

B.S.ED. IN PHYSICS

College of Education and Social Work

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 ⁷		3
Distributed Disciplinary Foundations		
Science requirement		6-8
Behavioral & Social Science requirement		6
Humanities requirement ^{1,4}		6
Arts requirement		3
ADDITIONAL BACCALAUREATE REQUIREMENTS (http://catalog.wcupa.edu/undergraduate/general-education-requirements/)		
University Requirements		
Writing Emphasis requirement ⁵		9
Speaking Emphasis requirement ⁶		9
Degree Requirements		
Capstone requirement		1-15
MAJOR REQUIREMENTS		
Required Core Courses ²		
PHY 170	Physics I	4
PHY 180	Physics II	4
PHY 240	Introduction to Modern Physics	3
PHY 275	Computational Physics	3
PHY 300	Mechanics	3
PHY 310	Intermediate Physics Lab: Experimental Methods & Scientific Communication	3
PHY 330	Electronics I	3
PHY 410	Optics	3
or PHY 430	Electricity and Magnetism I	
PHY 455	Advanced Physics Lab: Experimental Methods & Scientific Communication	3
Required Supporting Math & Science Courses ²		
MAT 161	Calculus I ⁴	4
MAT 162	Calculus II	4
MAT 261	Calculus III	4
MAT 315	Differential Equations and Linear Algebra	3
CHE 103	General Chemistry I ⁴	3
CRL 103	General Chemistry I Lab	1
CHE 104	General Chemistry II	3
CRL 104	General Chemistry II Lab	1
PHY 105	Structure of the Universe	3
or ESS 111	Other Worlds, Other Stars	
Select one elective in biology ⁴		3
Education Requirements		

EDF 300	Democracy and Education ⁴	3
EDP 280	Developmental and Psychological Perspectives in Education	3
EDA 103	Foundations of Special Education	3
EDA 303	Special Ed: Processes/Procedures for General Educators	2
EDR 347	Literacy Development and Secondary Students with Disabilities in Inclusive Classrooms	3
LAN/ENG 382	Teaching English Language Learners PK-12 ⁴	3
ERM 355	Ethical and Effective Assessment for Learning 7-12 ⁴	3
SED 100	An Exploration of Secondary Education	3
SED 200	Learning Environments and Field Experience in Secondary Schools	3
SED 300	Principles of Teaching and Technology in the Secondary Classroom	3
SED 360	Science Education in the Secondary School	3
Capstone Requirement		
SED 411	Student Teaching Sec - 1st Half ³	6
SED 412	Student Teaching Sec - 2nd Half ³	6
Total Minimum Credits Required		127/128

¹ A LIT course is required for the program.

² Program courses must be completed with a grade of C- or better.

³ This course fulfills the Capstone requirement.

⁴ This course meets gen ed requirements.

⁵ Writing Emphasis requirements are satisfied by SED 300, PHY 310, and PHY 455.

⁶ Speaking Emphasis requirements are satisfied by SED 200, SED 411, and SED 412.

⁷ Ethics requirement is satisfied by ERM 355.

Students must maintain a GPA of 2.0 or greater in their physics courses. Transfer students must take nine or more physics credits at West Chester at the 250 level and above for graduation. See the Educator Preparation Programs (<http://catalog.wcupa.edu/undergraduate/education-social-work/educator-preparation-programs/>) section of this catalog for an explanation of related requirements.

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		
PHY 105	Structure of the Universe	3
MAT 161	Calculus I	4
WRT 120	Effective Writing I	3
FYE 100X	First Year Experience	4
Humanities Gen Ed		3
Credits		17

Semester Two		
PHY 170	Physics I	4
MAT 162	Calculus II	4
SED 100	An Exploration of Secondary Education	3
EDP 280	Developmental and Psychological Perspectives in Education	3
WRT 2XX	200-Level WRT Course	3
Credits		17

Year Two		
Semester Three		
PHY 180	Physics II	4
MAT 261	Calculus III	4
EDA 103	Foundations of Special Education	3
EDF 300	Democracy and Education	3
LIT 165	Topics in Literature	3
Credits		17

Semester Four		
PHY 275	Computational Physics	3
PHY 240	Introduction to Modern Physics	3
MAT 315	Differential Equations and Linear Algebra	3
SED 200	Learning Environments and Field Experience in Secondary Schools	3
EDA 303	Special Ed: Processes/Procedures for General Educators	2
Behavioral & Social Science Gen Ed		3
Credits		17

Year Three		
Semester Five		
PHY 300	Mechanics	3
PHY 310	Intermediate Physics Lab: Experimental Methods & Scientific Communication	3
CHE 103 & CRL 103	General Chemistry I and General Chemistry I Lab	4
LAN 382 or ENG 382	Teaching English Language Learners PK-12 or Teaching English Language Learners PK-12	3
EDR 347	Literacy Development and Secondary Students with Disabilities in Inclusive Classrooms	3
Credits		16

Semester Six		
PHY 455	Advanced Physics Lab: Experimental Methods & Scientific Communication	3
PHY 330	Electronics I	3
CHE 104 & CRL 104	General Chemistry II and General Chemistry II Lab	4
SED 300	Principles of Teaching and Technology in the Secondary Classroom	3
ERM 355	Ethical and Effective Assessment for Learning 7-12	3
Credits		16

Year Four		
Semester Seven		
PHY 410	Optics	3
BIO 110	General Biology I	4
SED 360	Science Education in the Secondary School	3
Behavioral & Social Science Gen Ed		3

Arts Gen Ed		3
Credits		16
Semester Eight		
SED 411	Student Teaching Sec - 1st Half ¹	6
SED 412	Student Teaching Sec - 2nd Half ¹	6
Credits		12
Total Credits		128

¹ Field course. Clearances required.