Neuroscience (BSc)

Admission Requirements

Prerequisite Requirements for BSc:

• ENG4U, SBI4U, MHF4U, SCH4U

• **Expected minimum admission average:** low 80s – mid 80s

Program Overview

Neuroscience is a Specialised Honours BSc degree program jointly offered by the Faculty of Science in the Department of Biology and the Faculty of Health in the School of Kinesiology & Health Science and the Department of Psychology. All three entrance pathways allow students to begin the Neuroscience specialization in second year.

York's neuroscience program combines broad neuroscience foundation courses with the ability, based on a student's preference, to focus in one of three streams after first year:

• **Molecular and Cellular Neuroscience**
• **Behavioural and Cognitive Neuroscience**
• **Systems Neuroscience**

Its small size encourages collaboration amongst students and instructors as they investigate the development, structure and function of the nervous system including the ways they can change – whether naturally or through human intervention.

Starting in first year, students are introduced to both classroom and laboratory work and begin developing their understanding of the fundamental processes of life at the molecular, cellular and population levels. As students move through the program they choose from an extensive variety of science and non-science courses to tailor their degree to their individual interests.

Students hoping to pursue medical school or other professional programs will be able to incorporate all required prerequisite courses into their schedule. Choosing courses from a broad range of disciplines helps prepare students for the MCAT (Medical College Admissions Test) or other professional school admission tests.

First Year Neuroscience Major Courses:

• Biology
• Psychology
• Frontiers in Neuroscience
• Computer Use
• General Education Course

Second Year Neuroscience Major Courses:

• Fundamental Molecular and Cellular Neuroscience
• Systems, Behavioural, and Cognitive Neuroscience
• Statistics
• Neuroscience Techniques
• General Education Course

Upper Year Neuroscience Major Course Options:

• Functional Neuroanatomy
• Neural Basis of Behaviour
• Human Anatomy and Physiology
• Molecular and Cellular Neurobiology
• Immunobiology
• Neurobiology
• Cellular Regulation
• Cell and Molecular Basis of Muscle Physiology

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Experiential Education

The Faculty of Science provides a rich diversity of opportunities for undergraduate students to engage in Experiential Education. Both the Co-op and Internship Program provides students in this program with an opportunity to integrate their classroom learning with hands-on, paid, work experiences related to their field of study.

Here are just a few of the companies you could have the opportunity to work for:

• Sanofi Pasteur
• Health Gene Corporation
• Parks Canada
• City of Toronto
• Grande Prairie Regional College

Visit yorku.ca/science/students/experiential-education/ for more information.
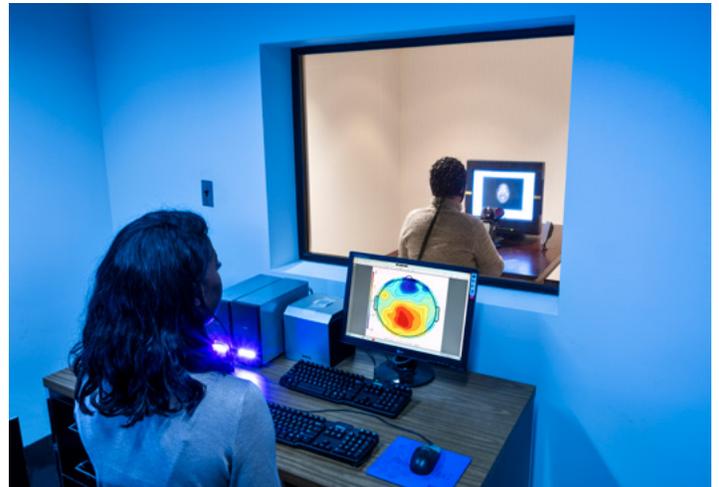
Career Pathways for Neuroscience

Your studies in Neuroscience will lay the foundation for your future career or continuing education in professional programs or graduate studies or prepare you for neuroscience-related careers in research institutes, universities, health care, and industry.

• Clinical data collection
• Clinical research
• Community programming
• Analytical laboratory work
• Medical devices and therapies

• Pharmaceuticals
• Regulatory affairs
• Science advocacy
• Science communications
• Professional Schools – Medicine, Dentistry, Pharmacy, Law, Business

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