

## Psychology at McMaster Areas of Specialization



**Behavioural Neuroscience** – The question of how the brain works is one of the great mysteries of science, and of the Behavioural Neurosciences in particular. Perception, cognition, learning, memory, reasoning, emotion, and all other aspects of psychological functioning depend on communication that occurs among neurons in the brain. Behavioural Neuroscience encompasses the broad field of the biological bases of behaviour. We study behaviour and its functional correlates in the brain with the goal of understanding the neural bases of psychological and behavioural responses. Graduates in this program will have an understanding of the biochemical, anatomical, and physiological bases of brain function and dysfunction, as well as some knowledge of behavioural disorders and current therapeutic strategies. They will be well prepared for careers in areas related to neuroscience, psychology, and the biomedical sciences.



### **Cognition & Perception** –

McMaster's cognition and perception specialization provides students with an interdisciplinary view with the goal of understanding how people mentally represent their experience and then use these representations to operate effectively. Perceiving, imaging, thinking, remembering, forming concepts, and solving problems, indeed all aspects of people's mental lives define this domain. Also it involves the discovery of the lawful relations between environmental events (e.g., sounds) and subjective experience (e.g., hearing), and the methods by which an accurate description of these experiences is represented. Students who graduate from this program are well prepared for graduate studies in psychology and related disciplines, professional studies such as medicine, or research positions in government, university, or industry settings.



**Developmental** – Developmental Psychology is concerned with the factors that affect physical, perceptual, cognitive, emotional, and social development from infancy through adulthood. The centuries-old debate between the relative contributions of innate and experiential factors in development are studied today in the context of experiments examining behaviour and/or physiological indexes, such as heart rate, cortisol levels, and EEG. This specialization provides excellent training for graduate school, research positions, and professional disciplines such as medicine, nursing, teaching, and speech pathology.



**Evolution & Social Behaviour** – Social behaviour and social cognition are major foci in psychology. The social sciences are often pursued in isolation from biology, but these disciplines meet in psychology, and this is essentially the case

at McMaster, where the study of social cognition, development, and behaviour are integrated with the study of non-human animal behaviour, physiology, and behavioural evolution. This program provides valuable preparation for further training in these areas or for careers in the health sciences & helping professions.



**Honours Core Program** – This program is for students with a broader focus. However, it does have a set of fundamental courses that are shared with the specialization programs. The core program permits the greatest flexibility in selection of additional courses. Students will be able to choose psychology courses following their own interests, or to develop an interdisciplinary approach possibly leading to a Minor in another subject. The core program as with the specialization programs provides an excellent background for graduate studies particularly if the student completes a Psychology thesis in Year 4.

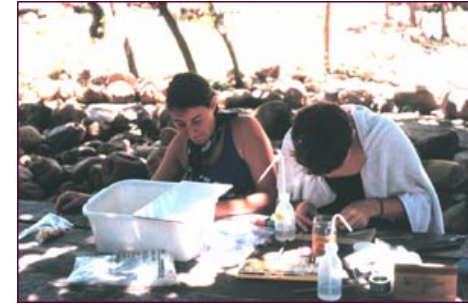


### **Honours Biology/Psychology Program**

<http://www.mcmaster.ca/psychology>  
<http://www.science.mcmaster.ca/biology>

### **Honours Linguistic Cognitive Science Program**

<http://www.humanities.mcmaster.ca/~linguistics>



## More facts about the department:

Departmental researchers hold over \$11 million in research funding, and their research has received international attention from both the scientific community and the news media.

The Department just completed a renovation of the building funded by Ontario SuperBuild Corp, Canada Foundation for Innovation, Ontario Innovation Trust, & McMaster University. The renovated space supports human and animal research facilities along with expanded teaching & seminar classrooms. The new facilities include an optical imaging laboratory; a transgenic procedure suite; neurochemistry suites; advance computing stations; advanced eye-tracking and virtual reality systems; equipment for transcranial magnetic stimulation; the largest number of electroencephalography (EEG) systems in one department in Canada, and a mobile testing centre.



## Year 1 Programs

### Science I program (for Psych B.Sc. degree)

Psych 1A03, Introduction to Experimental Psychology  
Psych 1AA3, The Psychology of Interpersonal Behaviour  
Math 1A03, Calculus I

One of Math 1AA3, Calculus II; Math 1B03, Linear Algebra I; Math 1D03, Algebra & Geometry; Stats 1CC3, Introduction to Computer-Aided Statistics

One of Biology 1A03, Cell & Molecular; Biology 1AA3, Biodiversity

One of Chemistry 1A03, Intro I; Physics 1B03, Mechanics & Waves

Two additional Science I courses

Level I electives

### Any Level I program (for Psych B.A. degree) but must include:

Psych 1A03, Introduction to Experimental Psychology

Psych 1AA3, The Psychology of Interpersonal Behaviour

Calculus (Math 1A03 or Math 1M03 or Math 1K03

depends on program)

Additional Level I courses – any faculty (Biology is recommended)

## You apply to a Psychology Program in Level II

### Admission Requirements:

**Honours Psychology (BA & BSc) programs are Limited Enrollment Programs. Selection is based on academic achievement but requires as a minimum the following:**

### 4-yr Honours Psychology (B.Sc.) Program

Completion of Science I program with an overall average of 6.0 (C+), and a grade of 7.0 (B-) in both Psych 1A03 & 1AA3.

### 4-yr Honours Psychology (B.A.) Program

Completion of any Level I program with an overall average of 6.0 (C+), and a grade of 7.0 (B-) in both Psych 1A03 & 1AA3, and Math 1A03 or Math 1M03 (with at least a 4.0 (C-))

This program does not have limited enrollment but requires:

### 3-yr Psychology (B.A.) Program

Completion of any Level I program with an overall average of 3.5 (between C- and D+), and an average of 4.0 (C-) in Psych 1A03 & 1AA3.

## Which Faculty?

### Science (B.Sc.) or Social Sciences (B.A.)?

Psychology is offered through both faculties.

### So What's The Difference between the B.Sc. and B.A. Programs in Psychology?

The B.Sc. program is for those more interested in the natural sciences, and thinking about a career in health-related fields, or interested in studying the link between the brain and behaviour. The B.A. program is for those more interested in fields that focus less on the biological and more on the psychological aspects of human behaviour. The psychology courses do not differ between the faculties. It is basically the other courses you take along with Psychology that create the difference. And this is particularly true in Year 1. (See Year 1 Programs in this flyer.)

## Ontario High School Requirements for Psychology Programs

### Grade 12 U/M Requirements:

6 courses in total, including:



### Faculty of Science (B.Sc.)

English U

Advanced Functions & Introductory Calculus U

Biology U

One of: Chemistry U, Physics U, or Geometry & Discrete Mathematics U

Anticipated Cut-off Range 80%

### Faculty of Social Sciences (B.A.)

English U

Advanced Functions & Introductory Calculus U

& Biology U are strongly recommended

Anticipated Cut-off 75%

### English as a Second Language

TOEFL – 237 or better on computer-based test.



## DEPARTMENT OF PSYCHOLOGY, NEUROSCIENCE & BEHAVIOUR

### Undergraduate Studies

<http://www.mcmaster.ca/psychology>



## What is Psychology?

Psychology is both a science and a practice that involves the scientific study of brain and behaviour. As scientists, psychologists do research to understand thought, learning, perception, emotion, and behaviour. They often work at universities or at research institutes funded by government or industry. As practitioners, psychologists apply scientific understanding towards helping individuals, institutions, and societies deal with issues relating to human behaviour and happiness. They may be found at work in mental hospitals or in the school system where their responsibilities involve the diagnosis and treatment of behavioural, emotional, and intellectual problems. They are also active in industry, where they are concerned with the selection of personnel, research on marketing, and the design of procedures that maximize productivity.

**Questions? E-mail: [hollings@mcmaster.ca](mailto:hollings@mcmaster.ca)**