

# PHYSICS MAJOR

## Requirements

All students planning to major in physics are required to take the following courses. Because of the sequential nature of the curriculum, students should pursue the following plan of study.

Students enrolled in the 3-2 Cooperative Program in Engineering complete the requirements for the physics degree through the junior year. They then transfer to an engineering program and complete an additional two years. They earn a double bachelor's degree in physics and engineering.

		Credits
<b>Freshman</b>		
PHYS 1601 & PHYS 1511	Introduction to Physics I and Physics I Lab	5
PHYS 1602 & PHYS 1512	Introduction to Physics II and Physics II Lab	5
MATH 1206	Calculus I	4
MATH 1207	Calculus II	4
<b>Credits</b>		<b>18</b>
<b>Sophomore</b>		
PHYS 2005	Introduction to Modern Physics	4
PHYS 2201	Classical Mechanics I	4
CHEM 1321 & CHEM 1331	General Chemistry I and General Chemistry Lab I	6
CHEM 1322 & CHEM 1332	General Chemistry II and General Chemistry Lab II	6
MATH 2004	Multivariable Calculus I	4
MATH 2005	Multivariable Calculus II	4
<b>Credits</b>		<b>28</b>
<b>Junior</b>		
PHYS 2011	Intermediate Laboratory	2
PHYS 3001	Electricity and Magnetism I	4
PHYS 3013	Experimental Techniques in Engineering and Physics	3
PHYS 3101	Math Methods in Physics I	4
PHYS 3102	Math Methods in Physics II	4
PHYS 3211	Computational Physics and Programming I	2
PHYS 3401	Thermo and Stat Physics	4
PHYS 4005	Quantum Mechanics I	4
<b>Credits</b>		<b>27</b>
<b>Senior</b>		
Select two of the following electives (except those in the 3-2 Cooperative Program in Engineering):		8
PHYS 3601	Optics	
PHYS 4003	Classical Mechanics II	
PHYS 4004	Electricity and Magnetism II	
PHYS 4006	Quantum Mechanics II	
PHYS 4011	Nuclear and Particle Physics	
PHYS 4012	Solid State Physics	
PHYS 4401	Undergraduate Research I	

PHYS 4402	Undergraduate Research II	
<b>Credits</b>		<b>8</b>
<b>Total Credits</b>		<b>81</b>

The minimum acceptable grade in all courses required for a degree in physics or engineering physics is a C-. All majors must meet with their faculty adviser each semester prior to registration to have their course schedules approved.

Physics and engineering physics majors are expected to take all required major courses at Fordham. Exceptions may be made on a case-by-case basis for certain rare and compelling reasons. Under no circumstances can more than two external courses be transferred toward the major.

## Availability

The major in physics is available at Fordham College at Rose Hill. Students in Fordham's School of Professional and Continuing Studies may major in physics only if they receive the approval of their advising dean and/or department, and their schedules are sufficiently flexible to permit them to take day courses at the Rose Hill campus.

**Fordham College at Rose Hill students:** The requirements above are in addition to those of the Core Curriculum.

**Professional and Continuing Studies students:** The requirements above are in addition to those of the PCS Core Curriculum and any additional electives that may be required to earn a minimum of 124 credits.