Where Can a Graduate Degree Take Me?

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.

- Research chemist
- Research engineer
- Scientist
- Technical leader
- ICP Analyst
- Professor

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

Ph.D. Career Outcomes in Canada

- Other Academia 21%
- Other 6%
- Public Sector 11%
- Health 11%
- Management, Business, & Finance 15%
- Sciences 17%
- Arts 12%

University of Chemistry

Queens' University and the Department of Chemistry enjoy international reputations. With 25 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.

At Queens, 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 Queens' 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, Queens 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.

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.

Ph.D. Map FAQs

What do I need to know to apply?

ACADEMIC REQUIREMENTS
- MSc in Chemistry of equivalent, or direct entry from B.Sc for exceptional candidates with extensive research experience.
- Grade requirements: minimum upper second class standing (8+ 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: March 1st to be considered for awards. Later applications are accepted. It is encouraged that international students apply early.
- Notification of acceptance: Accepted students are notified as the applications are reviewed.

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 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.

What about funding?

The minimum funding guarantee for Chemistry PhD students is $23,000 per year, which will include an assistantship, and teaching assistantships. For more information, please see the School of Graduate Studies' information on awards and scholarships.
**ACHIEVE YOUR ACADEMIC GOALS**

**YEAR I**
- Key priorities include your relationship with your supervisor, forming your committee, coursework, field exams, and language exam.
- Look to Student Academic Success Services for a variety of supports.
- Complete WHS safety training.

**YEAR II**
- Write and defend your thesis proposal.
- Embark on your substantive research.
- Find your way through the academic process with the help of Expanding Horizons.
- Attend or present at a graduate conference such as Canadian Chemistry Conference and Exhibition.

**YEAR III**
- Continue to research and write your dissertation.
- Check out the SIGs Dissertation Boot Camp or Dissertation on the Lake.
- Consider publishing elements of your research. Learn from the Expanding Horizons Publishing workshop.
- Complete the Annual Research Progress Report (1 of 2).

**YEAR IV & TRANSITIONING**
- Complete and defend your dissertation.
- Continue to pursue publication options for your research.
- Complete the Annual Research Progress Report (2 of 2).

**MAXIMIZE RESEARCH IMPACT**

**YEAR I**
- Think about audiences for your research.
- Complete ROMEO online module on research ethics if doing research with human or sensitive topics.
- Apply to NSERC, GGS, and other funding.
- Attend conferences in your field.

**YEAR II**
- Attend or present at a graduate conference such as Canadian Chemistry Conference and Exhibition.
- Expand your research audience through social media such as Twitter or a blog.
- Apply for the Graduate Dean’s Travel Grant for Doctoral Field Research.

**YEAR III**
- Continue to present at conferences.
- Consider participating in the 3 Minute Thesis (3MT) competition.
- Contact the Queen’s Media Centre for guidance on speaking to news outlets about your work. List yourself on the Arts and Science University.

**YEAR IV**
- 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.
- Take advantage of the state-of-the-art research facilities, which feature NMR, mass spectrometry, X-ray diffractometer, a laser lab, and more.

**BUILD SKILLS AND EXPERIENCE**

**YEAR I**
- Serve on departmental, faculty or university committees, talk to the Queen’s Graduate Chemistry Society about getting involved.
- Consider positions in student services, like the SGPS, or media outlets like the Queen’s Journal or Queen’s Online.
- Use a Teaching Assistant or Research Assistant position to develop your skills.

**YEAR II**
- hone skills for non-academic employment by continuing involvement on committees and in community.
- Start keeping an eportfolio of your skills, experiences, and competencies.
- For help with teaching, get support from the Centre for Teaching and Learning.
- Apply to NSERC, GGS, and other funding.
- Attend or present at a graduate conference such as Canadian Chemistry Conference and Exhibition.

**YEAR III**
- Begin teaching as a departmental Teaching Fellow.
- Find opportunities for extra training through CTL, Expanding Horizons, Mitacs, or other sources to boost your skills. Investigate internships from Mitacs and other sources.
- Prepare for work or studies in a multi-cultural environment by taking Queen’s Intercultural Competency Certificate.

**YEAR IV**
- 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.
- Take advantage of the state-of-the-art research facilities, which feature NMR, mass spectrometry, X-ray diffractometer, a laser lab, and more.

**ENGAGE WITH YOUR COMMUNITY**

**YEAR I**
- Consider volunteering with different community organizations such as Science Rendezvous.
- Consider positions in student services, like the SGPS, or media outlets like the Queen’s Journal or Queen’s Online.
- Use a Teaching Assistant or Research Assistant position to develop your skills.

**YEAR II**
- Participate in your graduate and professional community through activities such as graduate student outreach programs, organizing conferences, and research groups like Material Matters.

**YEAR III**
- Do some targeted networking with people working in careers of interest, through Queen’sConnects on LinkedIn, the Queen’s Alumni Association, professional associations, and at conferences. Check out Career Services’ networking workshops.

**YEAR IV**
- Consider joining professional associations like the Canadian Society for Chemistry.
- Join groups on LinkedIn reflecting specific careers or topics of interest.

**LAUNCH YOUR CAREER**

**YEAR I**
- Finding career fit starts with knowing yourself. Take the Career Services Career Planning workshop or meet with a career counsellor for help. 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.

**YEAR II**
- Start building your teaching portfolio including student evaluations, and seeking mentorship.
- Explore different careers of interest by reading alumni profiles on the SGPS website, and using Queen’sConnects on LinkedIn to connect with Queen’s alumni, or find alumni in various careers through Ask an Alumni. For more information check out Career Counseling.
- Investigate requirements for professional positions or other opportunities related to careers of interest.

**YEAR III**
- Participate in hiring committees and attend job talks. Research academic careers of interest. Craft your CV and job application materials.
- Start focusing on non-academic areas of interest. Research organizations of interest and start putting together your resume for potential positions of interest.
- Check out the free online modules at MyGradSkills to help you plan your career.

**YEAR IV**
- Build connections with faculty outside of your department. Pursue interviews for faculty positions and apply for post-doc fellowships and positions.
- Apply to jobs or make plans for other adventures. Get help from Career Services with job searching, resumes, or interviews.
- If considering jobs abroad, research possible immigration regulations. If you are an international student interested in staying in Canada, consider speaking with an International Student Advisor.