

# PHYSICS, B.S.

## Requirements

Requires 38 hours in physics and must include the following courses:

Code	Title	Hours
<b>Required Major Courses</b>		
PHY 123	General Physics I - Studio Format	4
or PHY 113	General Physics I	
or PHY 111	Mechanics Waves and Heat	
PHY 124	General Physics II - Studio Format	4
or PHY 114	General Physics II	
PHY 215	Elementary Modern Physics	3
PHY 230	Electronics	3
PHY 262	Mechanics	3
PHY 265	Intermediate Laboratory I	1
PHY 266	Intermediate Laboratory II	1
PHY 301	Physics Seminar (at least twice)	1
PHY 337	Analytical Mechanics	1.5
PHY 339	Electricity and Magnetism	1.5
PHY 340	Electricity and Magnetism	3
PHY 341	Thermodynamics and Statistical Mechanics *	3
PHY 343	Quantum Physics	3
PHY 344	Quantum Physics	3

The remaining hours may be satisfied with any other 300-level course in the department except PHY 381.

### Co-Requirements

MTH 113	Multivariable Calculus	4
MTH 205	Introduction to Linear Algebra and Differential Equations	4
or MTH 121 & MTH 251	Linear Algebra I and Ordinary Differential Equations	

One additional course at the 200 level or above in statistics, mathematics, or computer science other than independent study courses is required

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Students may substitute CHM 341 for PHY 341.

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Students must earn a minimum C grade in MTH 113, MTH 205 or MTH 121/MTH 251.

Students are advised to complete math requirements as early as possible. Students are strongly encouraged to take either CSC 102 or CSC 111; early in their curriculum if possible. CSC 111 would be appropriate for majors who are interested in further study in computer science, such as through a double major or minor in Computer Science. Otherwise, we encourage our majors to take CSC 102.

No student may be a candidate for a degree with a major in physics with a grade less than C in General Physics without special permission of the department. Students must achieve a minimum GPA of 2.0 in physics courses for graduation.

## Honors

Highly qualified majors are invited by the department to apply for admission to the honors program in physics through the major adviser. To be graduated with the designation "Honors in Physics," students must:

- pass PHY 381
- write a paper on the results of the research in that course
- pass an oral exam on the research and related topics given by a committee of three physics faculty members
- obtain a GPA of at least 3.3 in physics and 3.0 overall