

PHYSICS PH.D.

All students must meet the Requirements for the Doctor of Philosophy Degree (<http://catalogue.uvm.edu/graduate/degree/requirements/requirementsforthedoctorofphilosophydegree/>).

OVERVIEW

The Department of Physics offers research opportunities in theoretical and experimental condensed matter physics, astronomy and astrophysics, and soft condensed matter physics and biophysics.

SPECIFIC REQUIREMENTS

Requirements for Admission to Graduate Studies for the Degree of Doctor of Philosophy

Undergraduate majors in physics are considered for admission to the program. Satisfactory scores on the Graduate Record Examination (general) are required.

Minimum Degree Requirements

75 credits, including:

6 Core Graduate Courses		
PHYS 301	Mathematical Physics	3
PHYS 311	Advanced Dynamics	3
PHYS 313	Electromagnetic Theory	3
PHYS 323	Contemporary Physics	3
PHYS 362	Quantum Mechanics II	3
PHYS 365	Statistical Mechanics	3
All of these courses must be completed with a grade B or better within the first 2 years of graduate study.		
To accommodate the needs of the specific subfields in physics such as astrophysics, biological physics, condensed- matter physics and materials physics, 3 elective courses (9 credits) have to be chosen to fulfill the breadth requirement with a grade of B or higher. Elective courses must be completed within the first 3 years of the program, as the fourth year (and beyond if needed) should be dedicated to progress towards the Ph.D. dissertation.		
A minimum of 20 credits of Doctoral Dissertation Reserach (PHYS 491)		20
A minimum of 3 credits of Teaching College Physics (PHYS 305)		3

Comprehensive Examination

At the start of their second semester at UVM, students are expected to sit for the written part of the Comprehensive Exam which covers classical mechanics, quantum mechanics, electricity and magnetism, as well as thermal physics and mathematical physics.

Students are given 2 opportunities to pass the comprehensive exam. In addition to the written portion, there is also an oral portion that

consists of a Ph.D. dissertation proposal given after the start of a dissertation research project.

Requirements for Advancement to Candidacy for the Degree of Doctor of Philosophy

Successful completion of all required courses and the comprehensive exam.