

PHYSIOLOGY AND NEUROBIOLOGY (PHD)

The Department of Physiology and Neurobiology offers a Doctor of Philosophy (Ph.D.) degree in Physiology and Neurobiology. Possible areas of focus include molecular and cellular physiology, circuit and behavioral neuroscience, development, disease and tissue repair, and genetics and genomics. The PNB Ph.D. program offers opportunity for intellectual growth through learning and discovery, development of technical and problem-solving skills, critical thinking, and effective scientific communication. The Ph.D. 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

Required Courses

Students should complete at least six courses in the first three years of the program.

Course	Title	Credits
PNB 5001	Principles of Physiology and Neurobiology	3
PNB 5002	Principles of Physiology and Neurobiology II	3
Four additional graduate graduate-level (at least two of which must be PNB courses) ¹		8-12
GRAD 6950	Doctoral Dissertation Research ²	15
Total Credits		29-33

¹ Courses must be approved by the Advisory Committee as being related to the student's dissertation research.

² GRAD 6950 is generally taken after the dissertation proposal.

Students should also enroll each semester in the one-credit seminars PNB 6405 Seminar in Research and Journal Presentations in Physiology and Neurobiology and PNB 5395 Investigation of Special Topics in Physiology and Neurobiology. Students should complete their Plan of Study by the time they complete 18 credits.

General Exam and Dissertation Proposal

By the end of the third year of the Ph.D. program, students must pass the written Dissertation Proposal and the General Exam ("qualifying exam") orally administered by their Advisory Committee. Their Dissertation proposal consists of a written 12-page NIH style grant proposal, which is submitted two weeks prior to the General Exam.

Publication

Students must have a minimum of one first-author, peer-reviewed research article accepted for publication prior to defending their

dissertation. This requirement does not include reviews, abstracts, or conference proceedings.

Final Exam and Doctoral Dissertation Defense

Students must complete a written dissertation describing their body of work that makes a significant contribution to the field of study as evaluated by the Advisory Committee. Students must defend their dissertation at an advertised, public seminar. The approved Dissertation Proposal must be on file in the Office of the Registrar before the public announcement of the oral defense of the dissertation. Following the presentation, the student must successfully defend the research orally in a private meeting, as determined by their Advisory Committee. Its purpose is to assess the student's understanding of the area on which their research focuses, their research, and their dissertation.

Learning Objectives

1. Knowledge: Demonstrate appropriate breadth and depth of disciplinary knowledge and comprehension of the major topics, theories, and issues of the discipline, including demonstration of specialized knowledge of a sub-field sufficient to carry out substantive independent research or creative pursuits.
2. Research/applied skills: Use disciplinary methods and techniques ethically and professionally to apply knowledge, critically analyze, and, as appropriate to the degree, create new knowledge or achieve advanced creative accomplishments.
3. Communication: Communicate proficiently and effectively to a specialist or non-specialist audience, verbally and in writing, a structured, coherent academic presentation, representation, or argument that cogently summarizes their research or creative pursuit, relevant literature, and its significance at the level appropriate to discipline.