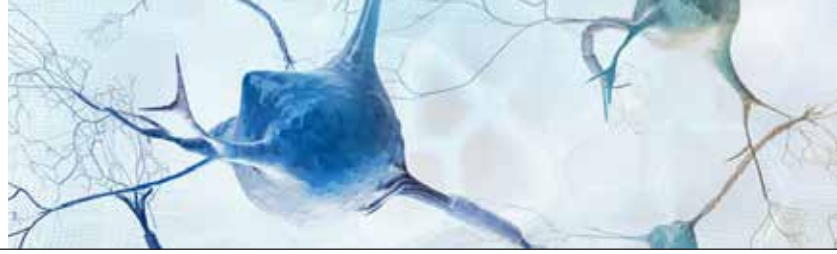


# GRADUATE PROGRAMS IN Neuroscience



## Our students are our top priority.

The brain is the body's most mysterious and complicated organ. Discovering how the brain works holds the key to understanding behaviours as basic as breathing or as complex as thinking. Recent advances have helped unlock the puzzle of how molecular and cellular processes impact behaviour and yet scientists have just scratched the surface in understanding brain function and psychosocial behaviour.

We offer two degrees: a Master of Science (MSc) and a PhD. Our students gain a combination of technical, theoretical and interpersonal skills which will equip them for related careers in academia, industry and health care.

Neuroscience research is not only critical for understanding our daily behaviours — it also reveals insights into how changes in the structure and function of the brain lead to neurological and psychiatric diseases. Identification of the key players in these pathological processes is essential for finding cures for brain disorders ranging from depression to Parkinson's disease to brain injury to chronic pain.

Our faculty members have individual research programs covering memory processes, motivation, hormonal involvement in behaviour and pathology, molecular biological processes in disease, inflammatory and neurotransmitter processes in psychological and neurodegenerative disorders, brain-immune interactions and the contribution of stressors to brain health. This work is mainly done on a collabora-

tive basis within the department, as well as through widespread collaborations outside of Carleton.

The MSc degree trains students to design, perform and communicate innovative neuroscience research performed in our state-of-the-art facilities, as well as in a nurturing and supportive environment. Students have access to a diverse range of hands-on training opportunities using behavioural, genetic, anatomical, electrophysiological, optogenetic, and molecular approaches, which are combined with a comprehensive foundation in underlying neuroscience principles.

Our PhD students work alongside top researchers in the field, using microscopy, histology, neurochemistry, behavioural analysis, electrophysiology, chemo and optogenetics, and molecular genetic analysis. They have an opportunity to develop independent, novel research projects aimed at finding the answers to big questions involving addiction, depression, Parkinson's disease, obesity, dementia and traumatic injury.

## Degrees Offered

MSc, PhD

## Career Options

Graduates from both of our programs can pursue career opportunities in academia, health, business/industry, education or government. PhD alumni interested in academia can potentially pursue careers as research scientists/postdoctoral fellows or biologists

in universities, Health Canada or the National Research Council Canada.

Students interested in health professions could consider careers (in some cases following further education) in medicine, as rehabilitation counsellors, behavioural therapists, speech-language pathologists, public health officers, neurologists, microbiologists, genetic counsellors, biomedical lab technicians, health planners/consultants, toxicologists, or mental health workers.

Within business or industry, career paths may include technical writer, pharmaceutical sales, consultant, researcher or analyst.

Within education, graduates may find positions in journalism, teaching, as instructors, or as policy developers. Government positions include patent officer, forensic scientist and management positions within health-related organizations.

## Fall Application Deadline

**February 1**, in order to be eligible for funding

## Admission Requirements

**MSC:** A Bachelor of Science (Honours) degree in neuroscience, psychology, biology or a related field with a completed bachelor's thesis or equivalent, a minimum B+ average and research experience.

**PHD:** A master's degree in neuroscience, psychology, biology or related field with a minimum A- average.

[carleton.ca/neuroscience](http://carleton.ca/neuroscience)

### Contact INFO

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