



Chemistry

FACULTY OF SCIENCE



Who We Are

Whether it's the invention of high-tech materials for thin display screens, hydrogen fuel cells, environmental toxicology, pharmaceutical synthesis, or nanotechnology and molecular machines, chemistry plays a central role in the sciences. The Chemistry Program provides students with a contemporary education in chemistry, taught by a faculty actively involved in the international research community.

*the degree
that works*

Why Windsor

The Right Choice

Quality programs. Exceptional faculty members. A friendly, supportive campus. These are just a few of the reasons why Windsor is the right choice for you. We provide "the degree that works," an innovative, student-focused approach that combines learner-centred teaching with practical experiences to prepare its students for the challenges of tomorrow.

Vibrant and Dynamic

Windsor (www.city.windsor.on.ca/home) is a friendly community of 200,000. We're known for our exciting arts and entertainment scene, hundreds of restaurants, and abundant shopping. Outdoor enthusiasts can enjoy our moderate climate, many major waterways and countless parks. And, our strategic, international border location means Michigan is just across the river with concerts, world-class museums and four major league sports teams.

The Windsor advantage

Chemistry at Windsor

The Department of Chemistry at the University of Windsor offers an exceptional program for students interested in pursuing a chemistry-related career, or for those who wish to use chemistry as a pre-professional springboard. The facilities are world-class, and include newly renovated teaching and research labs equipped with state-of-the-art equipment. Students benefit from small class sizes, approachable faculty and a significant, hands-on component to their studies.

An additional asset is a faculty that is involved in cutting-edge research and a significant number of new faculty members from all over Canada and the world. This involvement in the research community prepares students for the current job market and keeps course content up-to-date.

Involvement in Research and Teaching

In addition to the extensive laboratory content of the program, students gain hands-on research experience in their fourth year by completing a year-long, undergraduate research project. For students who excel in their second, third and fourth years, summer employment and work study projects are also available in many laboratories in the department.

Undergraduate summer research assistantships are available from the Centre for Catalysis and Materials Research and the National Science and Engineering Research Council. Additionally, senior students interested in teaching and chemical education may work as teaching assistants

in first-year laboratories.

Students who enjoy academic research may wish to continue in graduate school after obtaining their BSc and receive a healthy stipend while obtaining a MSc or PhD degree.

Program Profile

The four-year degree program in chemistry begins with an exposure to a broad spectrum of courses to provide a general background in the sciences. In senior years, students can focus on their interests and select courses which include topical aspects of modern chemistry such as liquid crystals, nonlinear optical materials, nanotechnology, catalysis, nanoscale machinery, light-emitting diodes for display technology, environmental chemistry, hydrogen fuel cells, toxicology, and computational chemistry.

Senior students may also choose cutting-edge research projects in a variety of specialized areas including analytical, organic, inorganic, polymer, organometallic, physical, theoretical, materials and computational chemistry.

What You Will Take First Year

General Chemistry I and II (59-140 and 59-141), Linear Algebra I (62-120), Differential and Integral Calculus (62-140 and 62-141), and Introductory Physics I and II (64-140 and 64-141). Possible elective courses include Computer Science (60-106), Philosophy (34-160), and English (26-100).

Career Paths

A chemistry or biochemistry degree is the best starting point for a multitude of careers in education (high school or university, chemical education, and environmental awareness) research (government, industrial or academic laboratories), specialized Chemistry (forensic science, environmental chemistry and blood chemistry), professional degrees (a starting point for degrees in medicine, law, dentistry and pharmacy), industry (chemists work for companies in synthesis and evaluation testing, quality control, and of course, research and development), and biological/medical research (biotechnology, biochemistry, pharmacology, molecular biology).

Outstanding Scholars Award

Students with an average of 80 per cent or higher who intend to major in the Chemistry or Chemistry & Physics programs (not Biochemistry or Biotech) will be offered an Outstanding Scholars Award. The award amounts range between \$4,000 and \$10,000 over four years. More details can be found on the website of the Chemistry & Biochemistry Department.

Admission Requirements

Six Grade 12 U or M courses including Grade 12 U English I, Grade 12 U Advanced Functions and Introductory Calculus, 12 U Geometry and Discrete Mathematics, 12 U Chemistry, and one of Physics or Biology.

Chemistry Degrees Available at Windsor:

- BSc Honours Chemistry with thesis
- BSc Honours Chemistry
- BSc Honours Chemistry and Physics with thesis
- BSc Honours Chemistry and Physics (Other BSc Combined Honours Programs with Chemistry are available)

Graduate Degrees:

- MSc Chemistry
- PhD Chemistry

FOR MORE INFORMATION PLEASE

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