

Integrative Biology

Made in Windsor.



BIOLOGICAL SCIENCES



uwindsor.ca/science/integrative-biology



**Biological Sciences
Experience Map**



**University
of Windsor**

Highlights and Skills

PROGRAM HIGHLIGHTS

Biological Sciences **HCT**

Study the fundamentals of life in this flexible program that lets you blaze your own trail and choose courses that you are passionate about. Specialize in microbiology, cellular development, physiology and behaviour, environmental and evolutionary biology, population and ecosystem ecology, or any combination of these areas. You'll learn research techniques in our new labs and out in the field that will prepare you for a wide range of career paths, ranging from interests at the molecular level, to whole organisms (including humans) and/or the more complex community and ecosystem levels.

MIN. AVG.* 70% ONTARIO COURSE REQUIREMENTS ENG4U, MHF4U, SCH4U and SBI4U. MCV4U is strongly recommended. SPH4U is recommended. A minimum 70% average of all required science and math courses is also required, excluding MDM4U.

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.

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 audience

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 first year required courses including Cell Biology, Biological Diversity, General Chemistry I and II, Calculus, Statistics, and optional courses
- Review degree course requirements for all years of study and mesh them with professional or graduate school aspirations
- Meet with a dedicated Biology academic advisor
- Learn more about your program and campus during **Welcome Week**, including participating in the **PASS** program that will coach you on skills necessary to be a successful Faculty of Science student
- Receive peer mentorship from an upper-year **MySci** advisor

Middle Years

- Take required courses, including those that focus on a specialization such as microbiology, cellular, developmental, environmental and evolutionary biology, or population and ecosystem ecology
- Consider declaring a minor and/or specialization
- Check in with academic advisor to make sure you are on the right path
- Meet professors you are considering working with if completing an undergraduate research project in your final year 
- 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


Final Year




- Complete all required courses for your degree
- Undertake an undergraduate research project with faculty member, a requirement if program includes a thesis 
- Consider completing a minor in a second discipline
- Meet with an academic advisor to review graduation requirements
- Apply to graduate through **UWinsite Student Portal**
- Apply your knowledge through an upper-year course that offers field and/or lab experience to culminate your senior experience 
- Check that you have completed requirements for graduate school, professional school, or other future goals

Experience

Ways To Get Involved



- Join clubs such as the **Science Society** or **Students Offering Support**
- Begin the process of becoming a **LEAD Medallion Scholar** in accordance with *Leadership, Engagement, Application, Discover* – participate in credit and volunteer activities such as being *Engaged* by volunteering in a lab or at the **Great Lakes Institute of Environmental Research (GLIER)** to help with research for professors and graduate students and/or *Discover* research opportunities as part of the **Outstanding Scholars** program 
- Join the **USci Network** to take part in collaborative and integrative science experiences
- 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 co-curricular experience such as **VIP - Community Service Learning**

- Join a club, or continue your involvement in any clubs (such as **Science Society**)
- Expand your skills by taking on a summer, part-time or volunteer position
- Continue the process of becoming a **LEAD Medallion Scholar** in ways such as *Applying* your knowledge through a summer research assistant or a teaching assistant position within the Department of Integrative Biology, becoming *Engaged* through service learning opportunities with **Let's Talk Science** and **Science Rendezvous**, and gaining valuable *Leadership skills* through roles within a club or society 
- Participate in **UWill Discover** undergraduate research conference 
- Gain a **Global Perspective of Science (GPS)** through an international exchange or by studying abroad 

- Conduct field/lab research with a faculty member 
- Join a professional association in your field such as the **Association of Professional Biology**
- Attend **Ontario Biology Day** to present thesis research 
- Become a **MySci** advisor to provide academic support and mentorship for first year students
- Become a tutor for **Students Offering Support (SOS)** 
- 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



- Analyze the requirements for graduate or professional schools
- Start planning your career by making a list of things you enjoy, your skills and areas where you excel
- Get involved with a part-time job, volunteer opportunity, campus group, or research assistantship
- Consider a **Career Exploration Program** appointment to help you identify possible career paths
- Attend **CDEL** 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

- Explore further educational opportunities by attending the **Graduate and Professional Schools Fair** and researching admission requirements for programs that interest you
- If you are considering applying to graduate or professional school, be aware of early application deadlines
- Explore opportunities and meet potential employers by participating in **Job Shadow Experience**, job fairs, and industry networking events
- Research career fields and occupations with the help of **CDEL**
- 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
- Create a **LinkedIn** profile and have it critiqued by **CDEL**

- Compose a portfolio of relevant academic and work experience
- Set up a mock interview with a career advisor for professional school or job applications
- Take part in recruitment events and job fairs hosted by **CDEL** and other organizations
- 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
- Explore professional development opportunities through **Continuing Education**

Life After Graduation



I really enjoyed my time in the Biological Sciences program at the University of Windsor. The faculty and staff care about student success and they were always incredibly supportive. The department produces high-quality, innovative research, often led by students. I have now gone on to a PhD program in a different province, and I value the skills and experience I gained from my time at UWindsor. I could not have asked for a better place to complete my degree!

*Kiirsti Owen
Biological Sciences*

70 Number of
Graduates
(2020)

100% Employment
Rate of Graduates

Employment rate of graduates 2 years following
degree completion (OUGS Biological Sciences, 2019)

Career Tracks*

Agricultural scientist
Animal care specialist
Audiologist
Chiropractor
Conservation officer
Dentist
Ecologist
Entomologist

Environmental assessor
Fisheries scientist
Food inspector
Lab technician/supervisor
Medical director
Medical Doctor
Nutritionist
Optometrist

Pharmacist
Physiotherapist
Policy advisor
Professional biologist
Professor
Project manager
Public health educator
Quality assurance supervisor

Radiation therapy
Research co-ordinator
Research scientist
Teacher
Veterinarian

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



Common Sectors For Graduates

- **Academia:** advanced biological research
- **Biomedical professions:** medicine, dentistry, optometry, pharmacy, and other related areas
- **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 and medicine**

Career-Readiness Competencies



**Critical Thinking &
Problem Solving**



**Professionalism &
Work Ethic**



**Teamwork &
Collaboration**



Communication





Campus Resources

- Research undergraduate 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 **Central 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**
- Broaden your cultural awareness through the **International Student Centre** and **Student Exchange Office**
- Look into the **Ignite: Work Study** program for on-campus employment
- Get assistance developing your career plan and job search skills from **Career Development and Experiential Learning**
- Develop your entrepreneurial skills and learn how to start your own business at **EPICentre**
- Find support for Indigenous learners and broaden your understanding of Indigenous culture by visiting the **Aboriginal Education Centre - Turtle Island**
- Tend to your health and wellness with support from **Student Health Services**, the **Wellness Outreach Office** 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 **Office of Sexual Violence Prevention, Resistance & Support**
- 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 Integrative Biology

Phone: 519-253-3000, Ext. 2696

Email: biosci@uwindsor.ca

Career Development and Experiential Learning

Web: uwindsor.ca/cdel

Email: careerservices@uwindsor.ca