NEU 201 | INTRODUCTION TO NEUROSCIENCE | 4 quarter hours
(Undergraduate)
This class will introduce the structure and function of the nervous system as well as approaches to study and model it. Anatomical, cellular, and molecular foundations will be covered and these will be related to behavior and cognition. Computational approaches will also be presented. A historical review will place neuroscience within its contemporary context and current approaches will be presented, discussed, and critiqued.

A grade of C- or better in BIO 191 or instructor consent is a prerequisite for this course.

NEU 228 | NEUROETHICS | 4 quarter hours
(Undergraduate)
This course examines moral standards and issues as these arise in the practice of neuroscience. Advances in this field have developed unprecedented ways of understanding, predicting, and even, influencing and controlling the human mind and, through this, human behavior. Neuroethics considers the ethical dilemmas that emerge in such research and the technologies that it fosters as well as the challenges these advances pose to some of the fundamental underlying concepts of moral theory: human nature, personal identity, and moral responsibility itself. Cross listed as PHL 228.

NEU 256 | INTRODUCTION TO COMPUTATIONAL NEUROSCIENCE | 4 quarter hours
(Undergraduate)
Provides an introduction to basic computational methods for understanding what nervous systems do and how they function. The course covers the structure of the brain, from neurons to circuits to regions, and also the computational and theoretical approaches to model the brain. The course will introduce students to the physiology of individual neurons, how they communicate through synapses and firing, and how they work together to create systems that control, learn and memorize. The course will include the application of mathematical and computational models to neural systems.

CSC 241 and NEU 201 (or consent of instructor) are prerequisites for this class.

NEU 301 | RESEARCH METHODS IN NEUROSCIENCE | 4 quarter hours
(Undergraduate)
This course is designed to provide students an understanding of how questions are answered in neuroscience by exploring experimental designs used in neuroscience research and individual techniques used by neuroscientists. In addition to reading about these methods, students will have hands on opportunities to conduct some of the methods discussed. Lastly, students will formulate their own research question and develop a proposal to answer their question.

NEU 201 or PSY 377 or BIO 339 or NEU 339 or BIO 340 or instructor consent is a prerequisite for this class.

NEU 310 | SEMINAR IN NEUROPSYCHOPHARMACOLOGY | 4 quarter hours
(Undergraduate)
In this discussion-based course we cover how substances from the outside world affect the brain and behavior by reviewing primary research literature. Drugs such as levodopa can be greatly beneficial in the clinic, while other substances like cocaine can lead to addiction and drug abuse. The course will focus on drug action at a molecular and cellular level, as well as drug effects on a behavioral and psychological scale.

NEU 201 and (CHE 120 or CHE 130) are prerequisites for this class.