

# NEUROSCIENCE, PHD

Neuroscience is a collaborative and interdisciplinary PhD program that provides training for careers in neuroscience research, teaching and more. Our training program is designed to provide a strong foundation of neuroscience knowledge while at the same time taking into account each student's strengths, needs, and career goals.

Virtually all aspects of traditional neuroscience are reflected in the research programs of the **186 faculty members** who participate in NGG training, including computational, systems, cellular and molecular, developmental, behavioral, and cognitive neuroscience, along with the neurobiology of disease. NGG faculty members represent 30 academic departments in the schools of Arts and Sciences, Engineering and Applied Science, Wharton Business, Veterinary Medicine, Dental Medicine, and Nursing, as well as the Perelman School of Medicine.

**For more information:** <https://www.med.upenn.edu/ngg/ngg-courses.html>

View the University's Academic Rules for PhD Programs (<http://catalog.upenn.edu/pennbook/academic-rules-phd/>).

## Required Courses

Code	Title	Course Units
<b>Coursework</b>		
BIOM 6000	Cell Biology	
NGG 5720	Electrical Language of Cells	
NGG 6050	NeuroCore:Quantitative Rigor and Reproducibility in Neuroscience	
NGG 5730	Systems Neuroscience	
NGG 6950	Scientific Writing	
Select three electives		
NGG First Year Journal Club		
NGG Specialty Journal Club		
<b>Research</b>		
NGG 6990	Lab Rotation	
NGG 8990	Pre-Disst Lab Rotation	
NGG 9950	Dissertation	

The degree and major requirements displayed are intended as a guide for students entering in the Fall of 2024 and later. Students should consult with their academic program regarding final certifications and requirements for graduation.

## Sample Plan of Study

Code	Title	Course Units
<b>Year 1</b>		
<i>Fall</i>		
BIOM 6000	Cell Biology	
NGG 5720	Electrical Language of Cells	

NGG 6990	Lab Rotation
First Year Journal Club	
<i>Spring</i>	
NGG 5730	Systems Neuroscience
BIOM 6100	Foundations in Statistics
NGG 6050	NeuroCore:Quantitative Rigor and Reproducibility in Neuroscience
NGG 6990	Lab Rotation
First Year Journal Club	
<i>Summer</i>	
NGG 6990	Lab Rotation
<b>Year 2</b>	
<i>Fall</i>	
NGG 8990	Pre-Disst Lab Rotation
Specialty Journal Club	
Elective	
Elective	
<i>Spring</i>	
NGG 6950	Scientific Writing
NGG 8990	Pre-Disst Lab Rotation
Specialty Journal Club	
Elective	
<b>Year 3 and Beyond</b>	
NGG 9950	Dissertation