

MOLECULAR NEUROSCIENCE

Nsci 5500f,w,s,su. CRITICAL THINKING AND SCIENTIFIC PROPOSAL WRITING. (1 cr/yr; A-F) Bieber, Strehler

This course is intended for first and second year graduate students. During the winter quarter of the first year students will identify a topic and a “writing” mentor. They will formulate a 6-10 page scientific proposal in a typical grant format that will be submitted by the end of the spring quarter. This proposal will be critically reviewed by the mentor and a committee of Neuroscience faculty members. Language, creativity and scientific reasoning will be evaluated. This will be an iterative process, in which students will be required to rewrite a proposal until their committee is satisfied that they have sufficient mastery of these skills.

Nsci 5600w,s. BEHAVIORAL NEUROLOGY. (2 cr/yr;S-N; offered odd years) Graff-Radford
Students will learn about the neuropathological, genetic, and clinical characteristics of neurodegenerative diseases such as Alzheimer’s Disease. The course will feature the most current knowledge about each disease, including therapies available or ongoing research on the causes of the disorder.

Nsci 8100f,w,s,su. NEUROSCIENCE MASTER’S PROJECT. (3 cr; A-F) Bieber, Strehler
The Master’s project will consist of a scholarly written review of an important area of molecular neuroscience. The student will identify an area of active neuroscience research, describe the current state of understanding in the area, identify fundamental outstanding questions and controversies, and describe potential future directions for research that will address these questions. The final document, and an oral defense of the document, must be of sufficient merit to satisfy all members of a four member advisory committee, to be selected by the student and approved by the Molecular Neuroscience Graduate Program Director prior to beginning work on the Master’s project.

Nsci 8400f. BASIC HUMAN NEUROANATOMY. (3 cr; A-F) Eggers
Structure and functional anatomy of the nervous system. The human system will be used as the most complex model of the nervous system available.

Nsci 8500f,w,s. NEUROSCIENCE SEMINAR. (1 cr/yr; S-N) Howe
Seminar series by Mayo faculty and visiting faculty covering advanced topics in molecular neuroscience research. *Register for this course fall quarter only.*

Nsci 8600f,w,s. SPECIAL TOPICS IN NEUROSCIENCE. (1 cr/yr.; A-F) Howe
This multifaceted course will address current topics in Neuroscience and will emphasize dynamic interactions between students and faculty. Each quarter two to three focused topics will be covered in depth through a series of didactic lectures by the faculty and literature reviews and presentations by the students. One credit will be given per year and every student will be expected to present and participate throughout each quarter. Students will be required to attend and participate for 9 quarters (first three years in the program, excluding summer quarter).

Nsci 8650su. MOLECULAR NEUROSCIENCE WORKS IN PROGRESS. (1 cr; S-N) Howe
Presentation of ongoing research projects by graduate students in the Molecular Neuroscience Ph.D. Program.

Nsci 8854w. BASIC NEUROSCIENCE. (5 cr; A-F; continues into spring quarter) Benarroch
Lectures dealing with basic topics in CNS structure, function and pharmacology.

Nsci 8860w. ADVANCED TOPICS IN CELLULAR, MOLECULAR, AND SYSTEMS NEUROSCIENCE. (3 cr; A-F; prerequisites NSci 8854, NSci 8400; second year Neuroscience student, others only by permission of instructor) Howe
This course is intended for second year students in the Neuroscience track and will be structured as a small group didactic discussion of advanced topics in neuroscience. The course will use the analysis of both primary historical and current research articles to more thoroughly develop critical topics introduced in NSci 8854 and NSci 6550.

Research

Nsci 8840f,w,s,su. RESEARCH IN MOLECULAR NEUROSCIENCE. (6 cr/qtr; S-N) Staff
Graduate thesis research for Master's students under supervision of staff.

Nsci 8900f,w,s,su. RESEARCH IN MOLECULAR NEUROSCIENCE. (S-N) Staff
Graduate thesis research for Ph.D. students under supervision of staff.