

# Chemical Engineering Ph.D. Map

*Navigating Graduate Studies and Beyond*

GRAD MAP FOR PH.D. STUDENTS 

## How do I **USE THIS MAP?**

Whether you are considering or have embarked on graduate studies at Queen's, use this map to plan for success in five overlapping areas of your career and academic life. The map helps you explore possibilities, set goals and track your individual accomplishments. Everyone's journey is different – the guide offers options for finding your way at Queen's and setting the foundation for your future. To make your own customized map, use the online [My Grad Map](#) tool.

## 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 degradation, tissue engineering, process control and optimization, biomarker detection, Raman spectroscopy, and many of 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](http://whygradstudies.ca) for more reasons to choose graduate studies in engineering.

## Why **QUEEN'S?**

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

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.

Research activities in the department are concentrated in three areas: biomedical/biochemical engineering, polymer and reaction engineering, and process systems 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.

## Why **KINGSTON?**

Described by students as both "quaint" and "eclectic," Kingston is big enough to provide all the conveniences of modern life, and small enough for students, staff, and faculty to feel instantly comfortable and at home.

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 the School of Graduate Studies' [Discover Kingston](#) page.

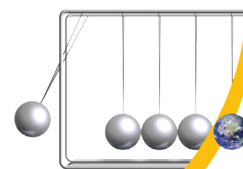
## Program **STRUCTURE**

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

## **RESEARCH** Areas

- Biochemical Engineering
- Biomedical Engineering
- Environmental Engineering
- Fuel Cells
- Macro-molecular Processes and Products
- Microfluidics & Biosensors: Electrokinetics
- Process Systems Engineering

School of  
Graduate  
Studies  
Create an impact  
[www.queensu.ca/sgs](http://www.queensu.ca/sgs)



# Chemical Engineering PH.D. MAP

DOCTOR OF PHILOSOPHY (PH.D.)

Queen's  
175  
YEARS



Visit [careers.queensu.ca/gradmaps](https://careers.queensu.ca/gradmaps) for the online version with links!

# Ph.D. Map 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 [TOEFL requirements](#) in writing, speaking, reading, and listening.

### 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](#).

## How do I find a supervisor?

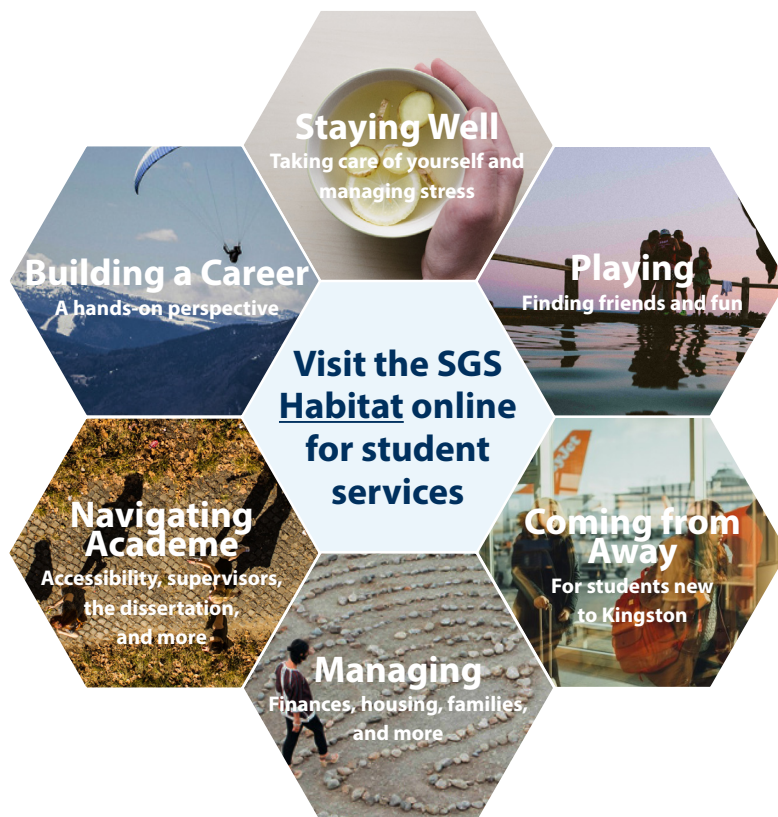
We suggest that you review the specific research projects currently being investigated by faculty members to identify a potential supervisor. Please note, however, that contacting a faculty member does not guarantee acceptance and you will need to submit your full application in order to be considered.

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

## 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 2016-2017. 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, SSHRC and other sources. Queen's will automatically issue a \$10,000 award to winners of federal government tri-council awards for PhD studies. For more information, see the School of Graduate Studies' information on [awards and scholarships](#).



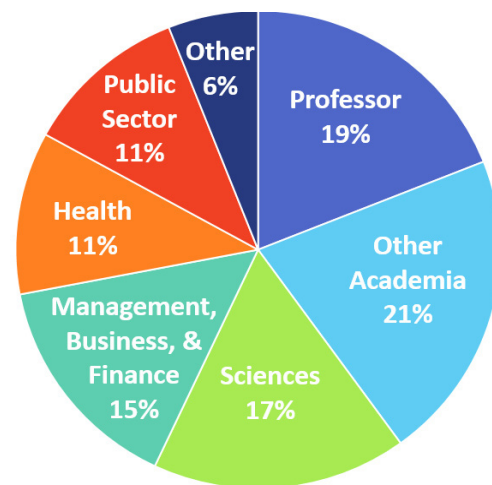
# Where Can a Graduate Degree Take Me?

A PhD in Chemical 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 Chemical Engineering PhD program have found careers in:

- Biochemical Engineering
- Biomedical Engineering
- Environmental Engineering
- Fuel Cells
- Macro-molecular Processes and Products
- Microfluidics & Biosensors
- Process Systems Engineering

Taking time to explore career options, build experience, and network can help you have a smooth transition to the world of work after graduation.



## Ph.D. Career Outcomes in Canada

*Edge, Jessica, and Daniel Munro. Inside and Outside the Academy: Valuing and Preparing PhDs for Careers. Ottawa: The Conference Board of Canada, 2015.*

Queen's  
UNIVERSITY

DEPARTMENT OF  
CHEMICAL  
ENGINEERING

Graduate Assistant  
613.533.6000 ext. 74830  
phillipl@queensu.ca  
www.chemeng.queensu.ca