

Chemistry PhD Map

Applying to and Navigating Graduate Studies

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 26 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.



"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

Program Structure

PhD (4 years): course work, research thesis, comprehensive oral exam, and research seminar.

Research Areas

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

Visit the Chemistry Department website to read faculty members' profiles and learn more about their research areas. Students should contact potential supervisors before applying, to express interest in joining their research groups and to find out if the faculty member is accepting new students to supervise.



Chemistry PhD Map

DOCTOR OF PHILOSOPHY (PhD)

How to use this map

Use the 5 rows of the map to explore possibilities and plan for success in the five overlapping areas of career and academics. To make your own custom map, use the My Grad Map tool: careers.queensu.ca/gradmaps.



Knowledge & Workplace Skills

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 modeling

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

Career Possibilities

A PhD in Chemistry 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.

- Biochemistry
- Chemical Education (University, College, Secondary/Primary)
- Consumer Protection
- Environmental Law
- Food Science
- Forensic Science
- Materials Science
- Patent Law
- Petroleum Engineering
- Pharmaceutical Chemistry
- Postdoctoral Fellowship
- Quality Control Chemistry

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

Graduate Studies FAQs

How do I make the most of my time at Queen's?

Use the Grad Map to plan for success in five overlapping areas of your career and academic life. Everyone's journey is different - the ideas on the maps are just suggestions to help you explore possibilities. For more support with your professional development, take advantage of the SGSPA professional development framework and the new Professional Development Plan (PDP) process to set customized goals to help you get career ready when you graduate.

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 [SGSPA website](#) for available resources.

What is the community like?

Queen's offers graduate students from every discipline a close-knit intellectual community where they can learn, discover, and build lasting connections. With more than 130 graduate programs across 50+ departments and research centres, students benefit from world-class scholars, prize-winning professional development, generous funding packages, and life in the historic waterfront city of Kingston. The campus sits at the heart of Kingston, just a 10-minute walk from downtown's shops, restaurants, and waterfront, and is deeply integrated with the local community. For more on 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

- MSc in Chemistry or equivalent, or direct entry from BSc for exceptional candidates with extensive research experience.
- **Grade requirements:** minimum upper second class standing (B+ average).

ADDITIONAL REQUIREMENTS

- Official transcripts for all post-secondary studies.
- Two letters of recommendation (academic)
- Correspond with potential supervisors.
- If English is not a first language, nor was the language of instruction in undergraduate studies, prospective students must meet English language proficiency requirements in writing, speaking, reading, and listening as part of the application process, and before final acceptance is granted, as per School of Graduate Studies and Postdoctoral Affairs' regulations.

KEY DATES & DEADLINES

- **Application Due:** While the department accepts applications throughout the year, those students wishing to be considered for awards should apply by March 1st.
 - **Available Intakes:** September, January, and May
 - **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?

The minimum funding guarantee for Chemistry PhD students is currently \$30,152 per year, throughout years 1-4. The funding package may be comprised of graduate awards, graduate research fellowships, and research and/or teaching assistantships. Students who win awards will have a higher stipend. For more information, check the department website: <https://www.chem.queensu.ca/graduate/financial-support> and <https://www.chem.queensu.ca/graduate/awards-scholarships>. We encourage all students to apply for external funding from OGS, NSERC and other sources. For more information on awards and scholarships, consult the School of Graduate Studies and Postdoctoral Affairs' website.

