Get to know GEOLOGICAL SCIENCES

Discovery, development and sustainability of water, mineral and energy resources as well as coping with climate change, human impact and natural hazards facing increasing global populations, all depend on a deep understanding of natural processes. Our students study the Earth in this context, with high-demand career options in diverse fields such as mineral and oil exploration, mining and hydrocarbon extraction, surface and underground construction, environmental assessment, protection and rehabilitation, groundwater investigation and resource management.

Why study in Kingston?

For over 175 years, the Kingston community has been a collection of bright minds. We are proud that our city was named one of the top Intelligent Communities across the globe, an accolade largely due to the thousands of students who study here every single year. In fact, the BBC has identified Kingston as one of the GREATEST UNIVERSITY TOWNS in the world, which might be why Instagram named the city the happiest place on the planet! Just a quick drive to Toronto, Montreal, Ottawa and even New York, Kingston is a safe and livable city. Not only are we known as the freshwater sailing capital of the world, Kingston is arguably the birthplace of hockey. Wondering what to do while you’re attending school? Kingston has more clubs per capita than any other university in Canada, and Kingston has more restaurants per capita than any other city in North America, your time here is guaranteed to be ‘fresh made daily’.

Resources and time management

As a Geological Science student, you will learn in a variety of ways. Many courses involve laboratory and field work in a small group setting. Second and upper year courses include several extended field trips. When we aren’t in the field our students spend their time in one of our world-class teaching labs such as the Geochronology Lab that looks at items 100,000 years old or older, or the X-ray Diffraction and Clay Mineral Lab to separate and identify minerals and crystals. The Miller Museum collections of rocks and minerals provides students the opportunity to study samples collected from around the world. We are one of the largest Geology departments in Canada - and yet we pride ourselves on our small group settings and classes. At the same time, most students rack up more than 240 hours of experience on various field trips.

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Geological Sciences

MAJOR MAP

Queen’s provides you with a broad range of support services from your first point of contact with the university through to graduation. At Queen’s, you are never alone. We have many offices dedicated to helping you learn, think and do. Ranging from help with academics and careers, to physical, emotional, or spiritual resources – our welcoming living and learning environment offers the programs and services you need to be successful, both academically and personally, and Queen’s wants you to succeed! Check out the Student Affairs website for available resources.

Succeed in the workplace

What employers want

The Canadian Council of Chief Executives list the top 6 skills sought by employers as:
1. People skills
2. Communication skills
3. Problem-solving skills
4. Analytical abilities
5. Leadership skills
6. Industry-specific knowledge

Take the time to think about the unique skills you have developed at Queen’s, starting with the skills list here for ideas. Explaining your strengths with compelling examples will be important for applications to employers and further education. For help, check out the Career Services skills workshop.

What can I learn studying GEOLOGICAL SCIENCES?

- Knowledge of principles and techniques of the earth sciences
- Practical applications of geological science techniques
- Understanding of the variability of earth materials and their changes with time and environment
- Fieldwork skills to design and carry out site investigations to solve problems
- Technical skills to use up-to-date geological analysis tools, equipment and software
- Research skills to conduct scientific research and analyze quantitative information, develop multiple working hypotheses
- Problem solving to approach a range of problems from various perspectives
- Ability to work independently and in a team on a project
- Oral and written communication to clearly explain technical information and write reports
- Resource and time management

THE EARTH IS OUR CLASSROOM, AND HANDS-ON LEARNING IS THE WAY WE LEARN.

Queen’s ADMISSION

Students apply to Queen’s Science (QS) through the OUAC (Ontario Universities Application Centre) website (ouac.on.ca). Secondary School prerequisites include English 4U, Advanced Functions 4U, Calculus and Vectors 4U, plus two of Biology 4U, Chemistry 4U or Physics 4U. Visit queensu.ca/admission for additional information regarding requirements and admission to Queen’s.

Degree PLANS

Bachelor of Science (Honours) Major / Minor / Specialization in Geology, Environmental Geology - Internship option available.

Course HIGHLIGHTS

Diamonds anyone? Learn about the role of gemstones in society through the study of works of art and popular literature (GEOR 102). Volcanoes, Earthquakes, Climate Change? Examine the relationship between human-kind and our ever-changing planet, focusing on geologic hazards such as volcanic eruptions, earthquakes, tsunamis and more (GEOR 106). Where did life begin? Take a 4.5 billion year roller coaster through time to see how our planet has evolved (GEOL 107).

Go to... Go Global.

That is a degree from Queen’s.


www.quartscl.com
2017 - 2018

Geological Sciences MAJOR MAP

BACHELOR OF SCIENCE (HONOURS): SPECIALIZATION, MAJOR, MINOR

GET THE COURSES YOU NEED

1ST YEAR

In first year take CHEM 112, PHYS 106, MATH 121, GEOL 104 and GEOL 107.

Build your transferable skills in time management, problem-solving, writing and more with Student Academic Success Services.

GET RELEVANT EXPERIENCE

Join teams or clubs on campus such as the Queen's University Experimental Sustainability Team (QUEST) and the Queen's Project on International Development (QPID).

See the AMS Clubs Directory or the Queen's Get Involved page for more ideas.

GET CONNECTED WITH THE COMMUNITY

Volunteer on or off campus with different community organizations, such as the Earth Centre and Women in Science and Engineering.

Prepare for work or studies in a multi-cultural environment by taking QUC's Intercultural Competency Certificate, and research possible immigration regulations.

Speak to a QUC advisor to get involved in their programs, events, and training opportunities.

GET THINKING GLOBALLY

Is an exchange in your future? Start thinking about where you would like to study abroad. Apply in January for a 3rd year exchange through the International Programs Office.

Explore different careers of interest by accessing resources in the Career Services Career Advising and Resource Area, such as the GeoCareers Career File. For more information check out Career Cruising or by finding and connecting with alumni on LinkedIn.

GET READY FOR LIFE AFTER GRADUATION

Grappling with program decisions? Contact the Chair of Undergraduate studies in the Department of Geological Sciences and Geological Engineering.

Get some help wondering about career options from Career Services.

Where could I go after graduation?

Agricultural sciences

Architecture

Business administration and management

Community relations for the extractive industries

Contaminant remediation

Ecology

Environmental conservation and management

Forestry

Geology

Geomatics

Geophysics

International development

Landscape architecture

Law

Meteorology

Mineral industry

Natural hazard identification and mitigation

Oceanography

Oil and gas exploration and extraction

Paleontology

Public administration

Renewable energy

Surveying and cartography

Toxicology

Volcanology

Waste management

Water conservation

Some careers may require additional training.

Visit careers.queensu.ca/majormaps.html for the online version with links!

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BACHELOR OF SCIENCE (HONOURS): SPECIALIZATION, MAJOR, MINOR

2ND YEAR

In second year take core courses GEOL 200, 221, 232, 238, 235, 249 and STAT 263.

Please see the Academic Calendar to ensure you are taking the correct courses.

Want to enhance your degree? Consider a certificate in Geographic Information Science or explore other certificates available.

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BACHELOR OF SCIENCE (HONOURS): SPECIALIZATION, MAJOR, MINOR

3RD YEAR

In third year take core courses GEOL 300, 301, 321, 365 and GEOL option courses. For more information on 3rd year program requirements, including electives, see the Arts and Science Calendar.

Need help mapping all of your core, option, supporting and elective courses (including those not listed above) to make sure you will have what you need to complete your degree? Use the Course Mapping Tool on the Arts and Science website.

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BACHELOR OF SCIENCE (HONOURS): SPECIALIZATION, MAJOR, MINOR

4TH OR FINAL YEAR

In fourth year take GEOL 488 and 491. You may wish to do an independent studies project (GEOL 543).

Take your remaining GEOL option courses and any remaining core, option, and elective courses. Make sure to map your minor and / or certificate(s) as well.

Apply to graduate in SOLUS.

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*This map is intended to provide suggestions for potential activities and career paths, but everyone's abilities, experience, and constraints are different. Build your own map using our online My Major Map tool.