

BIOLOGICAL SCIENCES

Experience Map



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University
of Windsor

BIOLOGY AND BIOCHEMISTRY (HEALTH AND BIOMEDICAL STREAM)

BIOLOGY

MOLECULAR BIOLOGY AND BIOTECHNOLOGY

EXPERIENCE.UWINDSOR.CA

BIOLOGICAL SCIENCES

SKILLS AND KNOWLEDGE OF BIOLOGY GRADUATES

PROGRAM HIGHLIGHTS

Biology and Biochemistry (Health and Biomedical Stream) - Our Health and Biomedical Sciences stream provides a clear pathway to medicine, pharmacy or graduate research in a health-related science. This program builds on the strengths of both biology and biochemistry and integrates lab components with course selection flexibility.

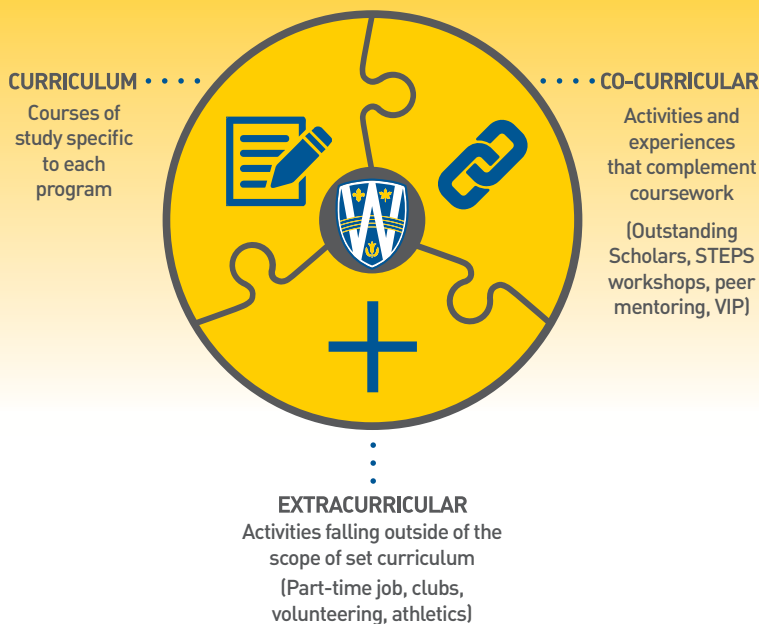
Biology - Our program applies modern investigative techniques in several biological areas with specializations in: microbiology, cellular, developmental, environmental and evolutionary biology, population and ecosystem ecology, or a combination of these areas. Acquire the tools and skills to successfully compete for positions in industry, government, education, medicine, dentistry, pharmacy, veterinary medicine and physical therapy—just to name a few.

Molecular Biology and Biotechnology Investigates biological systems at the cellular and molecular levels. This involves the use of living cells and the materials they produce to create

products for pharmaceutical, diagnostic, agricultural and environmental applications. Excellent foundation for a career in industry, government, education, medicine, dentistry, pharmacy, veterinary medicine, physical therapy.

FUNCTIONAL KNOWLEDGE

- Understanding and analyzing biological systems from the level of DNA up to and including ecosystem processes
- Operating advanced scientific laboratory equipment and instruments
- Taking careful measurements and recording precise observations using best practices/field techniques
- Communicating interpreted technical and scientific data to various audiences
- Understanding relevant topics in the medical and health sciences with depth and nuance



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.

CAREER PLANNING GUIDE

Intentional career planning will help you prepare for your next step after graduation. It is a fluid, dynamic, and continuous process, meaning you can move on or return to an earlier stage at any time. You can even work through simultaneous cycles, like one for your long-term dream job and another for a summer job.



Experience Map

HOW TO USE THIS GUIDE

This guide is meant to help you explore various opportunities throughout the course of your UWindsor experience. It is intended to help you link academics, co-curricular, extra-curricular and career planning activities by suggesting some of the options available to you. This is to help you see what you can do, rather than what you are required to do!

Academics



First Year

- Take required courses including Cell Biology and Biological Diversity
- Review degree course requirements for all years of study
- Participate in our PASS program during Welcome Week to be provided with the skills necessary to be successful as a Faculty of Science student
- Meet with a dedicated Biology academic advisor
- Receive peer mentorship from an upper-year MySci Advisor

Experience



- Begin the process of becoming a LEAD Medallion Scholar and participate in credit and volunteer activities that provide you skills in **Leadership, Engagement, Application and Discovery***
- Apply for a co-curricular experience such as the Volunteer Internship Program (VIP)*
- Be **Engaged** by volunteering in a Biology lab or the Great Lakes Institute for Environmental Research to help professors and graduate students with research*
- **Discover** through research opportunities as part of the Outstanding Scholars program*
- Research student exchange and study abroad opportunities for middle years to gain a Global Perspective of Science (GPS)*
- Join such clubs as the Science Society, Students Offering Support or UWindsor Green

Career



- Create a list of activities that you enjoy, areas in which you excel, and skills you have
- Meet with Career & Employment Services (CES) to develop a plan for your future years
- Consider taking an interest assessment to help you identify possible career paths
- Attend a CES workshop to learn how to find a summer or part-time job
- Become familiar with the mySuccess online job search tool
- Attend a CES resumé and cover letter workshop to get your resumé critiqued

Middle Years

- Take required courses and check in with academic advisor to make sure you are on the right path
- Meet professors you want to work with for your final year undergraduate research project★
- Begin taking courses that focus on a specialization such as microbiology, physiology, molecular biology or environmental and ecosystem ecology
- Seek out internships and courses that offer field experience★
- Start taking courses required as pre-requisites for graduate/professional school
- Consider declaring a minor and/or specialization

- Join a professional association in your field such as the Canadian Society for Molecular Biosciences or Association of Professional Biologists
- **Apply** your knowledge through a summer research assistant or teaching assistant position within the Biology Department★
- Participate in UWill Discover undergraduate research conference★
- Gain a Global Perspective of Science (GPS) through an international exchange or by studying abroad★
- Expand your skills by taking on a summer, part-time or volunteer position
- Gain valuable **Leadership** skills through roles within a club or society

- Research career fields and occupations that are of interest to you
- Explore opportunities and meet employers through a job fair or employer information session
- Attend the Graduate and Professional Schools Fair to explore further educational opportunities
- Analyze the requirements for graduate or professional schools of interest
- Make an appointment with Career & Employment Services to explore career options
- Create a LinkedIn profile and have it critiqued
- Take part in informational interviews through sources such as Ten Thousand Coffees

Final Year

- Meet with faculty and academic advisor to go over degree requirements
- Complete all required courses to fulfill your degree audit
- Apply to graduate through MyUWindsor Portal
- Undertake an undergraduate research project with faculty member★
- Consider completing a minor in a second Science discipline
- **Apply** your knowledge through a field work, internship, or practicum course to culminate your senior experience★

- Attend Ontario Biology Day to present thesis research★
- Conduct field research with faculty member★
- Be **Engaged** through service learning opportunities with Let's Talk Science and Science Rendezvous★
- 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, four areas for Gold in accordance with **Leadership, Engagement, Application, Discover**★

- Consider applying to graduate or professional school and be aware of early application deadlines
- Meet with Career & Employment Services to prepare application documents such as a resumé, CV or personal statement
- Attend an Interview Skills Workshop and Job Search Tips Workshop
- Set up a mock interview for professional school or job applications
- Meet employers at the annual job fair in January
- Compose a portfolio of relevant academic and work experience

★ High-Impact Practice: educational practices that include experiential learning as a basis for student engagement and successful scholarship

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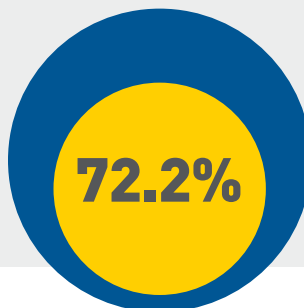
LIFE AFTER GRADUATION

2016



Number of University of Windsor graduates from Biological Sciences programs in 2016.

2013



Percentage of Biological Sciences/ Biomedical Science graduates from Canadian universities who continue studying after a Bachelor's degree. (National Graduates Study 2013)



COMMON INDUSTRIES FOR BIOLOGY GRADUATES

- Academia: advanced biological research
- Biomedical and biotechnical research
- Education: curriculum design, teaching
- Food sciences, production, and regulation
- Government: research and policy development
- Industry: consultation, product development/testing
- Medicine and dentistry
- Other health-care professions
- Veterinary science

CAREER TRACKS*

Agricultural scientist
Animal care specialist
Audiologist
Chiropractor
Conservation officer
Dentist
Doctor

Ecologist
Entomologist
Environmental assessor
Fisheries scientist
Food inspector
Lab technician
Laboratory supervisor

Medical director
Nutritionist
Optometrist
Pharmacist
Physiotherapist
Policy advisor
Professor

Project manager
Public health educator
Quality assurance supervisor
Radiation therapy
Research co-ordinator
Teacher
Veterinarian

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

CAREER-READINESS COMPETENCIES



Critical Thinking and Problem Solving: Using strategic and creative thinking to make decisions and evaluate solutions

- Adapting to changes within a given plan or scenario
- Effectively analyzing and applying data
- Breaking down complex problems in a systematic manner



Teamwork and Collaboration: Working as a productive member of a group and collaborating with others to achieve set goals

- Working co-operatively with laboratory partners
- Contributing through leading, teaching, and motivating others
- Determining outcomes, planning details, delegating, and completing tasks



Communication: Appropriate and effective articulation of ideas and information to a range of audiences

- Conveying information in clear and concise manner
- Developing effective, precisely organized reports
- Utilizing technical writing to convey the message of a broader piece of work



Professionalism and Work Ethic: Demonstrating personal management practices and a high level of integrity and ethical behaviour

- Managing time, data, and resources to meet deadlines
- Identifying priorities and preferable courses of action
- Acknowledging and complying with quality control and safety regulations



CAMPUS RESOURCES

- Visit **Leddy Library** and the **Writing Support Desk** on the main floor for help with academic assignments
- Improve study skills through the **Skills To Enhance Personal Success (STEPS)** program
- Discover ways to get involved on campus through the **Student Success and Leadership Centre**
- Explore mentorship opportunities through the **Connecting4Success (C4S)** and **Bounce Back** programs
- Apply to the **Volunteer Internship Program (VIP)** to get involved in the community
- Look into the **Work Study** program for on-campus employment opportunities
- Broaden your cultural awareness through the **International Student Centre** and **Student Exchange Office**
- Get assistance developing your career plan and job search skills from **Career & Employment Services**
- Consult with the **EPICentre** if you are interested in starting your own business
- Seek out assistance with academic accommodation from **Student Accessibility Services**
- Tend to your health and wellness with support from **Student Health Services, Lancer Recreation** and the **Student Counselling Centre**

Recruitment Office

Phone: 519-973-7014
Toll-Free: 1-800-864-2860
Email: info@uwindsor.ca

Department of Biological Sciences

Phone: 519-253-3000, Ext. 2695
Email: biosci@uwindsor.ca

Career and Employment Services

Phone: 519-253-3000, Ext. 3895
Email: careerservices@uwindsor.ca
experience.uwindsor.ca



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