

# Civil Engineering PhD Map

## Applying to and Navigating Graduate Studies

### Why GRADUATE STUDIES in CIVIL ENGINEERING?

As a PhD student in the field of Civil Engineering, you can play a vital role in future developments in such areas as design of earth structures, water quality and treatment, sediment transport, coastal protection, water and sewer networks, groundwater resources, and construction and rehabilitation of structures, including consideration of climate change impacts and other issues. Civil Engineering has a wide range of applications that contribute to modern life and its infrastructure.

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 Civil 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 Civil Engineering.

The Queen's graduate programs in Civil Engineering are home to some of the finest minds in the fields of civil and environmental engineering. Students have the chance to study engineering in an environment where multidisciplinary research and activities are encouraged and facilitated.



GRAD MAP FOR PhD STUDENTS 

*The Civil Engineering Department's objective is to provide a broadly-based education in civil engineering which is intrinsically supported by world-class research in the areas of Structural, Geotechnical, Hydrotechnical, and Environmental Engineering.*

### Program STRUCTURE

**PhD (4 years):** 4 graduate term length courses, research, comprehensive oral examination, and a thesis.

### RESEARCH Areas

- Environmental Engineering
- Geotechnical Engineering
- Hydrotechnical Engineering
- Structural Engineering

Visit the [Civil Engineering website](#) to read about research areas and learn more about faculty members' research specialization. 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.

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.



**SMITH  
ENGINEERING**  
Queen's University

**GRADUATE STUDIES AND  
POSTDOCTORAL AFFAIRS**

# Civil Engineering PhD Map

DOCTOR OF PHILOSOPHY (PhD)



## YEAR I

## YEAR II

## YEAR III

## YEAR IV

### ACHIEVE YOUR ACADEMIC GOALS

- Key priorities include forming your committee, coursework, discussing direction of your thesis research, and beginning your research.
- 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.

- 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 [School of Graduate Studies and Postdoctoral Affairs professional development](#) and the [SGSPA website](#).

- Continue to meet regularly with your supervisor, review research progress, and write your dissertation. Check out the [SGSPA writing camps](#), such as Dissertation Boot Camp or Dissertation on the Lake.
- Use conference presentations to create, discuss, and explore ways to disseminate research findings.
- Begin discussion of potential thesis defence examiners.

- Plan date of thesis submission for examination.
- Present your research to graduate students and faculty or at conferences and work with 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.

### MAXIMIZE RESEARCH IMPACT

- Think about audiences for your research.
- Complete the CORE online module on research ethics if doing research regarding sensitive topics.
- Apply to NSERC, OGS, and other funding sources.
- Attend conferences in your field, based on supervisor advising.

- Present your work at graduate conferences through professional associations, or topic conferences.
- Expand your research audience through social media such as Twitter or a blog.
- Consider publishing elements of your research.

- Continue to present at conferences.
- Consider participating in the [3 Minute Thesis \(3MT\)](#) competition.
- Contact the [Queen's Media Centre](#) for guidance on speaking to news outlets about your work.
- Consider putting an article in [The Conversation](#).

- Continue to attend conferences and connect with scholars in your field and with community partners.
- Continue public outreach through social media and the Queen's Media Centre.
- Set up a meeting with the SGSPA for a [Grad Chat](#) to discuss your research interests.

### BUILD SKILLS AND EXPERIENCE

- Serve on departmental, faculty, or university committees.
- Consider positions in student services, the SGPS, or media outlets like the Queen's Journal, CFRC, or the SGSPA Blog. Look in the [AMS Club Directory](#).
- Use a Teaching Assistant or Research Assistant position to develop your skills and experience.

- Hone skills for non-academic employment by continuing involvement on committees.
- Start keeping an eportfolio of your skills, experiences, and competencies.
- For help with teaching, get support from the [Centre for Teaching and Learning](#). Enrol in SGS902 or the PUTL Certificate for more professional development in teaching and learning.

- Investigate internships from [MITACS](#) and other sources.
- Find opportunities for extra training through CTL, School of Graduate Studies and Postdoctoral Affairs professional development, MITACS, or other sources to boost your skills.
- Prepare for work or studies in a multi-cultural environment by taking the Intercultural Awareness Training Certificate hosted by QUIC and FDISC.

- Practice articulating the skills you have been developing in difficult forums: casual conversation, networking, and interviews. Get help from a Career Services workshop.

### ENGAGE WITH YOUR COMMUNITY

- Consider volunteering with different community organizations.
- Connect to broader communities of engineers by joining one of the Engineering Society's Design Teams.

- Participate in your graduate and professional community through activities such as graduate student outreach programs, organizing conferences, and research groups.
- Consider signing up for the PhD-Community Initiative program run by the SGSPA.

- Do some targeted networking with people working in careers of interest, through [Queens Connects](#) on LinkedIn, the [Queen's Alumni Association](#), professional associations, and at conferences. Get help from a Career Services workshop.

- Consider joining professional societies like the [Canadian Society for Civil Engineers](#).
- Join groups on LinkedIn reflecting specific careers or topics of interest.

### LAUNCH YOUR CAREER

- Finding a career fit starts with knowing yourself. Take a Career Services workshop or meet with a career educator and coach for help.
- Start reading publications like [University Affairs](#) and the [Chronicle of Higher Education](#). Browse non-academic labour market websites.
- Stay on the lookout for special events like Graduate Studies and Postdoctoral Affairs Career Week to explore your career pathways.

- Start building your teaching portfolio including student evaluations, and seeking mentorship.
- Explore different careers of interest by using [Queens Connects](#) on LinkedIn to connect with Queen's alumni. For more information check out Career Cruising.
- Investigate requirements for professional positions or other opportunities related to careers of interest.

- Participate in hiring committees and attend job talks. Research academic careers of interest. Craft your CV and job application materials.
- Start focusing on non-academic areas of interest. Research organizations of interest and start putting together your industry resume and begin your job search plan.

- Build connections with faculty outside of your department. Pursue interviews for faculty positions and apply for post-doc fellowships and positions.
- Apply to jobs or make plans for other adventures. Get help from Career Services with job searching, resumes, and interviews.
- If considering jobs abroad, research possible immigration regulations. If you are an international student interested in staying in Canada, consider speaking with an [International Student Advisor](#).

### WHAT WILL I LEARN?

A graduate degree in Civil Engineering can equip you with:

- **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** and 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 Civil 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. Our PhD students are equipped with a strong foundation for careers in:

- Academia and Research
- Civil Engineering in the public domain
- Consulting
- Law
- Manufacturing
- Policy and Governance
- Public sector

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 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 Civil Engineering. Applicants with a Master's degree in a cognate science may be admitted.

### 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:** March 1 to qualify for internal funding.
- **Notification of acceptance:** 2-3 months 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 \$20,000. As part of the minimum funding package, you may serve as a Teaching or Research Assistant.

We encourage all students to apply for external funding from OGS, NSERC, and other sources. Queen's will automatically issue a one time \$10,000 award to Doctoral 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](#) or see what awards are offered through the Civil Engineering Department.

