Geological Sciences

What is Geological Sciences? Geoscientists interpret our natural world. We use geophysics, geochemistry, geobiology, and field geology to understand the modern and ancient Earth. Rocks, minerals, fluids, fossils, mountains, sediments, glaciers, and volcanoes are all fundamental to constraining Earth processes at all scales. Managing water, mineral, and energy resources, designing sustainable strategies for infrastructure and industrial growth, and solving natural and anthropogenic hazards, including climate change, depend on a deep understanding of geological processes.

Alumni Story

“I can honestly say that the choice to study Geology at Queen’s was the single best decision I have ever made. The department provided all the knowledge, opportunities, and support to develop a successful career in the geosciences along with relationships to friends and mentors that will last a lifetime.”

-Jonathan Savard, BSc'16

TOP ALUMNI JOBS

21% of alumni work in ENERGY
16% of alumni work in MINING
15% of alumni work in EDUCATION
9% of alumni work in GOVERNMENT

2023-24 Plan Thresholds

Thresholds are made on a competitive basis and are updated annually. To see the thresholds for all programs as well as the latest information, please visit quartsci.com/planselection

Interested in finding out how to augment your degree with Experiential Learning? Learn what opportunities and resources are available for you on the Experiential Learning website. You can also reach out to the team directly at asc.el@queensu.ca.


That is a degree from Queen’s.

queensu.ca/geol
Geological Sciences

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

2023-2024

GET THE COURSES YOU NEED

In first year you will have the chance to explore Geology by taking (GEOL 104, GEOL 107). The foundations will include biology, chemistry, geography, and geology along with some electives. Attend Majors Night in the Winter term to learn more about Plan options. Interested in getting a head start in learning and working in a digital world? Take ASCX 150 and develop future-ready skills!

GET RELEVANT EXPERIENCE

Join teams or clubs on campus such as the Queen’s University Experimental Sustainability, The Queen’s International Development Project (QIDP), etc. 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 Miller Museum and Miller Club. Start or continue volunteering with organizations such as Society of Economic Geologists, Engineers Without Borders, or Women in Science and Engineering.

GET THINKING GLOBALLY

Prepare for work or studies in a multi-cultural environment by taking QUCIS’s Intercultural Competency Certificate, and research possible resources in the Career Services.

GET READY FOR LIFE AFTER GRADUATION

Grapping 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.

1ST YEAR

2ND YEAR

Start going deeper into the discipline of Geology by taking (GEOL 221, GEOL 232, GEOL 235, GEOL 238 & GEOL 249).

WANT TO MAKE SURE YOUR ACADEMICS ARE WHERE YOU WANT THEM TO BE?

JOIN THE GEOTREASURER’S CLUB

GET THINKING ABOUT WHERE YOU WANT TO BE

GET RELEVANT EXPERIENCE

JOIN THE MILLER MUSEUM

GET CONNECTED WITH THE COMMUNITY

GET THINKING GLOBALLY

GET READY FOR LIFE AFTER GRADUATION

How to use this map

Use the 5 rows of the map to explore possibilities and plan for success in the five overlapping areas of career and academics. The map just offers suggestions – you don’t have to do it all! To make your own custom map, use the My Major Map tool.

What will I learn?

A degree in Geology can equip you with:
• 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 teams on projects.
• Oral and written communication to clearly explain technical information and write reports

Where can I go?

A degree in Geological Science can take your career in many directions. Many students choose to continue their academics with a master’s or connect with GARNET to network with alumni. Our students are equipped with a strong foundation for careers in:
• Ecology
• Environmental Geology
• Geological Hazards
• Geomatics
• Geomorphology
• Geophysics
• Geotechnique
• Hydrology
• Museum Curation
• Nature Resources
• Paleontology
• Renewable Energy
• Resource Policy Analyst
• Toxicology
• Volcanology

Taking time to explore career options, build experience, and network can help you have a smooth transition to the world of work after graduation.

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Get started thinking about the future now – where do you want to go after your degree? Having tentative goals (like careers or grad school) while working through your degree can help with short-term decisions about courses and experiences, but also help you keep motivated for success.

Get the help you need

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. Queen's wants you to succeed! Check out the Student Affairs website for available resources.

Why study in Kingston?

For 175 years, our community has been more than a collection of bright minds – Queen's has attracted students with an ambitious spirit. Queen's has the highest retention rates, the highest graduation rates, and one of the highest employment rates among recent graduates. We are a research intensive university focused on the undergraduate experience. The BBC has identified Kingston as one of the GREATEST UNIVERSITY TOWNS in the world – and it is often awarded the safest city in Canada. It is a university city at the core; just a quick drive to Toronto, Montreal, Ottawa and even New York. A university with more clubs per capita than any other university in Canada, and a city with more restaurants per capita than any other city in North America – you will have the experience of a lifetime at Queen's – and graduate with a degree that is globally recognized among the best.

We're closer than you think.