

B.S. IN PHYSICS

College of the Sciences and Mathematics

Curriculum

Code	Title	Credits
GENERAL EDUCATION REQUIREMENTS (http://catalog.wcupa.edu/undergraduate/general-education-requirements/)		
Academic Foundations		
First Year Experience requirement		4
English Composition requirement		6-7
Mathematics requirement		3-4
Interdisciplinary requirement		3
Diverse Communities requirement		3
Ethics requirement		3
Distributed Disciplinary Foundations		
Science requirement		6-8
Behavioral & Social Science requirement		6
Humanities requirement		6
Arts requirement		3
ADDITIONAL BACCALAUREATE REQUIREMENTS (http://catalog.wcupa.edu/undergraduate/general-education-requirements/)		
University Requirements		
Writing Emphasis requirement		9
Speaking Emphasis requirement		9
Degree Requirements		
Capstone requirement		1-15
MAJOR REQUIREMENTS		
Major Courses ^{1,2}		
PHY 170	Physics I	4
PHY 175		
PHY 180	Physics II	4
PHY 240	Introduction to Modern Physics	3
PHY 300	Mechanics ¹	3
PHY 310	Intermediate Physics Lab: Experimental Methods & Scientific Communication ¹	3
PHY 350	Heat and Thermodynamics ¹	3
PHY 370	Mathematical Physics ¹	3
PHY 420	Quantum Mechanics I ¹	3
PHY 430	Electricity and Magnetism I ¹	3
MAT 161	Calculus I	4
MAT 162	Calculus II	4
MAT 261	Calculus III	4
MAT 311	Linear Algebra	3
MAT 343	Differential Equations	3
CHE 103	General Chemistry I	3
CHE 104	General Chemistry II	3
CRL 103	General Chemistry I Lab	1
CRL 104	General Chemistry II Lab	1
Select an additional 9 credits in physics from available electives at the 300 level or above ^{3,4}		9
Capstone Requirement		
PHY 455	Advanced Physics Lab: Experimental Methods & Scientific Communication	3
Free Electives		
		14

Select 17 credits of free electives	17
Total Minimum Credits Required	120

- Physics courses at the 300-level or higher must be completed with a grade of C or better.
- Some of these courses may also fulfill general education requirements.
- We recommend strongly that students on the applied track take PHY 330 and PHY 410 as electives.
- We recommend strongly that students on the graduate school track take PHY 425 and PHY 435.
- This course fulfills the Capstone requirement.

Students must maintain a GPA of 2.0 or greater in their physics courses. Transfer students must take 15 or more physics credits at West Chester at the 300 level and above for graduation.

Sample Course Plan

To track their individual degree progress, students are advised to access their Degree Progress Report (DPR) via myWCU regularly. For more information, visit wcupa.edu/DegreeProgressReport (<http://wcupa.edu/degreeprogressreport/>).

The following is a sample suggested course sequence for this program; course offerings and availability are not guaranteed. Students should consult their academic advisor with any questions.

Course	Title	Credits
Year One		
Semester One		
MAT 161	Calculus I	4
WRT 120	Effective Writing I	3-4
or	or Effective Writing with Supplemental	
WRT 123	Writing Workshop	
FYE 100X	First Year Experience	4
General Education / Free Elective		3
General Education / Free Elective		3
Credits		17-18
Semester Two		
PHY 170	Physics I	4
MAT 162	Calculus II	4
WRT 2XX	200-Level WRT Course	3
General Education / Free Elective		3
Credits		14
Year Two		
Semester Three		
PHY 180	Physics II	4
MAT 261	Calculus III	4
MAT 321	Combinatorics and Graph Theory	3
General Education / Free Elective		3
Credits		14
Semester Four		
PHY 275	Computational Physics	3
PHY 240	Introduction to Modern Physics	3
MAT 343	Differential Equations	3
General Education / Free Elective		3
General Education / Free Elective		3
Credits		15
Year Three		
Semester Five		
PHY 300	Mechanics	3
PHY 370	Mathematical Physics	3

PHY 420	Quantum Mechanics I	3
CHE 103	General Chemistry I	3
CRL 103	General Chemistry I Lab	1
General Education / Free Elective		3
Credits		16
Semester Six		
PHY 350	Heat and Thermodynamics	3
PHY XXX	Physics Elective ¹	3
CHE 104	General Chemistry II	3
CRL 104	General Chemistry II Lab	1
General Education / Free Elective		3
General Education / Free Elective		3
Credits		16
Year Four		
Semester Seven		
PHY 310	Intermediate Physics Lab: Experimental Methods & Scientific Communication	3
PHY 430	Electricity and Magnetism I	3
PHY XXX	Physics Elective ¹	3
General Education / Free Elective		3
General Education / Free Elective		3
Credits		15
Semester Eight		
PHY 455	Advanced Physics Lab: Experimental Methods & Scientific Communication	3
PHY XXX	Physics Elective ¹	3
General Education / Free Elective		3
General Education / Free Elective		3
General Education / Free Elective		3
Credits		15
Total Credits		122-123

¹ Recommended PHY electives for students in the graduate school track are PHY 425 and PHY 435. Recommended PHY electives for students in the applied track are PHY 330 and PHY 410.

1. Majors shall not be permitted more than one repeat of a Physics course.
2. Upper level courses (numbered 300 or above) must be completed with a grade of C or higher.
3. All Physics electives must be at the 300 level or above