

# GRADUATE NEUROSCIENCE (NRSC)

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## **NRSC 410 Cellular & Molecular Neurobiology (3 Credit Hours)**

This course will review current knowledge of the morphological, biophysical and biochemical properties of neurons. Fundamental neuronal network processes such as stimulus transduction, neuronal plasticity, information processing, and learning and memory will be reviewed.

### *Outcomes:*

An advanced knowledge of the biophysical and biochemical properties of nerve cells and fundamental aspects of more global central nervous system function

## **NRSC 415 Neurochemistry (3 Credit Hours)**

This course is a team-taught neurochemistry course that integrates basic biochemical mechanisms of neurotransmitter synthesis, storage, reuptake, and inactivation with applied correlates to central and peripheral nervous system neurodegenerative disorders. Organic chemistry and neurobiology/neurophysiology are required prerequisite courses. Emphasis is placed on student participation including a student-held lecture series covering a contemporary neurochemical topic of their choosing.

*Interdisciplinary Option:* Neuroscience

## **NRSC 421 Neuroscience Teaching (1 Credit Hour)**

This course consists in serving as a Teaching Assistant in the medical Neuroscience course labs and proctoring the medical neuroscience course exams. It also includes a weekly pre-lab meeting in which the material for that week's lab is discussed.

### *Outcomes:*

Experience in teaching neuroanatomy for Neuroscience Graduate Program students

## **NRSC 422 Behavioral Neuroscience (2 Credit Hours)**

This course discusses the brain's role in sensory perception, higher perceptual functions, attention, learning and memory, executive function, and emotion. It consists of weekly lectures given by the professor or by one or two students.

### *Outcomes:*

An understanding of higher brain function and experience giving presentations

## **NRSC 423 Special Topics in Neuroscience (3 Credit Hours)**

Restricted to Graduate level students. This course explores a wide spectrum of neuroscience-related topics, and the subject matter will vary with each offering.

### *Outcomes:*

Measures include exam performance, in-class participation, and student presentation

## **NRSC 499 Research (1-9 Credit Hours)**

Independent research for thesis or dissertation under the supervision of a faculty research advisor. Credit varies based upon assigned effort and time spent in the laboratory. Students receive a letter grade from their research advisor.

## **NRSC 502 Neuroscience Journal Club (0-1 Credit Hours)**

*Pre-requisites:* Must be member of the Neuroscience Graduate Program  
One hour weekly course during which all students in the Neuroscience Graduate Program meet to discuss and critically evaluate recent, high impact journal articles covering varied neuroscience topics under the direction of two faculty mentors with neuroscience expertise.

### *Outcomes:*

Students advance their knowledge of new neuroscience concepts and methods, gain experience in presenting in front of a group, and gain confidence in their abilities to critically evaluate experimental design and statistical methods

## **NRSC 503 Neuroscience Seminar (0-1 Credit Hours)**

In both the fall and spring this course includes monthly Neuroscience seminar presentations by internal and external speakers. In the fall, the course also includes weekly journal club presentations by the graduate students: in the spring the course also includes weekly research progress reports by the graduate students.

### *Outcomes:*

A broad overview of current topics in the field and experience giving research presentations

## **NRSC 595 Thesis Supervision (0 Credit Hours)**

Supervised research and writing leading to the completion of the masters of science thesis and degree.

## **NRSC 600 Dissertation Supervision (0 Credit Hours)**

Supervised research and writing leading to the completion of the Ph.D. dissertation and degree.