Chemistry

Chemistry explores the composition, structure, and transformation of matter. Frequently called the central science, it provides the basis for studies in many other disciplines, ranging from biology to materials science, in addition to being a booming discipline of its own.

**Alumni story**

Not too long ago, Jenny Du was a student at Queen’s. Now she’s living the California lifestyle at a cool startup. As the Director of Extraction, Jenny works with a team at Apeel Sciences to use natural plant extracts to formulate edible coatings that work to extend the shelf-life of fresh produce.

**TOP 5 Reasons To Study Chemistry**

1. Chemistry opens very broad career options.
2. With extensive experimental training, Chemistry studies are very hands-on and fun!
3. Queen’s Chemistry Department is a very supportive and nurturing environment; our graduating class is small and close-knit.
4. All major and specialization students conduct research in fourth year as part of their plan.
5. Queen’s Chemistry programs are accredited by the Canadian Society for Chemistry.

**TOP ALUMNI JOBS**

- 10% of alumni work in GOVERNMENT
- 11% of alumni work in HEALTH & MEDICINE
- 14% of alumni work in RESEARCH & DEVELOPMENT
- 32% of alumni work in EDUCATION

**2023-24 Plan Thresholds**

Thresholds are made on a competitive basis and are updated annually. To see the thresholds for all programs as well as the latest information, please visit [quartsci.com/planselection](quartsci.com/planselection).

Interested in finding out how to augment your degree with Experiential Learning? Learn what opportunities and resources are available for you on the [Experiential Learning website](https://www.queensu.ca/education/experiential-learning). You can also reach out to the team directly at asc.el@queensu.ca.

**Acquire Skills. Gain Experience. Go Global.**

That is a degree from Queen’s.

[chem.queensu.ca](chem.queensu.ca)
**2023-2024**

**Chemistry MAJOR MAP**

**BACHELOR OF SCIENCE (HONOURS): SPECIALIZATION, MAJOR, MINOR**

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**1ST YEAR**

**GET THE COURSES YOU NEED**

In first year you will have the chance to explore the foundations of Chemistry in biology, chemistry, geography, and geology along with some electives.

**GET RELEVANT EXPERIENCE**

Join clubs on campus such as [Let's Talk Science](#), [Women in Science and Engineering](#), or the [Undergraduate Science Case Competition](#).

See the AMS Clubs Directory or the Queen's Get Involved page for more ideas.

**GET CONNECTED WITH THE COMMUNITY**

Volunteer on or off-campus with community organizations such as [Science Rendezvous](#).

Consider joining an intramural sports or an athletics team. Check out the [Athletics and Recreation site](#).

**GET THINKING GLOBALLY**

Prepare for work or studies in a multi-cultural environment by taking a QUIC Intercultural Competency Certificate, and research possible immigration regulations.

Speak to a QUIC advisor to get involved in their programs, events, and training opportunities.

**GET READY FOR LIFE AFTER GRADUATION**

Grapple with program decisions? Go to Majors Night or get some help wondering about career options from Career Services. Attend departmental information sessions on [Career selection (March)](#).

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**2ND YEAR**

**GET THE COURSES YOU NEED**

Start going deeper into the discipline of Chemistry, while considering a minor and/or certificate such as French for Professionals. Learn more about Certificates and Internship options.

Want to make sure your academics are where you want them to be? Visit SASS Queens, [Academic Support Services](#), or the Writing Centre for some help.

**GET RELEVANT EXPERIENCE**

Look into [summer jobs](#) by talking to the dept. or Career Services about work through [SWEP](#), [NSERC USRA](#), or [Work Study](#).

Consider entrepreneurship opportunities via programs like the [Quintus Innovation Connector](#) or the [Summer Initiative (QIS)].

**GET CONNECTED WITH THE COMMUNITY**

Get involved with the [Departmental Student Council (DSC)](#). Connect with professors at socials or attend speaker events. Start or continue volunteering.

**GET THINKING GLOBALLY**

Is an exchange in your future? Start thinking about where you would like to study abroad. Apply in January for a third year exchange through the [International Programs Office](#).

**GET READY FOR LIFE AFTER GRADUATION**

Explore different careers of interest in the Career Services Information Area. For more information check out [Career Cruising](#) or by finding and connecting with alumni on [LinkedIn](#).

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**3RD YEAR**

**GET THE COURSES YOU NEED**

A chance to start grouping courses in areas of interest, or to keep it more general and explore many areas of Chemistry. Meet with an [Academic Advisor](#) to make sure you are on track and have planned out your courses for next year.

**GET RELEVANT EXPERIENCE**

Consider applying to do a 12-16 month [Quick Internship](#) between your third and fourth year.

Consider presenting and publishing your work through [Inquiry@Queen’s](#).

**GET CONNECTED WITH THE COMMUNITY**

Do some targeted networking with alumni working in careers of interest by joining the LinkedIn group [Queen’s Connects](#). Check out Career Services networking workshops. Participate in meetings with the [Queens Chemistry Innovation Council (QCIC)](#).

**GET THINKING GLOBALLY**

Build your intercultural competence by getting involved with other cultures or by practicing or improving your language skills.

**GET READY FOR LIFE AFTER GRADUATION**

Start focusing on areas of interest. Research education requirements for careers of interest. If needed, prepare to take any required tests (like the LSAT or MCAT) and get help thinking about grad school from Career Services, as well as departmental resources; start looking into graduate school scholarship applications.

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**4TH OR FINAL YEAR**

**GET THE COURSES YOU NEED**

In fourth year you will have the chance to participate in research-based courses that can lead to [Graduate School](#) or to your future career path. Make sure to finish up all your courses for your major and your optional minor and/or certificate(s).

**GET RELEVANT EXPERIENCE**

Interested in working on a real-world problem with an actual client? Take [ASCS 400](#) and develop your consulting and project-management skills.

**GET CONNECTED WITH THE COMMUNITY**

Investigate requirements for full-time jobs, graduate studies, or other opportunities. Assess what you're lacking and fill in gaps – check out the Career Services skills workshop for help. Consider presenting your research results at the [Southern Ontario Undergraduate Student Chemistry Conference](#) in the Spring or at [Inquiry@Queen’s](#)

Consider joining associations like the [Chemical Institute of Canada](#) or the [Association of the Chemical Profession of Ontario](#). Join groups on LinkedIn reflecting specific careers or topics of interest in Chemistry.

**GET THINKING GLOBALLY**

International students interested in staying in Canada can speak with an [International Student Advisor](#).

Consider widening your global skills by applying to the [ duel MSc Queen’s – Stuttgart degrees](#). Do your research at the University of Stuttgart in Germany.

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**What will I learn?**

A degree in Chemistry can equip you with:

- Academic and technical skills to conduct research, understand scientific journal articles, trouble-shooting, clearly explain and interpret research data
- Organizational skills to compile, organize and maintain accurate records
- Ability to operate laboratory equipment and to employ appropriate scientific lab techniques
- Proficiency in mathematical and logical analysis
- Sensitivity to the health and safety of others - safe handling, storage and disposal of hazardous chemicals
- Written and oral communication skills to prepare and present reports from research ideas and information using current technology
- Team working in a multidisciplinary context
- Practical and fundamental knowledge of all subdisciplines of chemistry

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**Where can I go?**

A degree in Chemistry can take your career in many directions.

Many students choose to continue their academic inquiry with a Master's. Our students are equipped with a strong foundation for careers in:

- Environmental research
- Environmental sustainability
- Forensic science
- Materials science
- Patent law
- Pharmaceuticals
- Pharmacy
- Public health
- Quality control
- Sustainability design

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

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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. The map just offers suggestions - you don’t have to do it all! To make your own custom map, use the [My Major Tool](#).
Why study in Kingston?

For 175 years, our community has been more than a collection of bright minds – Queen’s has attracted students with an ambitious spirit. Queen's has the highest retention rates, the highest graduation rates, and one of the highest employment rates among recent graduates. We are a research intensive university focused on the undergraduate experience. The BBC has identified Kingston as one of the GREATEST UNIVERSITY TOWNS in the world – and it is often awarded the safest city in Canada. It is a university city at the core; just a quick drive to Toronto, Montreal, Ottawa and even New York. A university with more clubs per capita than any other university in Canada, and a city with more restaurants per capita than any other city in North America - you will have the experience of a lifetime at Queen’s - and graduate with a degree that is globally recognized among the best.

We’re closer than you think.