

PHYSICS, PHD

Degree Requirements

Course work must include the following:

Code	Title	Hours
PHY 711	Classical Mechanics and Mathematical Methods *	3
PHY 712	Electromagnetism *	3
PHY 741	Quantum Mechanics *	3
PHY 742	Quantum Mechanics *	3
PHY 770	Statistical Mechanics *	3
PHY 601	Physics Seminar (seven semesters)	3.5

* Unless satisfactorily completed elsewhere.

Students must also take three elective courses at the graduate level (600 or 700 level), at least one of which must be in physics. A research advisory committee, appointed after completion of the written preliminary examination, determines the additional courses needed for the degree, such as Advanced Quantum Mechanics, Biophysics, Solid State Physics, General Relativity, Nonlinear Optics, Math or Computer Science, Medical Physics, Biomedical Engineering, etc. Within eighteen months of completing the preliminary written examination, the student submits to his or her individual advisory committee and defends orally a dissertation research plan. This constitutes the oral part of the preliminary exam and upon passing it, the student can be advanced to candidacy. The successful completion of a program in scientific ethics is also required prior to admission to degree candidacy. This requirement is fulfilled either by participating in the courses designated by the Graduate School or by satisfactory completion of approved departmental electives that incorporate extensive discussion of scientific ethics. The research advisory committee meets annually with the student to ensure timely progress toward the degree. Upon completion of the research in the approved plan, the student writes his or her dissertation, presents it to the department, and defends it orally.

For additional degree requirements, see Requirements for Degrees (<https://bulletin.wfu.edu/graduate/requirements-degrees/>).