

# Geological Engineering PhD Map

## Applying to and Navigating Graduate Studies

GRAD MAP FOR PhD STUDENTS 

### 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, gas, and minerals; for construction of projects on, in or of soil and rock; or to safeguard the public from geohazards. At Queen's, students 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.

### 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.

The Department of Geological Sciences and Geological Engineering provides opportunities for advanced studies and research in the Earth Sciences. Faculty interests span disciplines in Applied Geoenvironmental Sciences and Geotechnique, Geophysics and Geochronology, Economic Geology and Mineral Exploration, Petrology and Structural Geology, Sedimentology, Sedimentary Geochemistry, and Paleobiology often in a multi-disciplinary fashion and including applications to economic and environmental problems.

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.



*"I wanted a challenge and saw geomechanical engineering as the answer; it would provide that challenge while simultaneously providing me an 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

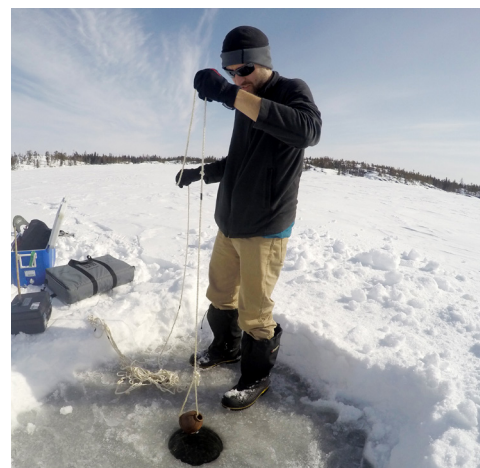
We suggest that you review the specific research projects currently being investigated by [faculty members](#) to identify a potential supervisor. Please note, however, that contacting a faculty member does not guarantee acceptance and you will need to submit your full application in order to be considered.

### 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 geochemistry 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 geoengineering research. As well, students collaborate with industrial 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 GeoEngineering Centre at Queen's and RMC, Mining, Environmental Studies, and Civil Engineering.



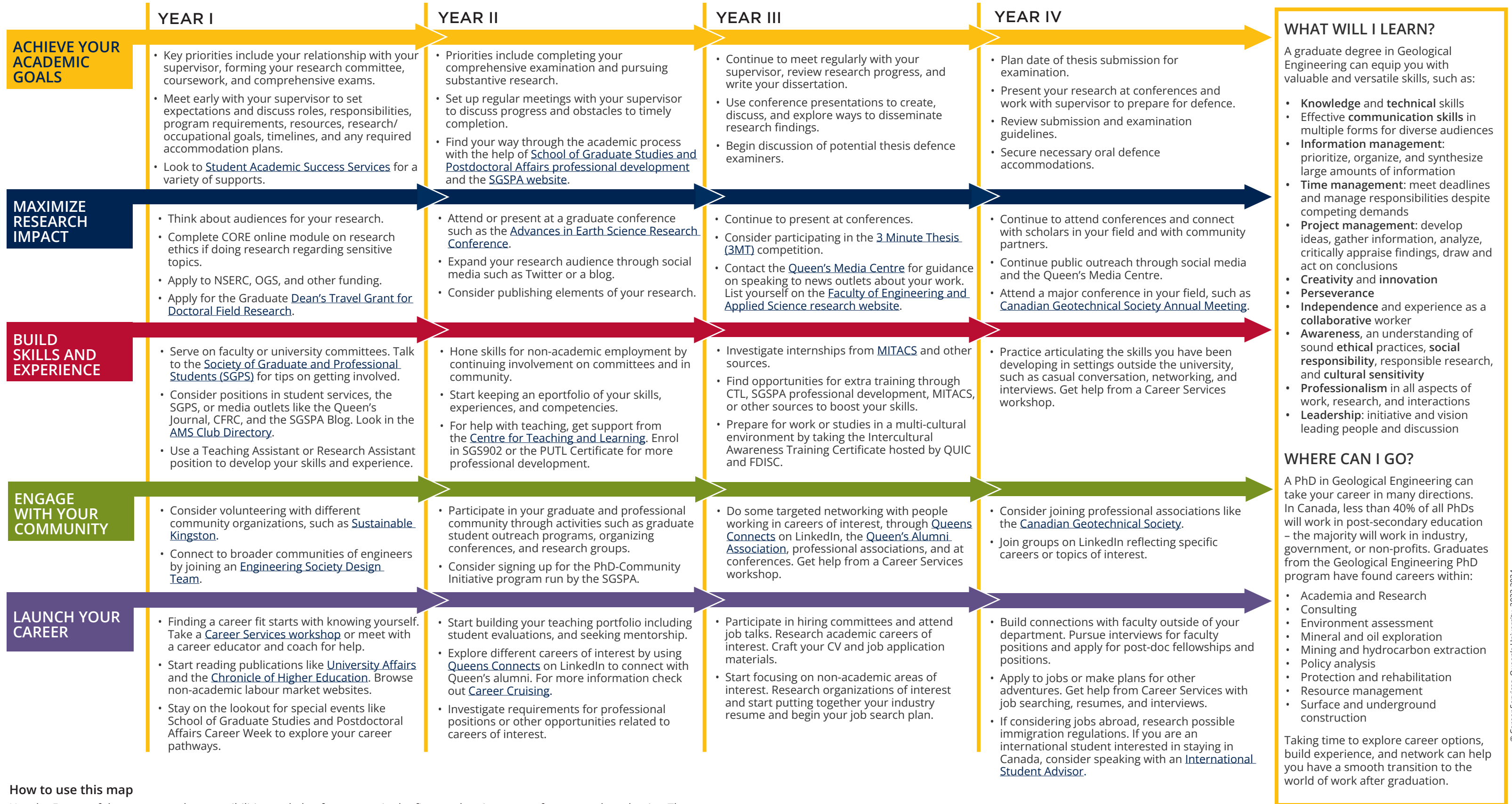
**SMITH  
ENGINEERING**  
Queen's University

**GRADUATE STUDIES AND  
POSTDOCTORAL AFFAIRS**

2023-2024

# Geological Engineering PhD Map

DOCTOR OF PHILOSOPHY (PhD)



**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 Grad Map](#) tool.



# 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 [Individual Development Plan \(IDP\)](#) 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?

At Queen's, graduate students from all disciplines learn and discover in a close-knit intellectual community. You will find friends, peers and support among the graduate students enrolled in Queen's more than 130 graduate programs within 50+ departments & research centres. With the world's best scholars, prize-winning professional development opportunities, excellent funding packages and life in the affordable, historic waterfront city of Kingston, Queen's offers a wonderful environment for graduate studies. Queen's is an integral part of the Kingston community, with the campus nestled in the core of the city, only a 10-minute walk to downtown with its shopping, dining and waterfront. For more about 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

- 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 following minimum scores are required: (1) TOEFL iBT: Writing (24/30); Speaking (22/30); Reading (22/30); Listening (20/30). Applicants must have the minimum score in each test as well as the minimum overall score, or (2) IELTS: 7.0 (academic module overall band score and a 7.0 for each test band), or (3) PTE Academics: 65, or (4) CAEL CE -70 (minimum overall score).

### 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 OGS, 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 and Postdoctoral Affairs' information on [awards and scholarships](#).



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