

Geological Sciences

PhD Map

Applying to and Navigating Graduate Studies

Why Graduate Studies in Geological Sciences?

Geoscientists and geological engineers interpret the 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 minerals, fluids and fossils, mountains and sediments, glaciers, and volcanoes are marshaled to understand and explain 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.

Why Queen's?

As a PhD student in Geological Science you are part of one of the most research intensive universities in Canada. Our research program is internationally renowned with a wide range of research activities in all the major specialization areas in geological science.

Students are able to work in first-rate facilities with world-renowned scientists and research engineers, and have opportunities to collaborate with industrial leaders and engage in extensive fieldwork on six continents, making our program truly a world-class experience.

Students can also collaborate with other departments at Queen's, including Mining, Environmental Studies, Chemistry, and Biology as well as other institutions like RMC.



"The PhD experience in geology at Queen's has been a key step in my academic career. It has been a meaningful and rewarding experience, allowing me to achieve my inner goals, besides allowing me to be in contact with a great team of experts in the field" – Tassiane Junquiera, PhD

Program Structure

PhD (4 years): Thesis. The department has no minimum formal course requirement

Research Areas

- Applied Geoenvironmental Sciences & Geotechnique
- Economic Geology & Mineral Exploration
- Geophysics and Geochronology
- Petrology & Structural Geology
- Sedimentology, Sedimentary Geochemistry & Paleobiology

We encourage you to identify an area of research interest and contact a potential supervisor before applying.

Visit the [Geological Sciences Department website](#) to read faculty profiles and learn more about faculty members'

research areas. When you find a faculty member with similar research interests to yours, contact them and tell them about your interest in graduate work and related experience. This is also an opportunity for you to find out if the faculty member is accepting new graduate students to supervise.



Geological Sciences PhD Map

DOCTOR OF PHILOSOPHY (PhD)



Knowledge & Workplace Skills

A graduate degree in Geological Sciences can equip you with valuable and versatile skills, such as:

- Knowledge and technical skills**
- Effective communication skills** in multiple forms for diverse audiences
- Information management:** prioritize, organize, and synthesize large amounts of information
- Time management:** Meet deadlines and manage responsibilities despite competing demands
- Project management:** develop ideas, gather information, analyze, critically appraise findings, draw and act on conclusions
- Creativity and innovation**
- Perseverance**
- Independence and experience** as a collaborative worker
- Awareness**, an understanding of sound ethical practices, **social responsibility**, responsible research, and **cultural sensitivity**
- Professionalism** in all aspects of work, research, and interactions
- Leadership:** initiative and vision leading people and discussion

Career Possibilities

A PhD in Geological Sciences can take your career in many directions. In Canada, less than 40% of all PhDs will work in post-secondary education – the majority will work in industry, government, or non-profits.

Graduates from the Geological Sciences PhD program have found careers in:

- Academia and research
- Environment assessment
- Mineral and oil exploration
- Mining and hydrocarbon extraction
- Policy analysis
- Protection and rehabilitation
- Resource Management
- Surface and underground construction

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. To make your own custom map, use the My Grad Map tool: [careers.queensu.ca/gradmaps](#).

Graduate Studies FAQs

How do I make the most of my time at Queen's?

Use the Grad Map to plan for success in five overlapping areas of your career and academic life. Everyone's journey is different - the ideas on the maps are just suggestions to help you explore possibilities. For more support with your professional development, take advantage of the SGSPA professional development framework and the new Professional Development Plan (PDP) process to set customized goals to help you get career ready when you graduate.

Where can I get help?

Queen's provides you with a broad range of support services from your first point of contact with the university through to graduation. Ranging from help with academics and careers, to physical, emotional, or spiritual resources – our welcoming environment offers the programs and services you need to be successful, both academically and personally. Check out the [SGSPA website](#) for available resources.

What is the community like?

Queen's offers graduate students from every discipline a close-knit intellectual community where they can learn, discover, and build lasting connections. With more than 130 graduate programs across 50+ departments and research centres, students benefit from world-class scholars, prize-winning professional development, generous funding packages, and life in the historic waterfront city of Kingston. The campus sits at the heart of Kingston, just a 10-minute walk from downtown's shops, restaurants, and waterfront, and is deeply integrated with the local community. For more on Kingston's history and culture, see Queen's University's Discover Kingston page.

Application FAQs

What do I need to know to Apply?

ACADEMIC REQUIREMENTS

- MSc in Geological Sciences or Geological Engineering, Mining Engineering, or Civil Engineering are acceptable.
- **Grade requirements:** minimum B average.

ADDITIONAL REQUIREMENTS

- If English is not a first language, nor was the language of instruction in undergraduate studies, prospective students must meet English language proficiency requirements in writing, speaking, reading, and listening as part of the application process, and before final acceptance is granted, as per School of Graduate Studies and Postdoctoral Affairs' regulations.

KEY DATES & DEADLINES

- **Application deadline:** February 1 for September submissions.
- **Notification of acceptance:** 4 weeks after the full application has been received.

Before you start your application, please review the Graduate studies application process.

What about Funding?

The current minimum funding guarantee for Geological Sciences PhD students is \$23,000 per year for domestic students and \$30,000 for international students throughout years 1-4. Research Assistantships are in consultation with the student's supervisor.

We encourage all students to apply for external funding from OGS, NSERC, and other sources. For more information on awards and scholarships, consult the School of Graduate Studies and Postdoctoral Affairs' website.

