Application FAQs

What do I need to know to APPLY?

ACADEMIC REQUIREMENTS
- Master’s degree in Geological Sciences or Geological Engineering, Mining Engineering, or Civil Engineering are acceptable. Degrees in related fields such as Biology, Chemistry, Physics, Environmental Sciences or Geography are considered, but may require additional Geology courses.

ADDITIONAL REQUIREMENTS
- If English is not a native language, prospective students must meet the English language proficiency requirements in writing, speaking, reading, and listening. The School of Graduate Studies requires the following minimum scores: TOEFL (paper based): 550, (internet based): 80, IELTS: 6.5 (overall band score), or (PTE Academic): 65.

KEY DATES & DEADLINES
- Application deadline: February 1 for September admission.
- Notification of acceptance: Typically, 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 level of financial support consequently varies among graduate students in the Department, with a guaranteed minimum level of $23,000 for PhD students. As part of the minimum funding package, you may serve as a Teaching Assistant. You are encouraged to apply for external funding from CGS, NSERC and other sources. Queen’s will automatically issue a one-time $10,000 award to incoming PhD students who have won federal government tri-council awards. For more information, see the School of Graduate Studies’ information on awards and scholarships.

Why GRADUATE STUDIES IN GEOLOGICAL ENGINEERING?

Geological Engineering is the application of geological knowledge to working with earth materials – whether for sustainable development of resources including water, oil and gas, minerals; for construction of projects on, in or of soil and rock; or to safeguard the public from geohazards. At Queen’s, in these fields will be exposed to geology from the field to the laboratory scale, and to analysis and decision-making in Earth Sciences, enjoying multiple field trips, and utilizing world-class labs for chemical and physical characterization of Earth materials, and numerical modelling of their behaviour.

Graduate students and their work are an important part of an ongoing research process that provides the community with ways of understanding natural, cultural, imaginative, social and technological phenomena. They will draw inspiration from their work, leading to new ideas, opportunities, and intellectual growth.

Why QUEEN’S?

As a PhD student in Geological Engineering at Queen’s, 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 of the major specialization areas of geological engineering.


Our students come from countries all over the world, such as Brazil, Chile, Greece, and China. At Queen’s, graduate students from all disciplines learn and discover in a close-knit intellectual community.

Why I wanted a challenge and saw geomechanical engineering as the answer; it would provide that challenge while simultaneously providing the world with the opportunity to use my structural engineering background. I came to Queen’s for my Masters, which developed into a PhD candidacy, and I haven’t looked back since.”

— Jeffrey Oke, PhD

Program STRUCTURE

PhD (4 years): Required to take a minimum of four term length graduate courses (or equivalent) beyond the Master’s degree course requirement and thesis.

RESEARCH Areas

With high-tech geophysics and geophysics labs, geomechanics computing tools and Queen’s Facility for Isotope Research lab, our students have the opportunity to engage in cutting-edge geoscience and geoenvironmental research. As well, students collaborate with industry partners, government laboratories and surveys, academic institutions worldwide and engage in extensive fieldwork on six continents, making our program truly a world-class experience. Students can avail themselves of opportunities to collaborate with other departments at Queen’s, including the Geoenvironmental Centre at Queen’s and RMC, Mining, Environmental Studies and Civil Engineering.

We suggest that you review the specific research projects currently being investigated by faculty members to identify a potential supervisor. Please note, however, that contacting a faculty member does not guarantee acceptance and you will need to submit your full application in order to be considered.
2019-2020
Geological Engineering PhD Map *

DOCTOR OF PHILOSOPHY (PhD)

YEAR I

- Key priorities include your relationship with your supervisor; forming your research committee, coursework and comprehensive exams.
- Meet early with your supervisor to set expectations and discuss roles, responsibilities, program requirements, resources, research/occupational goals, timelines, and any required accommodation plans.
- Look to Student Academic Success Services for a variety of supports.

YEAR II

- Priorities include completing your comprehensive examination and pursuing substantive research.
- Set up regular meetings with your supervisor to discuss progress and obstacles to timely completion.
- Find your way through the academic process with the help of Expanding Horizons and the SGS Habitat.
- Seek exponential/professional development opportunities.

YEAR III

- Continue to meet regularly with your supervisor; review research progress, and write your dissertation. Check out the SGS Dissertation Boot Camp or Dissertation on the Lake.
- Use conference presentations to create, discuss, and explore ways to disseminate research findings. Learn from the Expanding Horizons: Publishing workshop.
- Begin discussion of potential thesis defence opportunities.

YEAR IV & TRANSITIONING

- Plan date of thesis submission for examination.
- Present your research at conferences and workshops with your supervisor to prepare for defence.
- Review submission and examination guidelines.
- Secure necessary oral defence accommodations.
- Discuss career pathways, references letters, and publication options with your supervisor.

WHAT WILL I LEARN?
A graduate degree in Geological Engineering 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
- Perserverence
- 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

WHERE CAN I GO?
A PhD in Geological Engineering 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 Engineering PhD program have found careers within:
- Academia and Research
- Consulting
- Mineral and oil exploration
- Mining and hydrocarbon extraction
- Geospatial and geomatics
- Environmental impact assessment
- Surface and underground construction
- Environmental assessment
- Protection and rehabilitation
- Resource management

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

* This map is intended to provide suggestions for activities and careers, but everyone's abilities, experiences, and constraints are different. Build your own Grad Map using our online My Grad Map tool.