Chemistry

Get to know CHEMISTRY

Frequently called the central science because 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, chemistry explores the composition, structure and transformation of matter. Located in Chernoff Hall, Queen’s Department of Chemistry is regarded as one of the best in Canada for both teaching and research. Our aim is to offer a stimulating learning environment for undergraduate students, primarily through participating in engaging, practical laboratory work. In upper years, depending on their interests, undergraduates can specialize in one of the more fundamental branches of the discipline, such as analytical, inorganic, organic, physical, or theoretical chemistry. Others may choose to explore newer applications, such as environmental, materials, biological, computational, or polymer chemistry.

Professional chemists play major roles in such diverse and important areas as the design and synthesis of pharmaceuticals and polymers, the development of alternative energy sources, and the protection of the environment.

“A Common START

Students in our Faculty are admitted into Arts, Science or Computing but the focus is on a common first year. Through self-exploration, and while you settle into university life, you have the opportunity to work with our advisors and faculty to discover your real interests and identify opportunities for success. Sometimes that discovery happens fairly quickly, and for other students it takes some work and time before the “ah-ha!” happens – either way your first year will be a great experience at Queen’s.

Course HIGHLIGHTS

The first year course in Chemistry is a survey of modern chemistry covering molecular structure, bonding, phases of matter, thermodynamics, electrochemistry, equilibrium, kinetics, polymers, organic and biochemistry with extensive lab participation. Some popular upper year courses include Synthetic Organic Chemistry, Biological Chemistry, Polymer Chemistry, Environmental and Green Chemistry and Quantum Mechanics.

Degree OPTIONS

Bachelor of Science (Honours)
Major / Minor / Specialization in Chemistry or Environmental Chemistry
Bachelor of Science (General)
Bachelor of Arts (General)

Queen’s ADMISSIONS

Students apply to Queen’s Science (QS) through the OUAC (Ontario University Application Centre) website. Secondary School prerequisites include English 4U, 4U Calculus and Vectors, Advanced Functions and Chemistry or recognized equivalents required; 4U Physics or recognized equivalent strongly recommended.

That is a degree from Queen’s.
How to use this map

- Got questions about careers and classes?
- Feeling a little lost or overwhelmed by choices?
- Wondering what you are “supposed” to be doing?

Use this map to plan for success in five overlapping areas of career and academic life. Each map helps you explore possibilities, set goals and track your accomplishments. To make your own custom map, use the My Major Map tool.

Don’t stress if you haven’t done all of the suggested activities. The map is not a prescription – it’s a tool for finding your own way at Queen’s.

Getting what you need to succeed in the workplace

**WHAT DO EMPLOYERS WANT?**

In a recent survey from the Canadian Council of Chief Executives the top 6 skills sought by employers were:

1. People skills
2. Communication skills
3. Problem-solving skills
4. Analytical abilities
5. Leadership skills
6. Industry-specific knowledge

**HOW DO I GET THE SKILLS I NEED?**

It is important to develop a balanced skill set – many of which you will develop during your studies. To stand out, take advantage of experiential learning through the multitude of clubs and activities in and around Queen’s. Check out the Get Relevant Experience section of this map.

**WHAT CAN I LEARN STUDYING CHEMISTRY AT QUEEN’S?**

- Research skills – conduct research, understand scientific journal articles, trouble-shooting, clearly explain and interpret research data
- Organizational skills – compile, organize and maintain accurate records
- Ability to operate laboratory equipment and to employ appropriate scientific lab techniques
- Proficiency in mathematics
- Sensitivity to the health and safety of others - safe handling, storage and disposal of hazardous chemicals
- Written and oral communication skills – prepare and present reports from research ideas and information using current technology
- Observation and decision making skills
- Resource and time management
- Logical reasoning

**WHAT MAKES ME SPECIAL?**

No one will get exactly the same experience as you. Take the time to think about what skills you have developed to be able to best explain them with compelling examples in future applications to employers and further education. For help with this, check out the Career Services skills workshop.