

PH.D. IN PHYSICS

Requirements Effective Fall 2026

Students are required to maintain the department's requirements for normal progress (<https://www.physics.colostate.edu/normal-progress/>).

Any course substitutions, waivers, or transfer credits must be approved by the departmental Graduate Advisory Committee.

Code	Title	Credits
Core Courses ¹		21
PH 571	Mathematical Methods for Physics I	
PH 621	Classical Mechanics	
PH 641	Electromagnetism I	
PH 642	Electromagnetism II	
PH 651	Quantum Mechanics I	
PH 652	Quantum Mechanics II	
PH 671	Statistical Mechanics	
Seminar		4
PH 692	Seminar ²	
Physics Electives ³		9
DSCI 550/PH 550	Computational Physical Statistics	
PH 521	Introduction to Lasers	
PH 522	Introductory Laser Laboratory	
PH 531	Introductory Condensed Matter Physics	
PH 561	Elementary Particle Physics	
PH 721	Advanced Atomic, Molecular, Optical Physics	
PH 731	Condensed Matter Theory	
PH 762	Elementary Particle Theory	
PH 770	Quantum Theory	
Non-classroom courses		8-38
PH 693	Current Topics in Physics Research	
PH 698	Research	
PH 699	Thesis	
PH 784	Supervised College Teaching	
PH 795	Independent Study	
PH 799	Dissertation	
Other courses ⁴		0-15
ATS 3XX-7XX		
CHEM 3XX-7XX		
CS 3XX-7XX		
DSCI 3XX-5XX		
ECE 3XX-7XX		
GRAD 3XX-7XX		
MATH 3XX-7XX		
MECH 3XX-7XX		
MSE 3XX-7XX		
PH 3XX-7XX		
STAR 3XX-7XX		
STAT 3XX-7XX		

Master's Degree Credit ⁵	0-30
Program Total	72

A minimum of 72 credits are required to complete this program.

¹ A 3.0 GPA is required for the Core Courses.

² This is a 1-credit course, which must be taken at least 4 times.

³ At least 3 credits at the 600- or 700- level, and at least 3 credits in a subject outside the student's primary area of research. Any substitutions in this category must be approved by the student's advisor and the Graduate Advisory Committee.

⁴ With approval of the student's advisor.

⁵ Up to 30 credits may be accepted from a prior Master's degree.