL): Daniel Layton-Matthews (dlayton@queensu.ca) (Sabbatical July 1st – Dec 31st)
Chair of Undergraduate Studies (GEOL): Christopher Spencer (c.spencer@queensu.ca) (Interim Jan – Dec 2023)
Chair of Undergraduate Studies (GEOE): Bas Vriens (bas.vriens@queensu.ca)

Overview

Geoscientists are the interpreters of our natural world. They bring methods such as geophysics, geochemistry, geobiology, and field geology together to understand the modern and ancient Earth. Clues concealed in rocks and fossils, minerals and fluids, mountains and sediments, glaciers and volcanoes are marshaled to understand and explain the Earth system at all scales. Managing water, mineral, and energy resources, developing sustainable strategies for industrial growth, and coping with natural and anthropogenic hazards facing increasing global populations, including climate change, all depend on a deep understanding of natural processes. Our graduates study the Earth in this context, with careers in diverse fields including, but not limited to, research, mineral and oil exploration, policy analysis, environmental science, and resource management. The programs offered by this Department focus on the whole planet and global processes as a dynamic and integrated system.

Departmental Policies

Field Trips

Field trips are a necessary part of geological training and are offered in each year of study because the Department wishes to provide the best education possible.

Students are required to possess basic safety equipment such as a hard hat, safety glasses, reflective vest, and appropriate footwear, as specified for each course, and to have reviewed and signed the Departmental Field Safety Form and the OCASP form developed for each field trip or course. Field equipment is available for sale in the Main Office.

The cost of field trips and courses, including transportation, accommodation, and food (when it is supplied), will be borne by the student.

A list of the field education costs for each course (https://www.queensu.ca/geol/current-students/undergraduate/) is provided on the departmental web page. These costs are subject to change, and will be finalized by June 1 each year for the following academic year. These costs will be payable by the due dates listed in the table. Subsidies will be provided by the Department when funding permits.

For students who are not registered in a Plan offered by the Department there will be a charge per field trip. Students are required to possess basic safety equipment such as a hard hat, safety glasses, and appropriate footwear, and to have reviewed and signed the Departmental Field Safety Form and the OCASP form developed for each field trip or course.

Advice to Students

*Students should seek **academic advice** from one of the program consultants listed below*

Name	Title	Contact
Environmental Geology	David McLagan	david.mclagan@queensu.ca
Structural Geology/ Tectonics/Economic Geology	Christopher Spencer	c.spencer@queensu.ca
Paleontology/ Sedimentary Geology	Guy M. Narbonne	narbonne@queensu.ca
Petrology/ Geochemistry	Gema R. Olivo	olivo@queensu.ca

Geology Plans are offered as components of a degree Program within both the Faculty of Arts and Science (p. 1) and the Faculty of Engineering and Applied Science (https://queensu-ca-public.courseleaf.com/engineering-applied-sciences/academic-plans/geological-engineering/). Students applying to first year, with an interest in geology, should consult both *Calendars*. Within Arts and Science, a great deal of flexibility exists in the choice of Plans.

Students wishing to complete a Plan designed to train specialists in the Geological Sciences are encouraged to select one of the Geology Specialization (https://queensu-ca-public.courseleaf.com/arts-science/schools-departments-programs/geological-sciences-engineering/geology-specialization-science-bs-honours/) or Major Plans (https://queensu-ca-public.courseleaf.com/arts-science/schools-departments-programs/geological-sciences-engineering/geology-major-science-bs-honours/). The Geology Specialization Plan (https://queensu-ca-public.courseleaf.com/arts-science/schools-departments-programs/geological-sciences-engineering/geology-specialization-science-bs-honours/) provides the opportunity for intensive study of Geology and the supporting sciences. It is intended to fulfill the 'Knowledge Requirements' for registration as a Professional Geoscientist. The Geology Major Plan (https://queensu-ca-public.courseleaf.com/arts-science/schools-departments-programs/geological-sciences-engineering/geology-major-science-bs-honours/) is ideal for students who are interested in a career-oriented program in the geosciences that also allows a wider choice of supporting and elective courses. Another alternative route, for students who are particularly interested in the solid-earth aspects of environmental science, is the Environmental Geology Plan (https://queensu-ca-public.courseleaf.com/arts-science/schools-departments-programs/geological-sciences-engineering/environmental-geology-specialization-science-bs-honours/).

Students wishing to study geology and another subject should consider geology as one component of a Major-Minor degree combination. The Minor (Science) (https://queensu-ca-public.courseleaf.com/arts-science/schools-departments-programs/geological-sciences-engineering/geology-minor-science/) may be combined with a Major in virtually any other subject, and provides a solid introduction to the Geological Sciences. As the General (Science) (https://queensu-ca-public.courseleaf.com/arts-science/schools-departments-programs/geological-sciences-engineering/geology-general-science-bs/), this same Plan when taken alone leads to a 3-year B.Sc. degree in Geology. Students who want to explore the field of Geological Sciences but with greater flexibility in choice of courses should consider combining the Geology Minor (Arts) Plan (https://queensu-ca-public.courseleaf.com/arts-science/schools-departments-programs/geological-sciences-engineering/geology-minor-arts/) in a Major-Minor degree combination. The General (Arts) in Geology (https://queensu-ca-public.courseleaf.com/arts-science/schools-departments-programs/geological-sciences-engineering/geology-general-arts-ba/), leading to a 3-year B.A. degree, is also available using the same suite of courses as the Minor (Arts) (https://queensu-ca-public.courseleaf.com/arts-science/schools-departments-programs/geological-sciences-engineering/geology-minor-arts/).

If you have questions about the differences between the various programs, or on particular course selections, consult with the Chair of Undergraduate Studies before registration. Additional information about the various degree programs can be found by consulting the Geoscience Program webpage (https://www.queensu.ca/geol/current-students/undergraduate/).

Special Study Opportunities

Specialized graduate courses in some areas of Geology are available to qualified students in their final year, and may be counted for advanced standing in a Master's degree at Queen' University. For details, consult the Chair of Undergraduate Studies.