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 $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. A unique opportunity to obtain dual degrees from Queen’s University and the University of Stuttgart, Germany.

Program STRUCTURE

MSc (2 years): course work and thesis.

Current Queen’s undergraduate chemistry students entering their 4th year and have a A- (A minus) average may apply for an Accelerated Masters (https://www.chem.queensu.ca/undergraduate/accelerated-msc-program).

Students who show exceptional promise in their research have the option to promote to the PhD program in their second year.

“Within the Stuttgart/Queen’s double Master’s program I had the opportunity to conduct research at two different institutions and make valuable connections.”

- Matthias Hermann, MSc

RESEARCH Areas

- Analytical/Environmental
- Biological
- Chemistry Education
- 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.

“A Master’s in Chemistry is a versatile degree that has provided me with the analytical and critical thinking skills that are requisite to success in my future career as a lawyer”

- Kasia Donovan, MSc

GRAD MAP

FOR MSc STUDENTS

Applying to and Navigating Graduate Studies
2022-2023
Chemistry MSc Map

GETTING STARTED

- Start with key priorities like developing your relationship with your supervisor, forming your committee, and doing your coursework.
- Complete WMMS safety training.
- Find your way through the academic process with help from departmental and School of Graduate Studies and Postdoctoral Affairs professional development workshops, the department Grad Chair and the SGSPA website.
- Consider positions in student services, the SGSPA, or media outlets like the Queen’s Journal, CFRC, and the SGSPA Blog. Look in the AMS Clubs Directory for more information.
- Serve on departmental, faculty or university committees.
- Complete WHMIS safety training.
- Consider participating in the 3 Minute Thesis (3MT) competition and 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 (i.e. Stuttgart, Nagoya, Poitiers).
- Attend or present at a graduate conference such as the Canadian Chemistry Conference and Exhibition or the American Chemistry Society National Meeting.
- Consider joining professional associations like the Chemical Society National Meeting, American Chemical Society, American Chemical Society, Society for Chemistry, 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. Get help from a Career Services workshop.
- Check out opportunities for extra training through CTL, ITACS, or other sources to boost your skills.
- 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.
- 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.
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INTERMEDIATE STAGE

- Complete your coursework; begin to research and write your thesis.
- Complete your annual Research Progress Reports.
- Consider attempting the PhD Candidacy/Comprehensive Exam for promotion to the PhD program.
- Consider publication options for your research.
- Attend a major conference in your field, such as the MicroTAS, the ICP Winter Conference on Plasma Spectrochemistry, or the Canadian Cancer Research Conference.
- Set up a meeting with the School of Graduate Studies and Postdoctoral Affairs to go on Grad Chat to discuss your research interests.
- Consider putting an article in The Conversation.
- 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 Central for Teaching and Learning. Enroll in SG902 or the PUTL Certificate for more professional development.
- Participate as a graduate representative on a department committee (i.e. Graduate Committee, Appointments Committee, Technical Resource Committee, Health and Safety Committee).
- 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 Intercultural Awareness Training Certificate hosted by QUIC and FDISC.
- If you are an international student interested in staying in Canada, consider speaking with an International Student.

WRAPPING UP

- Complete and defend your thesis (CHEM 899).
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WHAT WILL I LEARN?
A graduate degree in Chemistry can equip you with:
- Knowledge and Technical Skills
- Chemical synthesis
- Spectroscopic characterization
- 3D printing/rapid prototyping
- Mass spectrometry analysis
- Experimental design
- Molecular modelling
- Communications
- Manuscript writing
- Conference oral presentation
- Poster presentation (graphic)
- Creativity and Innovation
- Scientific patent writing/patent protection
- Business skills in chemical industry
- Grant writing problem solving
- Leadership and Collaboration
- Committee 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 experience, and network can help you have a smooth transition to the world of work after graduation.

Use the map to explore possibilities and plan for success in the five overlapping areas of career and academics.

How to use this map

© Career Services, Queen's University, 2022-2023
Graduate Studies 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.
- Two official transcripts for all post-secondary studies
- Two Letters of Recommendation
- Curriculum Vitae
- 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: February 1st (to be considered for awards)
- Notification of acceptance: Students are accepted on an ongoing basis as their completed applications 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 $26,500 per year. Many students are awarded scholarships and awards, which allow them to exceed this level of income.

The funding package may comprise of graduate awards, graduate research fellowships, and research and/or teaching assistantships.

Apply for external funding from OGS, NSERC and other sources. Queen’s will automatically issue a one time $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, or see what awards are offered through the Chemistry Department.

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.