NEUROSCIENCE, CERTIFICATE

Understanding the intricate correlations between neural mechanisms and behavior is an important area of contemporary scientific research. The online Certificate in Neuroscience allows you to explore biological, psychological, and clinical approaches to understand the nervous system as the biological basis of behavior. Classes cover topics in neurochemistry, neuroendocrinology, and pharmacology to gain deeper insight into behavior, focusing on areas including perception, social behavior, mental health, and the effect of drugs on the function of the central nervous system.

Neuroscience Certificate Requirements

- The Certificate in Neuroscience is a 4-course, 4 c.u. credit program of study.
- To earn a certificate, students must first complete NEUR 1000: Introduction to Neuroscience, followed by any three neuroscience courses. See courses below.
- Students who complete the basic online certificate may pursue an Advanced Certificate in Neuroscience (6-course, 6 c.u.) by adding two additional neuroscience courses.

Flexible Course Schedule

Penn LPS Online courses in the Certificate in Neuroscience are offered on an accelerated (8-week) schedule. Courses in the online certificate program are largely asynchronous with some optional synchronous sessions to be scheduled by the instructors. All Penn LPS Online courses are taught at the undergraduate level by Penn instructors.

You have the option to enroll in individual neuroscience courses without committing to the entire online certificate, enjoying the flexibility and expertise offered by Penn LPS Online to suit your schedule and interests. Certificate students and individual course takers must first complete NEUR 1000: Introduction to Neuroscience before enrolling in additional neuroscience courses.

Read more about the Certificate in Neuroscience. (https://lpsonline.sas.upenn.edu/academics/certificates/neuroscience/)

The Certificate in Neuroscience prepares you to:

- Describe the structure and function of the vertebrate nervous system and its application to the neurobiology of behavior
- Understand the structures and functions of neurochemicals that are generated by and modulate the nervous system
- Examine the various roles played by the nervous and endocrine systems in controlling physiological and behavioral processes, with a focus on sexual and parental behaviors, aggression, and ingestion
- Learn about the mechanism by which drugs can influence the functioning of the central nervous system and the effect of drug actions both in the central nervous system and in the periphery
- Critically evaluate research strategies and hypotheses in neuroanatomy, neurophysiology, neurochemistry, and neuropharmacology to understand psychiatric disorders from a biological perspective

Curriculum

Certificate students and individual course takers must first complete NEUR 1000: Introduction to Neuroscience before enrolling in additional neuroscience courses. When you register for NEUR 1000, you are automatically enrolled in a neuroscience learning assessment to gauge your prior knowledge of biology and chemistry and help prepare you for the course.

Certificate students must first complete NEUR 1000: Introduction to Neuroscience, followed by any three neuroscience courses. Students who complete the basic online certificate may pursue an Advanced Certificate in Neuroscience by adding two additional neuroscience courses.

Code	Title	Course Units
Neuroscience Certificate		
Required		
NEUR 1000	Introduction to Neuroscience (Prerequisite for all Neuroscience courses)	1
Select 3 additional NEUR courses for a basic certificate *		*3*
NEUR 1600	The Neuroscience of Music	
NEUR 2000	Behavioral Neuroscience	
NEUR 2600	Hormones,Brain,Behavior	
NEUR 2800	Autonomic Pharmacology	
NEUR 4000	Psychopharmacology	
Any course with Attribute = BCNR (http://catalog.upenn.edu/attributes/bcnr/)		
Total Course Units		**4**

* Students who complete the basic certificate may pursue an advanced certificate by adding two additional neuroscience courses.

The degree and major requirements displayed are intended as a guide for students entering in the Fall of 2025 and later. Students should consult with their academic program regarding final certifications and requirements for graduation.