

BIOLOGY



BEHAVIOUR, COGNITION AND
NEUROSCIENCE

1

BIOLOGY

2

HEALTH AND BIOMEDICAL SCIENCES

3

MOLECULAR BIOLOGY AND
BIOTECHNOLOGY

4

1 BEHAVIOUR, COGNITION AND NEUROSCIENCE

Neuroscience is a strong and growing field that strives to understand brain function at the molecular, behavioural and cognitive levels. The Behaviour, Cognition and Neuroscience program combines the biological aspects of psychology and biology relating to the brain and behaviour.

PROGRAM DESCRIPTION

Behaviour, Cognition and Neuroscience is an interdisciplinary program designed for students interested in carrying out research in biology and psychology as part of their undergraduate academic training.

Along with taking regular courses with students in the Faculty of Science and the Faculty of Arts, Humanities and Social Sciences, you will also take directed research-based courses with one or more faculty.

Our students have the flexibility to design programs that meet the admission requirements of many professional programs. Graduates receive a Bachelor of Science degree upon graduation.

To see a sample first-year schedule, visit the online Guide to Registration website (www.uwindsor.ca/courseselection), click on the "Science Programs" link on the left, and select the specific program(s) in which you are interested.



University
of Windsor

EXPERIENTIAL LEARNING

Unlike many other universities, BCN undergraduate students at UWindsor are given the opportunity to gain practical, hands-on laboratory and field experience beginning in the first year of study.

This program involves directed, research-based courses with one or more faculty members. Students are required to complete a thesis in their fourth year.

CAREER PATHS

Demand for neuroscientists in the corporate, academic and health professions is increasing:

- Neurobiology
- Psychology
- Medicine (with additional studies)

ADMISSION REQUIREMENTS

Minimum admission average of 75% (plus 70% secondary average). ENG4U, MHF4U, SCH4U and SBI4U are required. MCV4U is strongly recommended. SPH4U is recommended.

CONTACT US

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2 BIOLOGY

Biology is one of the life sciences that describes the study of the well-being or overall condition of molecules, cells, organisms, and the environment through observation, experimental investigation and theoretical explanation.

PROGRAM DESCRIPTION

Our program involves the application of modern investigative techniques in several biological areas. We offer specialization in microbiology, cellular, developmental, environmental and evolutionary biology, population and ecosystem ecology or a combination of these areas.

Biological science majors acquire the tools and skills necessary to successfully compete for positions in industry, government, education or any one of several professional programs including medicine, dentistry, pharmacy, veterinary medicine and physical therapy—just to name a few.

Unlike many other universities, biology undergraduate students at Windsor are given the opportunity to gain practical, hands-on laboratory and field experience beginning in the first year of study.

To see a sample first-year schedule, visit the online Guide to Registration website (www.uwindsor.ca/courseselection), click on the "Science Programs" link on the left, and select the specific program(s) in which you are interested.

STUDENT SUPPORT

The breadth of courses offered and the accessibility of professors means learning at UWindsor is a rewarding experience.

CAREER PATHS

- Professional programs such as medicine, dentistry, pharmacy or other health-related sciences (with additional studies)
- Graduate studies
- R&D in industry or government
- Environmental research and monitoring
- Management
- Education (with additional studies)

ADMISSION REQUIREMENTS

Minimum admission average of 70% (plus 70% secondary average). ENG4U, MHF4U, SCH4U and SBI4U required. MCV4U is strongly recommended. SPH4U is recommended.

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3 HEALTH AND BIOMEDICAL SCIENCES

Health care is currently Canada's second-largest service industry and one of the world's fastest-growing employment sectors. Our Health and Biomedical Sciences stream provides a clear pathway to medicine, pharmacy or graduate research in a health-related science.

PROGRAM DESCRIPTION

This interdisciplinary program builds on the strengths of both biology and biochemistry and is designed to meet the needs of students who want a strong background in the fundamental sciences informing health and medicine.

The curriculum incorporates integrated laboratory components with flexibility in senior courses and course selection to suit student interests. The overall curriculum includes a greater focus on core sciences than most other health or biomedical programs, providing rigorous training that keeps alternate career paths open and provides more options for graduate and professional schools. Students may concentrate on sub-specialties such as molecular biology, biochemistry, medical physics or microbiology, which will lead to a wide range of career goals.

To see a sample first-year schedule, visit the online Guide to Registration website (www.uwindsor.ca/courseselection), click on the "Science Programs" link on the left, and select the specific program(s) in which you are interested.

FIRST YEAR

In your first year, you will take the foundational courses in Biology and Chemistry, along with Calculus, Physics, Statistics, and Arts or Social Science. The first-year science courses in this stream can be used to satisfy some prerequisite requirements for many pre-professional programs, and help students prepare for external admissions tests like the MCAT®. A sample schedule is shown below.

CAREER PATHS

- Industrial and academic R&D
- Professional programs such as medicine or pharmacy (with additional studies)
- Health and biomedical research in graduate studies
- R&D in industry or government
- Clinical research
- Education (with additional studies) - appropriate selection of courses allows for fulfilment of teachable subjects

ADMISSION REQUIREMENTS

Minimum admission average of 70% (plus 70% secondary average). ENG4U, MHF4U, SCH4U and SBI4U are required. MCV4U is strongly recommended. SPH4U is recommended.

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4 MOLECULAR BIOLOGY AND BIOTECHNOLOGY

Molecular Biology and Biotechnology focuses down to the levels of the molecules that support life and uses cutting-edge technology to understand mechanisms driving cell division and disease.

PROGRAM DESCRIPTION

The Molecular Biology and Biotechnology program 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.

Our program includes hands-on learning of sophisticated laboratory techniques and addresses ecological, medical and ethical aspects of this field. You will acquire the tools and skills necessary to successfully compete for positions in industry, government, education or any one of several professional programs including medicine, dentistry, pharmacy, veterinary medicine, physical therapy, just to name a few.

To see a sample first-year schedule, visit the online Guide to Registration website (www.uwindsor.ca/courseselection), click on the "Science Programs" link on the left, and select the specific program(s) in which you are interested.

EXPERIENTIAL LEARNING

Extensive training is provided in both the theory and practice of biotechnology including the development of first-rate biotechnology laboratory techniques. The program is similar in most respects to the biochemistry program, but it has a more biological focus.

CAREER PATHS

- R&D
- Quality control
- Clinical research
- Manufacturing and production
- Government and regulatory affairs
- Information systems
- Marketing and sales
- Administration

Courses are available to provide the necessary preparation for medicine, dentistry, pharmacy, veterinary, chiropractic and other health-based areas.

ADMISSION REQUIREMENTS

Minimum admission average of 70% (plus 70% secondary average). ENG4U, MHF4U, SCH4U and SBI4U are required. MCV4U is strongly recommended. SPH4U is recommended.

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STUDENT SUPPORT

With the breadth of courses offered, opportunity for laboratory/research experience, and approachable professors, learning at UWindsor is a rewarding and stimulating experience.

Support for pre-professional students is available in the Departments of Biological Sciences, Chemistry and Biochemistry and the Faculty of Science, in addition to other such student-based support groups as the Science Society and the Pre-Med Society.

FINANCIAL AID

For entrance and in-course award opportunities, please visit our Award Search at my.uwindsor.ca. Click on the Financial Matters heading and then Search for Awards in the sidebar.

In addition to entrance awards, the **Outstanding Scholars Program** attracts top high school students entering any first-year honours undergraduate program at the University of Windsor. Approximately 100 high-achieving, first-year students will be offered status as

an Outstanding Scholars Candidate in Year 1 of their studies. The goal of this program is to challenge and stimulate students by providing them with the unique opportunity of holding an undergraduate academic appointment in their second year of studies and beyond where students will work closely with faculty on academic research projects.

For more information, please visit: uwindsor.ca/outstandingscholars

STUDENT RECRUITMENT OFFICE

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