

# Minor - Neuroscience Description

The minor in neuroscience is an interdisciplinary course of study that will provide students an understanding of the neural underpinnings of behavior. Students will be encouraged to take basic and advanced courses in pure and applied neuroscience from several departments. Students from many different majors will find the scope of courses addressing brain and behavior enlightening and practical for their future careers. They will come to understand that neuroscience spans levels from the molecular to the psychological in both humans and other animals and learn how to apply theory to experimental or observational studies. There is no true dichotomy between the brain and the mind.

## Course Requirements

The minor in neuroscience requires 18-22 hours, including Psy 319, Bisc 327, and four courses at the 300 level or above, of which at least one course must be a formal laboratory course or director-approved independent laboratory course (3 credit hours minimum) and at least one course must be at the 500 level. At least 6 hours, not including Psy 319 or Bisc 327, must be outside of the student's major. A maximum of 6 credit hours of independent study can count toward the minor, but to apply more than 3 hours of independent study to the minor, a total of 9 credit hours of independent study must be taken. Approved laboratory courses for the minor and other approved courses are listed below. Courses may not satisfy requirements for both the student's major and the neuroscience minor.

### **Approved Neuroscience Laboratory Courses**

Bisc 330. Introductory Physiology

Bisc 427. Methods in Comparative Neuroscience

Bisc 512. Animal Behavior

Bisc 518. Microtechnique

BME 314. Biomedical Measurement

ES 514. Applied Electromyography

Neu 491. Directed Research in Neuroscience

Neu 493. Neuroscience Capstone Research

Neu 579. Advanced Topics of Neuroscience

Psy 390. Lab in Psy: Behavioral Neuroscience

#### **Approved Neuroscience Courses**

Bisc 529. Endocrinology

Bisc 533. Advanced Neuroscience

Bisc 538. Hormones and Behavior

Bisc 541. Cell Biology of Neurodegenerative Disorders

Bisc 543. Functional Neuroanatomy

Bms 471. Targeting Neurodegenerative Diseases

CSD 505. Neurophysiology of Communication

CSD 526. Neurogenic Disorders of Language

BME 313. Physiology for Biomedical Engineering

BME 413. Biomedical Signal Processing

ES 344. Aging in the 21st Century

ES 338. Motor Control and Learning

ES 512. Foundations of Biomechanics

ES 515. Stress and the Brain

Medc 416. Intro to the Principles of Med Chem I

Medc 417. Intro to the Principles of Med Chem II

Medc 418. Neuroscience Principles of Drug Abuse

Phcl 586. Receptors and Channels

Phil 332. Personal Identity and the Self

Phil 342. Philosophy of the Mind

Psy 309. Learning

Psy 322. Drugs and Behavior

Psy 326. Sensation and Perception

Psy 505. Conditioning and Learning



## **Approved Neuroscience Courses**

Psy 511. Neural Basis of Learning and Memory