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 and minerals, fluids and fossils, mountains and sediments, glaciers and volcanoes are all fundamental to our understanding of the Earth system at all scales. Managing water, mineral and energy resources, designing sustainable strategies for infrastructure and 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.

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 5 Reasons To Study Geological Sciences

1. Most students in the department gain over 240 hours of hands-on experience on various field trips.
2. We are a small, friendly department. You will get to know your classmates and professors very well.
3. The department has state-of-the-art facilities, including X-ray Diffraction and Applied Geophysics Labs.
4. The Miller Museum, our on-site museum right here at Queen’s, is your classroom.
5. Our students have the opportunity to study abroad with the International Exchange Program.

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

2022-23 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


That is a degree from Queen’s.

queensu.ca/geol
2022-2023

Geological Sciences MAJOR MAP

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

GET THE COURSES YOU NEED

1ST YEAR

- 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.

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 SASS (Student Academic Support Services) and the Writing Centre for some help.

3RD YEAR

- A chance to start grouping courses in areas of interest, or to keep it more general and explore many areas of Geology. Meet with an Academic Advisor to make sure you are on track and have planned out your courses for next year.

4TH OR FINAL YEAR

- In fourth year you will have the chance to participate in research-based courses that can lead to Graduate School or to your future career path. Make sure to finish up all your courses for your major and your optional minor and/or certificate(s).

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 Site for more ideas.

- Volunteer on or off campus with different community organizations, such as the Miller Club and Miller Museum.

GET CONNECTED WITH THE COMMUNITY

- Get involved with the Miller Club and Miller Museum.
- Start or continue volunteering with organizations such as Society of Economic Geologists, Engineers Without Borders or Women in Science and Engineering.

GET THINKING GLOBALLY

- Is an exchange in your future? Start thinking about where you would like to study abroad. Apply in January for a third year exchange through the International Programs Office.
- Prepare for work or studies in a multi-cultural environment by taking QUEC (Intercultural Competency Certificate), and research possible immigration regulations.
- Speak to a QUEC advisor to get involved in their programs, events, and training opportunities.

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.
- Explore different careers of interest by accessing resources in the Career Services Career Advising and Resource Area, such as the Geology Career Files. For more information check out Career Counseling or by finding and connecting with alumni on LinkedIn.
- Start focusing on areas of interest. Research education requirements for careers of interest. If needed, prepare to take any required tests (like the LSAT or GMAT) and get help thinking about Grad School from Career Services.

CONSIDER A 12-16 MONTH QUIP INTERNSHIP

- Consider joining professional organizations such as the Geological Association of Canada, the Canadian Society of Petroleum Geologists, the International Association of Hydrogeologists and the National Ground Water Association. Join groups on LinkedIn reflecting specific careers or topics of interest in Geology.
- International students interested in staying in Canada can speak with an International Student Advisor.

- Apply to jobs or future education, or make plans for other adventures. Get help from Career Services with job searching, resumes, interviews, Grad School applications, or other decisions.

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 academic master’s or Ph.D. with GARNET network with alumni. Our students are equipped with a strong foundation for careers in:

- Geoscientist
- Geomatics
- Palaeontology
- Renewable energy
- Toxicology
- Volcanology
- Landscape Evolution
- Geophysics
- Consultant
- Hydrologist
- Ecology
- Environmental Scientist
- Resource Policy Analyst
- Geomorphologist
- Museum curator
- Natural Resources manager/planner
- Taking time to explore career options, build experience and network can help you have a smooth transition to the world of work 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.
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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.

For more information, contact quip@queensu.ca or visit the Program Website.