

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

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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, or courses from Math, 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. All PhD students admitted in Fall 2023 or later must fulfill the Physics graduate program scientific ethics requirement in the Fall of their second year through one of two options:

Option A: Take the CITI online RCR modules (biomedical or physical sciences as appropriate) and take a 2-hr online workshop through ORSP. This option is required for students funded via an NSF-funded RA or fellowship; those students may need to complete this earlier under some circumstances

Option B: Take CITI online RCR modules in biomedical sciences and GRD 713 through the biomedical graduate program on the medical school campus. This option is required for students on NIH training grants or fellowships."

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/>).