

# Neuroscience (NEUS)

The program in Neuroscience provides students with an interdisciplinary examination of the nervous system and its regulation of behavior through multiple experimental approaches ranging from molecular biology to behavioral systems. The program is not a major. A student who fulfills the program requirements will receive a certificate and the program will be noted on the student's transcript. Students interested in completing the program in Neuroscience should contact the program coordinator for guidance in scheduling the completion of the necessary requirements.

## Coordinator

David W. Pittman

## Program Requirements

The program in Neuroscience requires courses from the departments of Biology and Psychology, in addition to the three Neuroscience courses. Courses that meet requirements in Neuroscience program and the Biology major or the Psychology major may be counted in both. Prerequisite courses may be waived for courses outside of your major. Contact the program coordinator for approval to waive prerequisite courses.

<b>Research/Experimental Methods</b>		1 to 4
Select one of the following:		
BIO 351	Research Methods & Communication, Neurobiology (with lab)	
BIO 352	Research Methods & Communication, Evolutionary Biology (with lab)	
CHEM 250	Introduction to Research	
PSY 151	Experimental Methods (with lab)	
<b>Biology Requirements</b>		8
BIO 214	Introduction to Cellular Biology (with lab)	
BIO 342	Human Physiology (with lab)	
<b>Neuroscience Requirements</b>		6
NEUS 321	Neuroscience Seminar I	
NEUS 322	Neuroscience Seminar II	
NEUS 447 or NEUS 448	Neuro Research Capstone I Neuro Research Capstone II	
<b>Psychology Requirements</b>		8
PSY 310	Cognitive Science (with lab)	
PSY 330 & 330L	Behavioral Neuroscience and Behavioral Neuroscience Laboratory	
<b>Approved Electives</b>		10 to 12
Select three courses from the following:		
BIO 392	Animal Behavior (with lab)	
BIO 446	Neurobiology (with lab)	
BIO 447	Cellular Neurobiology	
BIO 448	Systems Neurobiology	
PSY 300	Learning & Adaptive Behavior (with lab)	
PSY 315	Sensation & Perception (with lab)	

PSY 335	Affective Neuroscience
PSY 351	Psychopharmacology
PSY 415	Human Memory

Total Hours 33-38

### NEUS 251. Introduction to Research I. 1 to 3 Hours.

Research experience is an integral skill required in the field of neuroscience. This course provides an opportunity for students to become engaged in neuroscience-based research projects early in their undergraduate education. Students should contact the Program Coordinator or individual neuroscience faculty to make course arrangements.

### NEUS 252. Intro to Research II. 1 to 3 Hours.

Research experience is an integral skill required in the field of neuroscience. This course provides an opportunity for students to become engaged in neuroscience-based research projects early in their undergraduate education. Students should contact the Program Coordinator or individual neuroscience faculty to make course arrangements.

### NEUS 280. Selected Topics in Neuroscience. 1 to 4 Hours.

Selected topics in Neuroscience at the introductory or intermediate level.

### NEUS 321. Neuroscience Seminar I. 1 Hour.

An interdisciplinary seminar discussing current topics in neuroscience through the examination of literature at the molecular neurobiology, neuroanatomy, neurophysiology, and behavioral levels. This course is appropriate for Biology and Psychology majors and those pursuing the program in Neuroscience. Junior or senior standing required.

### NEUS 322. Neuroscience Seminar II. 1 Hour.

An interdisciplinary seminar discussing current topics in neuroscience through the examination of literature at the molecular neurobiology, neuroanatomy, neurophysiology, and behavioral levels. This course is appropriate for Biology and Psychology majors and those pursuing the program in Neuroscience. Junior or senior standing required.

### NEUS 447. Neuro Research Capstone I. 4 Hours.

This course is designed to permit students to learn a research technique and obtain training in the use of scientific methodology in the field of neuroscience. Specific course objectives include: hands-on experience in a neuroscience research technique, learning appropriate data collection and analysis techniques, and learning how conclusions based on empirical data are formed and disseminated as research articles.

**Prerequisite:** PSY 151 with a minimum grade of D or BIO 250 with a minimum grade of D.

### NEUS 448. Neuro Research Capstone II. 0 Hours.

This course is designed to permit students to learn a research technique and obtain training in the use of scientific methodology in the field of neuroscience under conditions where awarding course credit is inappropriate. Such conditions include research conducted as part of a paid stipend, research conducted in off-campus laboratories, or research conducted as part of another college course. Specific course objectives include: hands-on experience in a neuroscience research technique, learning appropriate data collection and analysis techniques, and learning how conclusions based on empirical data are formed and disseminated as research articles.

### NEUS 480. Advanced Topics in Neuroscience. 1 to 4 Hours.

Selected topics in Neuroscience at the advanced level.