

Neuroscience (NEUR)

Neuroscience (NEUR) Courses

NEUR 5000 [0.5 credit]

Foundations in Neuroscience

A comprehensive, lecture-based course which will cover the foundational principles of neuroscience for students with a limited background in neuroscience. Topics include neural signalling, sensation, movement, neurodevelopment, neuroplasticity, neuroendocrinology, learning and memory, and other complex brain functions. Prerequisite(s): permission of the Department.

NEUR 5100 [1.0 credit]

Fundamentals in Neuroscience

A general course covering core neuroscience topics including organization of the nervous system, sensory and motor systems, neuroendocrinology, motivation learning and memory, emotion, attention, and pathology. Course includes attendance of the neuroscience colloquium series.

Also listed as BIOL 5304.

Precludes additional credit for PSYC 5200.

NEUR 5201 [0.5 credit]

Statistics for Neuroscience I

Concepts and applications of basic statistical methods. Power determinations, t-tests, analysis of variance designs, including factorial, within groups, and hierarchical designs, analysis of covariance, and follow-up tests. Extensive use of statistical software. Precludes additional credit for PSYC 5410.

NEUR 5202 [0.5 credit]

Statistics for Neuroscience II

Concepts and applications of advanced regression analyses, including multiple regression, hierarchical and polynomial techniques, factor analysis and cluster analysis. Extensive use of statistical software. Precludes additional credit for PSYC 5411.

NEUR 5203 [0.5 credit]

Systematic Reviews and Meta-Analysis

Introduces the methodology for conducting systematic reviews and meta-analysis. Topics include: conducting literature searches, extracting relevant literature, assessing quality of studies, and synthesizing findings across studies. Students will be expected to identify a research question, identify relevant literature, and carry out the statistical software.

Prerequisite(s): NEUR 5201.

NEUR 5800 [0.5 credit]

Special Topics in Neuroscience

An in depth study of current topics in neuroscience and health. Course content varies yearly and has recently included cognitive neuroscience, neuropharmacology, neurodegeneration, neuroimmunology, behavioural medicine, neurobiology of learning and memory, brain mechanisms of ingestive behaviour and energy balance, and molecular neuroscience.

Also listed as BIOL 6203.

NEUR 5801 [0.5 credit]

Knowledge Mobilization

Knowledge mobilization concepts, tools, and frameworks, the challenges and value of translational research, and processes involved in integrated knowledge mobilization. Skills to maximize research impacts will be developed.

Includes: Experiential Learning Activity

Precludes additional credit for HLTH 5300.

NEUR 5909 [3.0 credits]

M.Sc. Thesis

Includes: Experiential Learning Activity

NEUR 6100 [1.0 credit]

Advanced Seminar in Neuroscience

A comprehensive pro-seminar series, covering issues ranging from cellular and molecular processes through to neural systems and behaviours as well as psychopathology. Students will also be required to attend the Neuroscience colloquia series as part of this course. Also listed as BIOL 6305.

Precludes additional credit for PSYC 6200, PSYC 6202, PSYC 6203, BIOL 6303, BIOL 6306.

Prerequisite(s): NEUR5100 or equivalent.

NEUR 6200 [1.0 credit]

Comprehensive Examination

The comprehensive examination will consist of either a grant proposal or a review paper, to be decided by the student in consultation with their supervisor.

The topic of the comprehensive examination must be outside of the candidate's primary area of specialization and must be completed within the first two years of PhD study.

NEUR 6301 [0.5 credit]

Techniques in Neuroscience I

Completion of a research project carried out under the supervision of a neuroscience faculty member, normally not the current supervisor. The student will learn a new neuroscience technique and apply it to a research objective. Students must obtain prior approval from the graduate committee.

Precludes additional credit for PSYC 6204.

NEUR 6302 [0.5 credit]**Techniques in Neuroscience II**

Completion of a research project carried out under the supervision of a neuroscience faculty member, normally not the current supervisor. The student will learn a new neuroscience technique and apply it to a research objective. Students must obtain prior approval from the graduate committee.

Precludes additional credit for PSYC 6204.

NEUR 6401 [0.5 credit]**Independent Research in Neuroscience I**

Permission to register and approval of research plan must be obtained from the graduate committee. A final research report must be filed in the departmental office prior to submission of course grade.

Includes: Experiential Learning Activity

Precludes additional credit for PSYC 5901 and PSYC 6901.

NEUR 6402 [0.5 credit]**Independent Research in Neuroscience II**

Permission to register and approval of research plan must be obtained from the graduate committee. A final research report must be filed in the departmental office prior to submission of course grade.

Includes: Experiential Learning Activity

Precludes additional credit for PSYC 5901 and PSYC 6901.

NEUR 6501 [0.5 credit]**Directed Studies in Neuroscience I**

In-depth investigation of selected topics in neuroscience by means of directed library research. Registration is restricted, permission to register being granted only by the graduate committee. A final report must be filed in the departmental office prior to submission of course grade.

Precludes additional credit for PSYC 5900 and PSYC 6900.

NEUR 6502 [0.5 credit]**Directed Studies in Neuroscience II**

In-depth investigation of selected topics in neuroscience by means of directed library research. Registration is restricted, permission to register being granted only by the graduate committee. A final report must be filed in the departmental office prior to submission of course grade.

Precludes additional credit for PSYC 5900 or PSYC 6900.

NEUR 6909 [0.0 credit]**Ph.D. Thesis**

Includes: Experiential Learning Activity