

NEUROSCIENCE (HERSHEY)

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/>)

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 from both basic and clinical science departments at the College of Medicine in Hershey. 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) 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
Required Courses		
NEURO 511	Neurobiology II	3
NEURO 520	Cellular and Molecular Neuroscience	3
NEURO 521	Systems Neuroscience	3
NEURO 522	Seminars in Neuroscience I	2
NEURO 524	Neuroscience Bootcamp	2
BMS 591	Biomedical Research Ethics	1
Electives		
The remaining elective credits may be chosen from a list of approved electives maintained by the program office.		10
Culminating Experience		
NEURO 600	Thesis Research	6
Total Credits		30

Doctor of Philosophy (Ph.D.)

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A minimum of 32 credits is required for the Ph.D. degree:

Code	Title	Credits
Required Courses		
<i>Core Requirements</i>		
BMS 502	Cell and Systems Biology	3
BMS 503	Flow of Cellular Information	3
NEURO 511	Neurobiology II	3
NEURO 520	Cellular and Molecular Neuroscience	3
NEURO 521	Systems Neuroscience	3
<i>Program Requirements</i>		
PHS 520	Principles of Biostatistics	3

NEURO 522	Seminars in Neuroscience I	2
NEURO 524	Neuroscience Bootcamp	2
NEURO 590	Colloquium	2
BMS 591	Biomedical Research Ethics	1
NEURO 602	Supervised Experience in College Teaching ¹	1

Electives

A minimum of 6 elective credits is required. 6

Total Credits 31

¹ In addition, Ph.D. students are required to complete 1 credit of NEURO 602; however, this 1 credit cannot be counted towards the minimum 31 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 an oral presentation and a written examination on anatomical course work,
- 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.