

Chemistry

Made in Windsor.



CHEMISTRY

GENERAL SCIENCE

INTERDISCIPLINARY ARTS AND SCIENCE



uwindsor.ca/science/chemistry



**Chemistry
Experience Map**



**University
of Windsor**

Highlights and Skills

PROGRAM HIGHLIGHTS

Chemistry **H T C** **C*** Want to understand the World? Chemistry is a flexible program that aims to answer questions of matter, energy and how they interact in the world around us! You'll be able to do research with our award-winning faculty, find innovative ways to apply your analytical skills and develop as a professional with industry specific hands-on experience through our co-op internship. Chemistry prepares you for professions from the lab to Law.

MIN. AVG.* 70% ONTARIO COURSE REQUIREMENTS ENG4U, MHF4U, SCH4U and SBI4U. MCV4U is strongly recommended. SPH4U is recommended. A minimum 70% average of all science and math courses is also required. Chemistry students may apply to co-op internship in Year 3.

General Science **G** This science program is like a buffet— you can try a little of everything before deciding what you want for the main course. It's ideal for students who want to explore more than one area or are undecided about what subjects to study. You'll focus on two core science areas — biology, chemistry, biochemistry, computer science, earth and environmental science, mathematics, physics, or economics — and still get the chance to pursue other areas, as well. Many students who start in this program transfer to a more specialized four-year honours program.

MIN. AVG.* 70% ONTARIO COURSE REQUIREMENTS ENG4U, MHF4U, and two of SCH4U, SBI4U or SPH4U. MCV4U is strongly recommended. A minimum 70% average of all attempted science and math courses is also required.

Interdisciplinary Arts and Science **H** If high achievement is in your DNA, this elite program is for you. It's for students who want to develop knowledge and skills in the sciences and the arts, humanities and social sciences. You can tailor your program to match your interests and career aspirations. Our students go on to do research or graduate degrees in their field. This program is small by design to give your talents the attention they deserve.

MIN. AVG.* 80% ONTARIO COURSE REQUIREMENTS ENG4U, MHF4U, and two from SBI4U, SCH4U, or SPH4U. MCV4U is strongly recommended.

FUNCTIONAL KNOWLEDGE

- Understanding chemical properties related to environmental concerns and health and safety protocols
- Testing and assessing materials to identify their properties and potential chemical reactions and determine concerns
- Operating advanced scientific laboratory equipment and instruments; implementing appropriate techniques for studying chemical processes and reactions
- Planning, conducting, recording, and presenting scientific research in a high degree of competency
- Designing experimental studies to accomplish targeted goals or test specific hypotheses

C Co-op available **G** General – 3-year program **H** Honours – 4-year program **T** Thesis available **C** Combined Honours programs available
* Minimum grade point average for admission to program. A higher average may be required.

Build your Skills and Experience

Your UWindsor experience is more than attending classes. It is a combination of academics, co-curricular activities, and extracurricular involvement. By making the most of all three elements of your university experience, you will maximize your opportunities to build your skills, broaden your personal network, and clarify your long term academic and career goals.

	CURRICULUM Courses of study specific to each program
	CO-CURRICULAR Activities and experiences that complement coursework (Outstanding Scholars, peer mentoring, VIP)
	EXTRACURRICULAR Activities falling outside the scope of set curriculum (Part-time job, clubs, volunteering, athletics)

Career Planning Cycle

Intentional career planning will help you prepare for your next step after graduation and beyond. It is a fluid, dynamic, and lifelong process. You can move on or return to an earlier stage in the cycle at any time.



Explore Opportunities Using This Chart

Explore a selection of opportunities recommended for students in your program. This chart shows some of your many options – you don't have to do everything on it or limit yourself to it. Engage in opportunities from each of the three categories to set yourself up for success.

High-Impact Practice (HIP)

A HIP is an enriching educational experience that can be life-changing and often includes learning outside of the classroom while encouraging meaningful interaction and collaboration, such as:

- Co-op, internship or field experiences
- Research with faculty
- Culminating senior experience
- Capstone courses
- Service-learning
- Learning communities
- Study abroad

Academics

Your Coursework



First Year

- Take required courses including General Chemistry I and II
- Review degree course requirements for all years of study and mesh them with professional or graduate school aspirations
- Participate in our **PASS** program during **Welcome Week** to be coached on the skills necessary to be successful as a Faculty of Science student
- Visit the **Chemistry Resource Centre** for free support by graduate students
- Meet with an academic advisor in your program
- Receive peer mentorship from an upper-year **MySci** advisor

Middle Years

- Take required courses and check in with an academic advisor to make sure you are on the right path
- Consider completing an undergraduate research project in final year 
- Begin taking courses that focus on a sub-discipline such as Organic, Inorganic, Physical, Analytical, Materials, Biochemistry or Theoretical/Computational Chemistry
- Seek out courses that offer experiential learning 
- Continue taking courses required as preparation for professional schools
- Study for and take professional school admission tests of interest
- Consider declaring a minor and/or specialization

Final Year

- Meet with an academic advisor to go over graduation requirements
- Complete all required courses for your degree
- Apply to graduate through **UWinsite**
- Undertake an Undergraduate Research project with a faculty member 
- Complete a minor in a second Science discipline if declared
- Apply your knowledge through a field work or practicum course to optimize your senior experience 

Experience

Ways To Get Involved



- Begin the process of becoming a **LEAD Medallion Scholar** and participate in credit and volunteer activities 
- *Discover* research opportunities as part of the **Outstanding Scholars** program 
- Join the **USci Network** to take part in collaborative and integrative science experiences
- Be *Engaged* by volunteering in a lab to help with research for professors and graduate students 
- Join a club like the **Chemistry Club**, **Students Offering Support** or **Science Society**
- Participate in the **Bystander Initiative** workshop to gain skills that will help you be an effective and supportive ally to prevent sexual assault on campus
- Apply for a co-curricular experience such as **VIP-Community Service Learning**

- *Apply* your knowledge through a summer Research Assistant or Teaching Assistant position in Chemistry and Biochemistry 
- Participate in **UWill Discover** undergraduate research conference 
- Be *Engaged* through service learning opportunities with **Let's Talk Science** and **Science Rendezvous** 
- Gain valuable *Leadership* skills through roles within a club or society
- Gain a **Global Perspective of Science (GPS)** through an international exchange or by studying abroad 
- Participate in **Work-Integrated Learning (WIL)** through paid, 8-to-16 month internships with industry partners 
- Apply for an **NSERC** – Undergraduate Student Research Award

- Join a professional association in your field such as the **Canadian Society for Chemistry**
- Conduct field research with a faculty member 
- Become a tutor for **Students Offering Support (SOS)** 
- Become a **MySci** advisor to provide academic support and mentorship for first-year students
- Complete **LEAD Medallion Scholars** in two areas for Bronze, three areas for Silver, or four areas for Gold in accordance with *Leadership, Engagement, Application, Discover* 

Career

Plan Ahead For What's Next



- Start planning your career by making a list of things you enjoy, your skills and areas where you excel
- Meet with a career advisor in **Career Development and Experiential Learning (CDEL)** for help developing a plan for your future years
- Consider a career assessment appointment to help you identify possible career paths
- Get involved with a part-time job, volunteer opportunity, campus group, or research assistantship
- Attend **CDEL's workshops** to learn how to find a summer or part-time job and write a university-level resumé
- Chat with an advisor during **CDEL's Drop-In** hours to get answers to your career and job search questions

- Research career fields and occupations with the help of a **CDEL** career advisor
- Explore opportunities and meet potential employers by participating in **Job Shadow Experience**, job fairs and industry networking events
- Explore further educational opportunities by attending the **Graduate and Professional Schools Fair** and researching admission requirements for programs you are interested in
- Create a **LinkedIn** profile and have it critiqued by **CDEL**
- Search job postings to learn what skills, knowledge, and credentials you will need for potential careers
- If you are considering applying to graduate or professional school, be aware of early application deadlines
- Take part in informational interviews and join online communities like **LinkedIn** and **Ten Thousand Coffees** to connect with people in your targeted profession or industry

- Meet with **CDEL** to prepare application documents like a resumé, cover letter, CV, or personal statement for jobs and education programs you are applying to
- Attend **CDEL's workshops** on interview skills and job search strategies
- Set up a mock interview with a career advisor for professional school or job applications
- Take part in recruitment events and job fairs, including those organized by **CDEL**
- Compose a portfolio of relevant academic and work experience
- Explore professional development opportunities through **Continuing Education**

Life After Graduation



My experience in the Chemistry Department at the University of Windsor gave me the skills to be self-sufficient, confident and curious. I was constantly surrounded by students reaching beyond their limits to reach their goals, with supportive faculty giving us the tools to do so. Between strong educators, access to research and involved student organizations, my Windsor Chemistry foundation has allowed me to move forward in my studies with pride."

*Diana Cuckovic – BSc (Combined Honours)
Biology and Chemistry with Thesis*

23 Number of Graduates

2018

Career Tracks*

Agricultural scientist
Dentist
Environmental analyst
Environmental consultant
Food inspector
Food scientist
Forensic scientist

Health educator
Industrial hygienist
Lab technician
Laboratory supervisor
Land surveyor
Lawyer
Medical doctor

Nutritionist
Optometrist
Pharmaceutical technician
Pharmacist
Product developer
Professor
Project manager

Quality assurance supervisor
Radiation therapist
Research scientist
Soil tester
Teacher
Toxicologist
Veterinarian

**Additional education and/or training required for some of the above careers.*



Common Industries for Graduates

- **Academia:** Advanced chemical research
- **Biomedical and biotechnical research**
- **Chemicals, petrochemicals, and pharmaceuticals**
- **Education:** Curriculum design, teaching
- **Food Sciences, production, and regulation**
- **Government:** Research and policy development
- **Health-care professions**
- **Industry:** Consulting, product development/testing
- **Physical science Industries**
- **Research, development, and production of materials**

Career-Readiness Competencies



Critical Thinking & Problem Solving



Professionalism & Work Ethic



Teamwork & Collaboration



Communication





Campus Resources

- Research scholarships and bursaries through the **Student Awards and Financial Aid Office**
- Visit **Leddy Library** and the **Writing Support Desk** for help with academic assignments
- Check out the **Bounce Back** program designed to improve academic performance as well as decrease feelings of stress and anxiety through both effective learning strategies and life skills acquisition
- Build leadership skills and find leadership opportunities at the **Leadership Hub**
- Get advice and support about your academic status by making an appointment with **Academic Advising**
- Seek out assistance with academic accommodation from **Student Accessibility Services**
- Discover ways to get involved on campus through the **Student Success and Leadership Centre**
- Look into the **Ignite: Work Study** program for on-campus employment opportunities
- Get assistance developing your career plan and job search skills from **Career Development and Experiential Learning**
- Consult with the **EPICentre** if you are interested in starting your own business
- Broaden your cultural awareness through the **International Student Centre** and **Student Exchange Office**
- Find support for Indigenous learners and broaden your understanding of Indigenous culture by visiting **Turtle Island**
- Tend to your health and wellness with support from **Student Health Services** and **Lancer Recreation**
- Receive confidential mental health counselling delivered by trained professionals at the **Student Counselling Centre**
- **Prevent.Resist.Support.** Seek personal support or learn more about sexual violence prevention and resistance education through the **Sexual Misconduct Response and Prevention Office**
- Explore professional development opportunities through **Continuing Education**



experience.uwindsor.ca

Student Recruitment

Phone: 519-973-7014

Toll-Free: 1-800-864-2860

Email: info@uwindsor.ca

Department of Chemistry and Biochemistry

Phone: 519-253-3000, Ext. 3521

Email: chembiohead@uwindsor.ca

Career Development and Experiential Learning

Phone: 519-253-3000, Ext. 3895

Email: careerservices@uwindsor.ca