

# Geological Engineering MASc Map

## Applying to and Navigating Graduate Studies

GRAD MAP FOR MASc 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 Master's 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.



*"Graduate level Geological Engineering has provided me with the opportunities to delve into my interests in Geophysics with intimate class sizes, impassioned instructors and spectacular locations for Graduate Field School."*

—Robin Maedel, MASc

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

Visit the [Geological Engineering website](#) to read about 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.

### Program STRUCTURE

MASc (2 years): Course work 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.

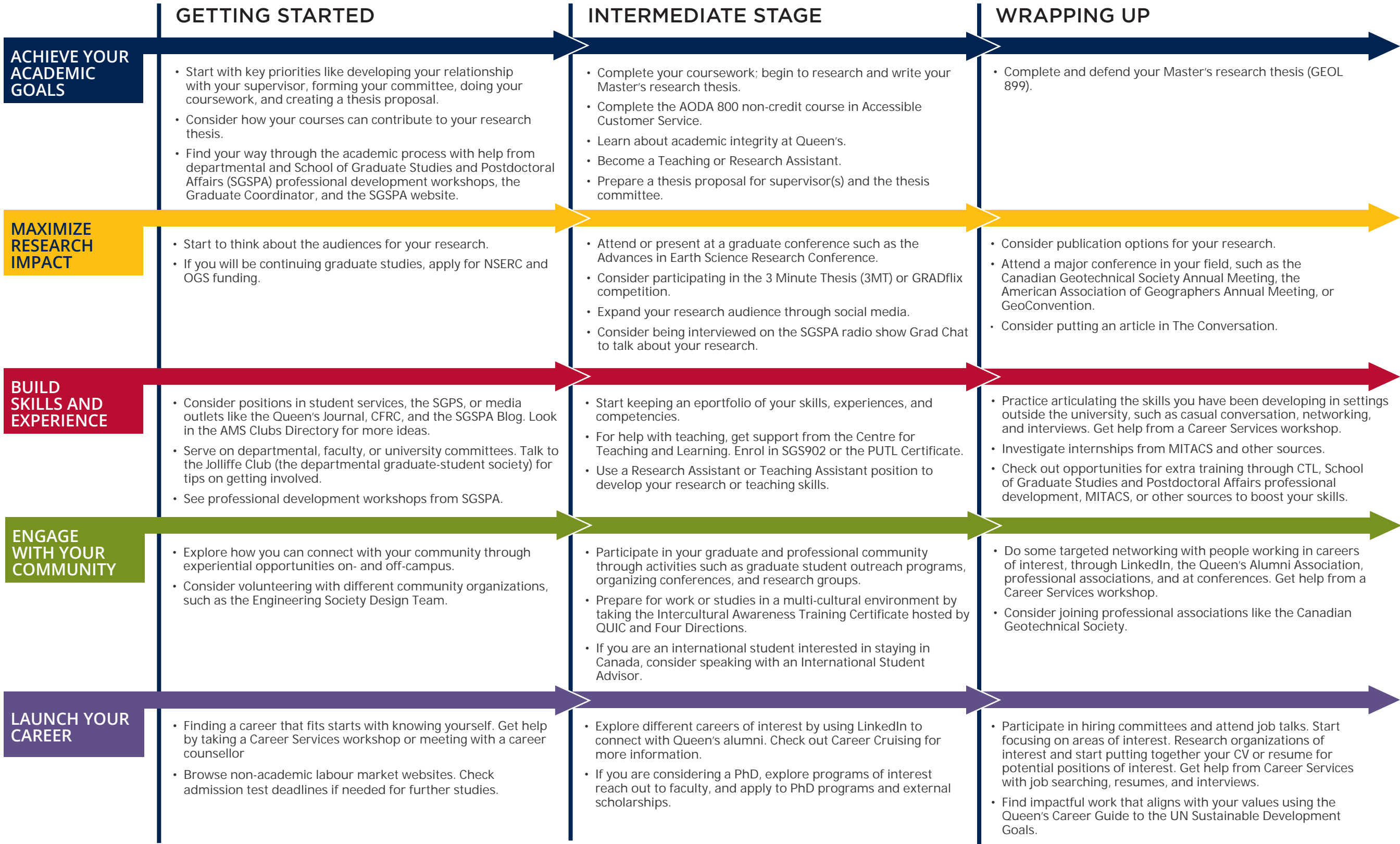


**GRADUATE STUDIES AND  
POSTDOCTORAL AFFAIRS**

[queensu.ca/grad-postdoc](https://queensu.ca/grad-postdoc)

# Geological Engineering MAsc Map

MASTER OF APPLIED SCIENCE (MAsc)



## Knowledge & Workplace Skills

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**
- 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 Master's degree in Geological Engineering can take your career in many directions. Many of our MAsc students choose to continue their academic inquiry with a PhD. Our Master's students are equipped with a strong foundation for careers in:

- Academia and Research
- Consulting
- Financial institutions
- Mining Companies
- Mining equipment and technology providers
- Non-Governmental Organizations

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](https://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?

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

- A Bachelor'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 will be considered, but may require additional Geology courses during the period of study.
- **Grade requirements:** Work completed over all 4 years of the undergraduate degree will be considered, with emphasis on the last 2 years.

### 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 due:** February 1.
- **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?

Currently, Geological Engineering Master's students have a minimum funding of \$21,000 for domestic students and minimum funding of \$28,000 for international students. Research Assistantships are in consultation with the student's supervisor. Students should also consult the NSERC for the current levels of support this agency provides.

For more information, see the School of Graduate Studies and Postdoctoral Affairs' information on awards and scholarships.



Kelly McCaugherty, Graduate Assistant  
(613) 533-2597

geolgradassistant@queensu.ca  
queensu.ca/geol/graduate