

# NEUROSCIENCE (SCIENCE)

## Degree Requirements

### Master of Science (M.S.)

Requirements listed here are in addition to Graduate Council policies listed under GCAC-600 Research Degree Policies. (<https://gradschool.psu.edu/graduate-education-policies/>)

Students are not accepted directly into the Neuroscience program as Master's degree candidates. However, for various reasons, a student may need to discontinue their PhD program. Depending on the circumstances, the advisor and Thesis Committee may allow the student to finish the program by earning a Master's degree. During the first year, students complete three research rotations that expose them to the wide range of research interests of The Pennsylvania State University Graduate Faculty at the University Park Campus. These rotations serve to inform the students with regard to choosing an adviser and forming a committee. In addition, students are advised to take ethics, statistics and electives.

A minimum of 30 credits at the 400, 500, 600, or 800 level is required for the M.S., with least 18 credits at the 500 and 600 level, combined. A thesis is required, and a minimum of six (6) thesis research credits (NEURO 600 or NEURO 610) must be taken in Neuroscience. The thesis must be accepted by the advisers and/or committee members, the head of the graduate program, and the Graduate School, and the student must pass a thesis defense.

Code	Title	Credits
<b>Required courses</b>		
NEURO 501	Neuroscience Seminar	4
NEURO 512	Comparative Neuroanatomy	4
NEURO 520	Cellular and Molecular Neuroscience	3
NEURO 521	Systems Neuroscience	3
NEURO 596	Individual Studies	3
MCIBS 591	Ethics, Rigor, Reproducibility and Conduct of Research in the Life Sciences	2
<b>Electives</b>		
The remaining elective credits may be chosen from a list of approved electives maintained by the program office.		5
<b>Culminating Experience</b>		
NEURO 600	Thesis Research	6
	or NEURO 610 Thesis Research Off Campus	
<b>Total Credits</b>		<b>30</b>

### Doctor of Philosophy (Ph.D.)

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A minimum of 35 credits is required for the Ph.D. degree:

Code	Title	Credits
<b>Required courses</b>		
NEURO 501	Neuroscience Seminar	8
NEURO 512	Comparative Neuroanatomy	4
NEURO 520	Cellular and Molecular Neuroscience	3
NEURO 521	Systems Neuroscience	3

NEURO 596	Individual Studies	3
MCIBS 591	Ethics, Rigor, Reproducibility and Conduct of Research in the Life Sciences	2

#### Electives

The remaining elective credits may be chosen from a list of approved electives maintained by the program office. 6

#### Culminating Experience

NEURO 600	Thesis Research	6
	or NEURO 610 Thesis Research Off Campus	

**Total Credits** **35**

In addition, Ph.D. students are required to complete 1 credit of NEURO 602; however, this 1 credit cannot be counted towards the minimum 35 credits required.

A student's Ph.D. committee can require additional course work depending on the student's background and research plans.

Ph.D. degree requirements include successful completion of the following:

- approved graduate course work,
- English Competence requirements,
- A qualifying examination, which entails oral and written components
- a comprehensive examination, and
- a final oral examination (the dissertation defense).

To earn the Ph.D. degree, doctoral candidates must write a dissertation that is accepted by the Ph.D. committee, the head of the graduate program, and the Graduate School.