PHYSIOLOGY AND NEUROBIOLOGY (MS)

The Department of Physiology and Neurobiology offers Master of Science (M.S.) degrees in Physiology and Neurobiology. The M.S. may be either a research-based (Plan A) or coursework-based (Plan B) degree. Possible areas of focus include molecular and cellular physiology, circuit and behavioral neuroscience, development, disease and tissue repair, and genetics and genomics. The PNB M.S. program offers opportunity for intellectual growth through learning and discovery, development of technical and problem-solving skills, critical thinking, and effective scientific communication. The M.S. in Physiology and Neurobiology requirements conform to the Graduate School requirements as outlined in the Academic Regulations section of this catalog. Coursework and other requirements are described below. In special circumstances, the Advisory Committee may waive or modify some of these requirements.

Location

- Storrs Campus

Modality

- In Person

Requirements

M.S. in Physiology and Neurobiology (Plan A)

Required Courses

Course	Title	Credits
PNB 5001	Principles of Physiology and Neurobiology	3
PNB 5002	Principles of Physiology and Neurobiology II	3
PNB 5395	Investigation of Special Topics in Physiology and Neurobiology (Research Seminar) [1]	1
PNB 6405	Seminar in Research and Journal Presentations in Physiology and Neurobiology (Journal Club) [1]	1
GRAD 5950	Master's Thesis Research	9
Two additional 2-to-3 credit graduate level courses		

[1] Students should enroll each semester in the one-credit seminar.

All courses must be approved by the Advisory Committee. Students must pass all PNB courses with a grade of "B-" or better and maintain an overall GPA over 3.0.

Plan A Thesis and Master's Defense

Students must produce a body of research that is suitable for publication, as determined by their Advisory Committee. They must complete a written thesis describing their body of work and present their thesis at an advertised, public seminar. Following the presentation, the student must successfully defend the research orally in a private meeting, as determined by their Advisory Committee.

M.S. in Physiology and Neurobiology (Plan B)

Required Courses

Course	Title	Credits
PNB 5001	Principles of Physiology and Neurobiology	3
PNB 5002	Principles of Physiology and Neurobiology II	3
PNB 5395	Investigation of Special Topics in Physiology and Neurobiology (PNB Research Seminar) [1]	1
PNB 6405	Seminar in Research and Journal Presentations in Physiology and Neurobiology (Journal Club) [1]	1
Additional graduate-level courses		

[1] Students should enroll each semester in the one-credit seminar.

Students must complete at least 30 credits of coursework. M.S. Plan B students may not include GRAD 5950 Master's Thesis Research on their Plan of Study. All courses must be approved by the Advisory Committee. Students must pass all PNB courses with a grade of "B-" or better and maintain an overall GPA over 3.0.

Plan B Master's Defense

Students must pass an oral examination of three research questions administered by their Advisory Committee. At the start of their final semester, the student should propose three different narrowly defined topics related to physiology and/or neurobiology and receive approval from their Advisory Committee. The student should study these topics during the semester. This defense examination is open to the public and must be advertised at least two weeks prior to the exam. During the examination, the student presents on each of the three topics in turn, without the use of visual aids, and answers questions posed by the Advisory Committee, who determines the outcome of the defense.

Learning Objectives

1. Knowledge: Demonstrate appropriate breadth and depth of disciplinary knowledge and comprehension of the major topics, theories, and issues of the discipline.
2. Applied skills: Uses, disaggregates, reformulates and/or adapts principal ideas, techniques or methods of the field of study ethically, professionally, and based on best practices of the discipline.
3. Communication: Communicate proficiently and effectively to a specialist or non-specialist audience, verbally and in writing, a coherent argument or explanation summarizing aspects of the discipline.