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

**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.

**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

**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.

**2018-19 thresholds**

1.9 cGPA PENDING LIST

*Thresholds are made on a competitive basis and are updated annually. For the latest information please visit: QUartscl.com

DEPARTMENT OF CHEMISTRY

Faculty of Arts and Science
Chernoff Hall
90 Bader Lane
613-533-2616
chem.queensu.ca
1ST YEAR
In first year you will have the chance to explore the foundations of Chemistry including, chemistry, geography and geology along with some electives.

See the back page for specific courses to consider.

Attend Majors Night in the Winter term to learn more about major options.

2ND YEAR
Start going deeper into the discipline of Environmental Chemistry, while considering a certificate such as Global Action and Engagement. Attend Degree + in the Fall term to learn more about certificates and internship options.

Want to make sure your academics are where you want them to be? Visit SASS (Student Academic Support Services) and the Writing Centre for some help.

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 QUIC’s 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
Grappling with program decisions? Go to Majors Night or get some help wondering about career options from Career Services. Attend departmental information sessions on Plan selection (March).

2ND YEAR
Look into summer jobs by talking to the dept. or Career Services about work through SWEP, NSERC-USRA or Work-Study.

Consider entrepreneurial opportunities via programs like the Queen’s Innovation Connector Summer Initiative (QICSII).

3RD YEAR
A chance to start grouping courses in areas of interest, or to keep it more general and explore many areas of Environmental Chemistry. Meet with an Academic Advisor to make sure you are on track and have planned out your courses for next year — for some ideas, see the back page.

Consider applying to do a 12-16 month QUIP internship between your third and fourth year.

4TH OR FINAL YEAR
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 degree and your optional certificate(s).

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.

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
• Forensic science
• Environmental sustainability
• 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.

GET THE COURSES YOU NEED
In first year you will have the chance to explore the foundations of Chemistry including, chemistry, geography and geology along with some electives.

See the back page for specific courses to consider.

Attend Majors Night in the Winter term to learn more about major options.

What will I learn?
A degree in Chemistry can equip you with valuable and versatile skills, such as:

• Written and oral communication skills
• Proficiency in mathematical and 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
• Observation and decision making skills
• Team working in a multidisciplinary context
• Resource and time management
• Practical and fundamental knowledge of all subdisciplines of chemistry

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• Team working in a multidisciplinary context
• Resource and time management
• Practical and fundamental knowledge of all subdisciplines of chemistry

• Academics 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

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• Sustainability design

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Sample Year by Year

1ST YEAR
- BIOL 111/3.0 or BIOL 103/3.0
- CHEM 112/6.0
- GPHY 101/3.0
- ENSC 103/3.0
- GEOL 104/3.0 or GEOL 107/3.0
- One of: MATH 120/6.0, MATH 121/6.0 or (MATH 123/3.0 and MATH 124/3.0) or MATH 111/6.0
- One of: PHYS 104/6.0, PHYS 106/6.0, PHYS 117/6.0

2ND YEAR
- CHEM 211/3.0
- CHEM 212/3.0
- CHEM 213/3.0
- CHEM 221/3.0
- CHEM 222/3.0
- CHEM 223/3.0
- GPHY 102/3.0
- 3.0 units from GEOL
- 6.0 units of electives

3RD YEAR
- CHEM 311/3.0
- CHEM 312/3.0
- CHEM 323/3.0
- CHEM 326/3.0
- CHEM 397/6.0
- ENSC 390/3.0
- One of CHEM 321/3.0 or ENSC 471/3.0
- 6.0 units of electives

4TH YEAR
- CHEM 497/6.0
- ENSC 430/6.0 or ENSC 501/6.0
- 12.0 units from ECHM Options
- 6.0 units of electives

Note that degree requirements are revised regularly. The most current requirements, including course lists and options, are found in the Academic Calendar at: QUartsci.com/academic-calendar