

# Chemical Engineering PhD Map

## Applying to and Navigating Graduate Studies

GRAD MAP FOR PhD STUDENTS 

### Why GRADUATE STUDIES in CHEMICAL ENGINEERING?

As a PhD student in the field of Chemical Engineering, you can play a vital role in future developments in such areas as biological conversion, pollution prevention and treatment, tissue engineering, process control and optimization, (bio)chemical sensing, nanocomposites, and many other areas. Chemical Engineering has a wide range of applications that contribute to modern life and its technologies.

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. Check out [whygradstudies.ca](#) for more reasons to choose graduate studies in engineering.



### Why QUEEN'S?

Queen's University is one of Canada's leading research-intensive universities, with over \$14 million in sponsored research funding and almost \$5 million in revenues from technology transfer. It consistently ranks as one of the top three medical/doctoral universities in Canada and offers an unparalleled environment to facilitate academic development. Among Queen's goals is to attract and retain



students with outstanding potential from across Canada and around the world.

The Department of Chemical Engineering at Queen's University is based in Dupuis Hall and the Biosciences Complex, which are multi-purpose facilities with extensive research laboratories, and large- and small-group teaching classrooms.

**The Chemical Engineering Department offers opportunities to collaborate with scientists in the Centre for Health Innovation and Computational Science and Engineering, as well as with co-supervising faculty in other departments.**

Areas of intense research in the department include: Biomedical engineering, polymer and reaction engineering, process systems engineering, sustainable energy sources and environmental engineering. Activities range from developing new bio- and polymeric materials and production techniques, to understanding how the dynamic structure of a chemical process limits the performance that can be achieved. Significant collaborations across these fields exist within the department, and faculty members also collaborate extensively with other researchers across Queen's and at other institutions.

### Program STRUCTURE

PhD (4 years): course work, research thesis, comprehensive exam, and two seminars.

### RESEARCH Areas

- Bioengineering
- Clean Energy and Sustainable Environment
- Process Systems Engineering and Systems Biology
- Materials and Interfaces

We suggest that you review the specific research interests of individual 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.

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



**GRADUATE STUDIES AND POSTDOCTORAL AFFAIRS**

# Chemical 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 [Major 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 of Applied Science or Master of Science.
- Grade requirements: minimum cumulative average of B+, with a minimum of 77% in last year of study.

### 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: There is a constant intake so there is no set deadline for application. If you are international, we recommend that you have completed your application at least 4 months ahead of your admission cycle.

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 \$25,000 (Masters and PhD) for 2022-2023. As part of the minimum funding package, you may serve as a Teaching Assistant for at least one term per year.

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 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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