Why GRADUATE STUDIES in CHEMISTRY?

A degree from Queen's Department of Chemistry is highly regarded and an important consideration in today's competitive science and technology job market. Our new $56 million state of the art building is home to the Nuclear Magnetic Resonance facility and its eight high-field instruments, an on-site Mass Spec facility with four mass spectrometers, an X-ray diffractometer, a CFI-funded facility for materials characterization and more unique equipment in faculty labs.

Why QUEEN’S?

Queen's University and the Department of Chemistry enjoy international reputations. With 27 award-winning faculty, and over 130 graduate students, post-doctoral fellows and research associates performing cutting-edge research in a multitude of areas, you will find this an exciting place to do research. Research is performed in the areas of analytical, inorganic, organic, physical, polymer, and theoretical chemistry. Research in these areas ranges from the most fundamental to very applied.

Program STRUCTURE

MSc (2 years): course work and thesis.

RESEARCH Areas

- Analytical/Environmental
- Biological
- Inorganic/Organometallic
- Materials/Polymer
- Organic
- Physical
- Theoretical/Computational

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

Visit the Chemistry Department website to read faculty profiles and learn more about faculty members’ research areas. 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. This is also an opportunity for you to find out if the faculty member is accepting new graduate students to supervise.

“My years at Queen’s have left me with nothing but good memories. It was a great experience, a great city and a great education. It was a solid foundation to launch a career.”

– Will N. Rogers, PhD
GETTING STARTED

• Start with key priorities like developing your relationship with your supervisor, forming your committee, and doing your coursework.
• Complete WHMIS safety training.
• 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.

INTERMEDIATE STAGE

• Complete your coursework; begin to research and write your thesis.
• Complete your annual Research Progress Reports.

WRAPPING UP

• Complete and defend your thesis (CHEM 899).

MAXIMIZE RESEARCH IMPACT

• Attend or present at a graduate conference such as the Canadian Chemistry Conference and Exhibition.
• Consider participating in the 3 Minute Thesis (3MT) competition.
• Attend the weekly seminar series (CHEM 802).
• Expand your research audience through social media such as Twitter or a blog. Conduct research at an International Collaborative University (e.g. Stuttgart, Nagoya, Poitiers).

• 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 as a graduate representative on a department committee (e.g. Graduate Committee, Appointments Committee, Technical Resource Committee, Health and Safety Committee).
• 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.
• Check out opportunities for extra training through CTL, Expanding Horizons, Mitacs, or other sources to boost your skills.
• Take advantage of the state-of-the-art research facilities, which feature NMR, mass spectrometry, X-ray diffractometer, a laser lab, and more.

• 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 taking the OCIC and Four Directions Aboriginal Student Centre’s Training Certificate.
• Consider joining professional associations like the Canadian Society for Chemistry or the American Chemical Society.

BUILD SKILLS AND EXPERIENCE

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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, museums, and cultural studies groups, such as Science Rendezvous.
• Take part in events put on by the Queen’s Chemistry Innovation Council.
• Consider judging local and regional science fairs.

• 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 taking the OCIC and Four Directions Aboriginal Student Centre's Training Certificate.
• If you are an international student interested in staying in Canada, consider speaking with an International Student Advisor.

WHERE CAN I GO?

A graduate degree in Chemistry can equip you with valuable and versatile skills, such as:

Knowledge and Technical Skills
• Chemical synthesis
• Spectroscopic characterization
• 3D printing/rapid prototyping
• Mass spectrometry analysis
• Experimental design
• Molecular modelling
• Manuscript writing
• Conference oral presentation
• Poster presentation (graphPhD)

Creativity and Innovation
• Scientific patent writing/patent protection
• Business skills in chemical industry
• Grant writing, problem solving

Leadership and Collaboration
• Conference participation
• Supervision of junior researchers
• Industrial engagement
• Research with international experts/partners

WHERE CAN I GO?

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

Quality Control Chemist
Doctoral Studies
Forensic Scientist
Environmental Law
Patent Law
Food Scientist
Biochemistry
Consumer Protection
Pharmaceutical Chemist
Materials Scientist
Petroleum Engineer
Chemical Education (University, College, Secondary/Primary)

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

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.

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 SGS HABITAT 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
- 4 year Honour’s degree in Chemistry or a related science, including Biochemistry, Chemical Physics, Materials Science, or Chemical Engineering.
- Grade requirements: minimum upper second class standing (B+ average).

ADDITIONAL REQUIREMENTS
- Correspond with potential supervisors.
- If English is not a native language, prospective students must meet the English language proficiency requirements in writing, speaking, reading, and listening. The School of Graduate Studies requires the following minimum scores: TOEFL (paper-based): 550, (2) TOEFL iBT: Writing (24/30); Speaking (22/30); Reading (22/30); Listening (20/30), for a total of 88/120 (applicants must have the minimum score in each test as well as the minimum overall score), or (3) IELTS: 7.0 (academic module overall band score), or (4) PTE Academics: 65.

KEY DATES & DEADLINES
- Application due: February 1st to be considered for awards. Later applications are accepted.
- Notification of acceptance: Accepted students are notified as the applications are reviewed.

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

What about FUNDING?

M.Sc. students in Chemistry receive minimum funding of $24,500 per year. Many students are awarded scholarships and awards, which allow them to exceed this level of income.

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’ information on awards and scholarships, or see what awards are offered through the Chemistry Department.