NEUROSCIENCE (NSCI)

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Required courses:

Introductory Psychology
Introduction to the Chemical Properties of Matter
Basic Principles of Chemical Reactivity
Cells and Cellular Processes
Evolution, Ecology and Biodiversity
Introduction to Data Analysis OR Elementary Biological Statistics II OR
Statistical Analysis II
Research Methods
Organic Chemistry I
Intermediate Biochemistry I: Structure, Function, and Energetics of Biomolecules
Genetics
Cell Biology
Physiological Psychology I

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A minimum of 9 credits hours are required from Areas 1 and 2 with a minimum of 6 credit hours in one Area.

Area 1 – Biology, physiology and chemistry of the nervous system.

Foundations of Physics ***OR*** Introduction to Physics
Medical Imaging
Biology of the Vertebrates
Histology
Molecular Genetics and Genomics
Human Embryology
) Comparative Animal Physiology I
Comparative Animal Physiology II
Parasites and Disease
Developmental Biology
Molecular Cell Biology
Ecological Animal Physiology*
Virology*
Immunology*
Neurobiology*
Organic Chemistry II
Intermediate Biochemistry II: Intermediary Metabolism
Medicinal Chemistry*
Drug Design*
Molecular Enzymology

Area 2 – Cognitive, behavioural and clinical neuroscience

Introduction to Animal Behavior
Field Research in Animal Ecology and Energetics*
) Introduction to Cognitive Psychology
Psycholinguistics
Perception I
Fundamentals of Animal Learning
Drugs & Behaviour
Cognitive Processes*
Genes, Evolution, and Behaviour I
Physiological Psychology II
Human Neuropsychology*
Cognitive Neuroscience*
Topics in Human Learning and Memory*
Topics in Perception*
Topics in Cognitive Psychology*
Biological Considerations in Clinical Psychology
Topics in Animal Learning*
Genes, Evolution, and Behaviour II
Neurobiology of Addiction and Fear*
Topics in Physiological Psychology*
Topics in Cognitive Neuroscience*

Starred courses (*) may not be taught every year.

Students must complete the requirements of the 3-year BSc in Neuroscience (see previous section) and the set of core courses indicated in the "Science with a Business Stream" section of the Calendar.

This allows program students with interests in the natural sciences to expand their knowledge of the neural basis of behavior and cognition. Students are required to consult with a Departmental Honours Advisor at the time they enroll in 4000-level courses in the Psychology Department. Appointments for advising are arranged through the departmental secretary at 786-9130. Enrolling in 4000-level courses in the Biology department does not require a consultation with a faculty member.

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Minimum of 12 credit hours at the 3000 or 4000 level from either area 1 or 2, or Electives
Minimum total of 24 credit hours over both areas, including Electives

Area 1 – Biology, physiology and chemistry of the nervous system.

Foundations of Physics ***OR*** Introduction to Physics
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Histology
Molecular Genetics and Genomics
Human Embryology
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Comparative Animal Physiology II
Parasites and Disease
Developmental Biology
Molecular Cell Biology
Ecological Animal Physiology*
Virology*
Immunology*
Neurobiology*
Organic Chemistry II
Intermediate Biochemistry II: Intermediary Metabolism
Medicinal Chemistry*
Drug Design*
Molecular Enzymology

Area 2 – Cognitive, behavioural and clinical neuroscience

Introduction to Animal Behavior
Field Research in Animal Ecology and Energetics*
) Introduction to Cognitive Psychology
Psycholinguistics
Perception I
Fundamentals of Animal Learning
Drugs & Behaviour

This program allows students with demonstrated ability an opportunity to deal more extensively and intensively with the subject matter. Students are required to consult with a Departmental Honours Advisor at the time they enroll in 4000-level courses in the Psychology Department. Appointments for advising are arranged through the departmental secretary at 786-9130. Enrolling in 4000-level courses in the Biology department does not require a consultation with a faculty member.

Students are required to consult with a Program Advisor or Coordinator in planning their course of study.
Both Chemistry 40S and either Pre-Calculus or Applied Mathematics 40S are required for students wishing to pursue a BSc (Hons).
Entry into the program after completing a minimum of 30 credit hours.
A grade of C or better in PSYC-1000(6)

120 credit hours

Graduation minimum GPA is 3.0 (B)

Minimum total of 27 credit hours over both areas and Electives.

Area 1 – Biology, physiology and chemistry of the nervous system.

Foundations of Physics ***OR*** Introduction to Physics
Medical Imaging
Histology
Molecular Genetics and Genomics
Human Embryology
) Comparative Animal Physiology I
Comparative Animal Physiology II
Parasites and Disease
Developmental Biology
Molecular Cell Biology
Ecological Animal Physiology*
Virology*
Immunology*
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