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 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 Chemical Engineering Department has links to a number of multi-disciplinary centres at Queen's, including: the Centre for Health Innovation, Green Centre Canada, Innovation Park, the Queen's Centre for Energy and Power Electronics Research (ePOWER), and the Queen's Innovation Connector.

Program STRUCTURE

MASc (approximately 2 years): course work, seminar, and thesis.

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.

“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
2022-2023
Chemical Engineering
MASc Map
MASTER OF APPLIED SCIENCE (MASc)

GETTING STARTED

- Achieve your academic goals
  - 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.

MAXIMIZE RESEARCH IMPACT

- Start or think about the audiences for your research.
  - 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.
  - Set up a meeting with the School of Graduate Studies and Postdoctoral Affairs to go on Grad Chat to discuss your research interests.

BUILD SKILLS AND EXPERIENCE

- Engage with your community
  - Participate in your graduate and professional community through activities such as graduate student outreach programs, organizing conferences, and research groups.
  - Prepare for work or studies in a multi-cultural environment by attending the Queen’s International Centre for Teaching and Learning.
  - Enroll in SGS902 or the ITACS competition.

ENGAGE WITH YOUR COMMUNITY

- Explore with your community
  - Explore different careers of interest by using Queen's Connects on LinkedIn to connect with Queen’s alumni. Check out Career Cruising for more information.
  - If you are considering a PhD, explore programs of interest reach out to faculty, and apply to PhD programs and external scholarships.

LAUNCH YOUR CAREER

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INTERMEDIATE STAGE

- Achieve your academic goals
  - Prepare your research to Chemical Engineering graduate students and faculty.
  - Complete and defend your Master’s research thesis.

MAXIMIZE RESEARCH IMPACT

- Start or think about the audiences for your research.
  - Consider publication options for your research.
  - Attend a major conference in your field, such as the Canadian Chemical Engineering Conference or the American Chemical Society.
  - Practice articulating the skills you have been developing in settings outside the university, such as casual conversation, networking, and interviews.

BUILD SKILLS AND EXPERIENCE

- Engage with your community
  - Practice articulating the skills you have been developing in settings outside the university, such as casual conversation, networking, and interviews.
  - Get help from a Career Services workshop.
  - Investigate internships from MITACS, and other sources.
  - Check out opportunities for extra training through CTL, School of Graduate Studies and Postdoctoral Affairs professional development, MITACS, or other sources to boost your skills.

ENGAGE WITH YOUR COMMUNITY

- Explore with your community
  - Do some targeted networking with people working in careers of interest, through Queen’s Connects on LinkedIn, the Queen’s Alumni Association, professional associations, and at conferences. Get help from a Career Services workshop.
  - Consider joining professional associations like the Chemical Engineering Society.

LAUNCH YOUR CAREER

- Launch your career
  - 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, and interviews.

WRAPPING UP

- Achieve your academic goals
  - Explore different careers of interest by using Queen's Connects on LinkedIn to connect with Queen’s alumni. Check out Career Cruising for more information.
  - If you are considering a PhD, explore programs of interest reach out to faculty, and apply to PhD programs and external scholarships.

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WHAT WILL I LEARN?

A graduate degree in Chemical Engineering will empower 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 Master’s degree in Chemical 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
- 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.
Application 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 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: 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 students.
- Notification of acceptance: Rolling acceptances for September, January, and May academic cycles.

Before you start your application, please review the Graduate studies application process.

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, NSERC 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 and Postdoctoral Affairs’ information on awards and scholarships.

Laurie Phillips, Graduate Assistant
Tel: (613) 533-6000 ext. 74830
phillipl@queensu.ca
chemeng.queensu.ca