

Chemical Engineering M.A.Sc. Map

Navigating Graduate Studies and Beyond

GRAD MAP FOR M.A.SC. 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 Master's 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 for more reasons to choose graduate studies in engineering.

Why **QUEEN'S?**

"I enjoyed the interaction between the students and faculty and our industrial partners. It was like a built-in work experience while you're in school, [giving me] real world experience that I can add to my résumé."

– *Adegboyega Babasola, MSc*

As a Master's student in Chemical 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.



The Chemical Engineering Department has links to a number of multi-disciplinary centres at Queen's, including: the Human Mobility Research Centre, Green Centre Canada, Innovation Park, the Queen's Centre for Energy and Power Electronics Research (ePOWER), and the Queen's Innovation Connector. The Department also houses the Polymers Research Group (PRG), with strengths in polymer reaction engineering, processing and rheology.

Our students come from all over the world. 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.

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 Queen's University's [Discover Kingston](#) page.

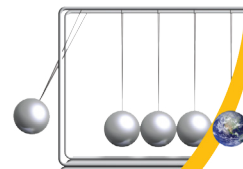
Program **STRUCTURE**

M.A.Sc. (approximately 2 years): course work, seminar, and thesis.

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
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Chemical Engineering M.A.Sc. MAP

MASTER OF APPLIED SCIENCE (M.A.Sc.)

Queen's
175
YEARS

GETTING STARTED

INTERMEDIATE STAGE

WRAPPING UP

ACHIEVE YOUR ACADEMIC GOALS

- Start with key priorities like developing your relationship with your supervisor, forming your committee, and doing your coursework.
- Consider how your course papers can contribute to your cognate essay or thesis.
- Find your way through the academic process with help from departmental and [Expanding Horizons](#) professional development workshops, the department Grad Chair and the [SGS Habitat](#).

MAXIMIZE RESEARCH IMPACT

- Start to think about the audiences for your research.
- If you will be continuing graduate studies, apply for NSERC and OGS funding.

BUILD SKILLS AND EXPERIENCE

- Consider positions in student services, the [SGPS](#), or media outlets like the [Queen's Journal](#), [CFRC QTV](#) and the [SGS Blog](#). Look in the [AMS Clubs Directory](#) for more ideas.
- Serve on departmental or university committees. Talk to the [Chemical Engineering Graduate Student Association \(CEGSA\)](#) to get involved.
- Check out professional development workshops from [Expanding Horizons](#) and the Chemical Engineering Department.

ENGAGE WITH YOUR COMMUNITY

- Explore how you can connect with your community through experiential opportunities on- and off-campus.
- Consider volunteering with different community organizations, such as Queen's [Chemical Engineering Graduate Student Association \(CEGSA\)](#).
- Engage with the Chemical Engineering department on [Twitter](#).

LAUNCH YOUR CAREER

- Finding a career that fits starts with knowing yourself. Get help by taking the [Career Services Career Planning workshop](#) or meeting with a career counsellor. Check out books like *So What Are You Going to do With That?* for advice on various career options.
- 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 Student [Career Week](#) to explore your career pathways.
- Check admission test deadlines if needed for further studies.

- Complete your coursework; begin to research and write your cognate essay or thesis.
- Attend the Departmental Speaker Series (CHEE 897).
- Complete the Academic Integrity Tutorial.

- Attend or present at a graduate conference.
- Consider participating in the [3 Minute Thesis \(3MT\)](#) competition.
- Expand your research audience through social media such as Twitter or a blog.

- Start keeping an eportfolio of your skills, experiences and competencies.
- Use a Research Assistant or Teaching Assistant position to develop your research or teaching skills.
- For help with teaching, get support from the [Centre for Teaching and Learning](#). Enroll in [SGS901](#) or the [PUTL certificate](#) for more professional development in teaching and learning.

- Participate in your graduate and professional community through activities such as graduate student outreach programs, organizing conferences, and research groups like [Material Matters](#).
- Prepare for work or studies in a multi-cultural environment by taking QUIC's [Intercultural Competency Certificate](#).
- If you are an international student interested in staying in Canada, consider speaking with an [International Student Advisor](#).

- Explore different careers of interest by reading [alumni profiles](#) on the SGS website, and using [QueensConnects](#) on LinkedIn to connect with Queen's alumni, or find alumni in various careers through "[Ask an Alum](#)".
- Check out the free online modules at [MyGradSkills](#) to help you plan your career.
- If you are considering a PhD, explore programs of interest reach out to faculty, and apply to PhD programs and external scholarships.

- Present your research to Chemical Engineering graduate students and faculty.
- Complete and defend your Master's research thesis.

- Consider publication options for your research.
- Attend a major conference in your field. Speak with your supervisor about options for conferences in your area of research.

- Practice articulating the skills you have been developing in settings outside the university, such as casual conversation, networking, and interviews. Get help with the [Skills and Experience workshop](#).
- Check out opportunities for extra training through CTL, Expanding Horizons, Mitacs, or other sources to boost your skills.
- Investigate internships from [Mitacs](#) and [other sources](#).

- Do some targeted networking with people working in careers of interest, through [QueensConnects](#) on LinkedIn, the [Queen's Alumni Association](#), professional associations, and at conferences. Check out Career Services' [networking workshops](#).
- Consider joining professional associations like the [Canadian Society for Chemical Engineers](#).

- Participate in hiring committees and attend job talks. Start focusing on areas of interest. Research organizations of interest and start putting together your CV or resume for potential positions of interest. Get help from Career Services with [job searching](#), [resumes](#), or [interviews](#).

EMPLOYABILITY SKILLS

Knowledge and technical skills in area of specialization

Communication: effective and clear in written, oral and multimedia forms, for diverse audiences

Information management: prioritize, organize and synthesize large amounts of information

Time management: meet deadlines and responsibilities despite competing demands

Project management: develop ideas, gather information, analyze, critically appraise findings, draw and act on conclusions

Creativity and innovation to address complex, multifaceted challenges

Perseverance to work through challenges to achieve desired outcome

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 discussions

M.A.Sc. Map FAQs

What do I need to know to apply?

ACADEMIC REQUIREMENTS

- Bachelor's degree in Engineering or other relevant program.
- **Grade requirements:** minimum B+ (77%) average.

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 with no set deadline. It is recommended that the application be completed at least 4 months ahead of the desired admission cycle, especially for international student.
- **Notification of acceptance:** rolling acceptances for September, January, and May academic cycles.

Before you start your application, please review the [Graduate studies application process](#).

How do I find a supervisor?

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

Visit the Chemical Engineering website to read about [research professionals](#) and see [faculty profiles](#). When you find a faculty member with similar research interests to yours, contact him/her and tell them about your interest in graduate work and related experience.

What about funding?

Chemical Engineering graduate students have a minimum funding of \$25,000. As part of the minimum funding package, you may serve as a Teaching Assistant for at least one term per year.

Apply for external funding from OGS, SSHRC and other sources. Queen's will automatically issue a \$5,000 top-up to Masters winners of federal government tri-council awards. For more information, see the School of Graduate Studies' information on [awards and scholarships](#).

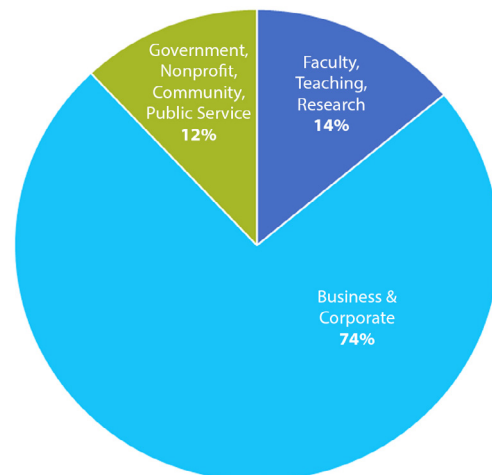


Where Can a Graduate Degree Take Me?

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

- Academia
- Consulting
- Finance
- Manufacturing
- Petroleum
- Pharmaceuticals

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



M.A.Sc. Career Outcomes in Engineering

Council of Graduate Schools and Educational Testing Service. (2012). Pathways Through Graduate School and Into Careers. Princeton, NJ: Educational Testing Service.



DEPARTMENT OF
CHEMICAL
ENGINEERING

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