

PHYSICS EDUCATION 6-12 (B.ED.) - EARTH SCIENCE - ONLINE

Important: This degree plan is effective for those starting this degree program in fall 2024 through summer 2025. This degree plan will remain in effect for students who do not break enrollment or who do not change degree programs, concentrations, or cognates.

General Education/Foundational Skills Requirements

Code	Title	Hours
Communication & Information Literacy ¹		
COMS 101	Speech Communication	3
ENGL 101	Composition and Rhetoric	3
HIUS 221	Survey of American History I	3
	Information Literacy Elective	3
Technological Solutions & Quantitative Reasoning ¹		
UNIV 104	Instructional Technology for Successful Online Learning	0-3
	MATH Elective	3
Critical Thinking		
ENGL 201	American Literature I	3
RLGN 104	Christian Life and Biblical Worldview ²	4
Civic & Global Engagement		
CSTU 101	Western Culture	3
Social & Scientific Inquiry ¹		
PSYC 210	Developmental Psychology	3
	Natural Science Elective	3
Christianity & Contexts		
BIBL 104	Survey of Old and New Testament	4
THEO 104	Introduction to Theology Survey ²	4
Total Hours		39-42

¹ Refer to the list of approved general education electives before enrolling in foundational skills requirements

² Students transferring in 45 or more UG credit hours will have the requirement of RLGN 104 waived; Students transferring in 60 or more UG credit hours will also have the requirement of THEO 104 waived

As a requirement for completion of this program, including student teaching and passing required licensure tests, the graduate of this program, regardless of state residency, must obtain a VA state teaching license. The VA teaching license may then be used for reciprocity in another state according to the regulations of that state.

Major Requirements

Code	Title	Hours
Major Foundational Courses		
ENGL 102	Composition and Literature ¹	3
MATH 131	Calculus and Analytic Geometry I ¹	4

Code	Title	Hours
PHYS 231	University Physics I ¹	4
Total Hours		11

¹ Course may fulfill select general education requirements

Code	Title	Hours
Major Core ¹		
<i>Education Courses</i>		
EDSC 419	Teaching Science Content Methods for the Middle and Secondary School	3
EDUC 201	Introduction to Education and Classroom Technology	3
EDUC 221	Content Area Reading and Differentiated Teaching and Learning	3
EDUC 230	Foundations of Reading and Literacy	3
EDUC 235	Content Instructional Design	3
EDUC 350	Behavior and Individual Differences	3
EDUC 360	Foundations of Education	3
EDUC 425	Content Measurement and Evaluation	3
EDUC 435	Content Curriculum Fundamentals	3
<i>Practicum and Gate Courses</i>		
EDGT 175	School of Education Gate 1 – UG Initial Licensure - Distance	0
EDGT 275	School of Education Gate 2 – UG Initial Licensure - Distance	0
EDGT 375	School of Education Gate 3 – UG Initial Licensure - Distance	0
EDUC 188	Practicum in Education I: Distance ²	0
EDUC 388	Practicum in Education III: Distance ²	0
EDSC 488	Science Lab Practicum in Schools ^{2,3}	0
<i>Secondary Courses</i>		
BIOL 101	Principles of Biology	3
CHEM 108	Chemistry for Health Science Professionals	4
MATH 132	Calculus and Analytic Geometry II	4
MATH 410	Matrix and Linear Algebra	3
PHYS 232	University Physics II	4
PHYS 305	Introduction to Modern Physics	3
PHYS 310	Numerical Methods in Physics	3
PHYS 321	Mechanics	3
PHYS 331	Electricity and Magnetism	3
PHYS 432	Thermodynamics and Statistical Mechanics	3
PHYS 440	Wave Optics	4
<i>Student Teaching</i>		
EDST 475	The Reflective Educator: Resource Seminar	3
	Choose one of the following: ^{2,4}	9
EDST 460	Student Teaching - One Placement – Distance	
EDST 461	Student Teaching - One Placement – Local	
EDST 464	Student Teaching - Own Classroom – Distance	
EDST 465	Student Teaching - Own Classroom – Local	
EDST 466	Student Teaching - Multiple Endorsement - One Placement – Distance	

Code	Title	Hours
EDST 467	Student Teaching - Multiple Endorsement - One Placement – Local	
Total Hours		76

¹ Relevant 300-400 level PHYS courses require successful completion of MATH 430.

² Liberty University School of Education Background check is required for all practicums and student teaching.

³ EDSC 488 is a required practicum course that requires a background check; candidates should not plan to take this course in summer sessions.

⁴ This course should be taken in the final semester.

Code	Title	Hours
Concentration		
PHSC 121	Introduction to Astronomy	3
PHSC 122	Elements of Astronomy Lab	1
PHSC 210	Elements of Earth Science	3
PHSC 211	Elements of Earth Science Lab	1
PHSC 311	Oceanography	3
PHSC 312	Meteorology	3
PHSC 313	Mineralogy and Petrology	4
Total Hours		18

Note:

- All practicum courses should be completed before student teaching, and candidate should not plan to take those courses in summer terms.

All applicable prerequisites must be met

Graduation Requirements

- 133 Total Hours
- 3.0 Overall grade point average
- 33.25 Hours must be upper-level courses (300-400 level)
- Grade of 'C'** Minimum required for all courses in the major and concentration
- 25% Of major taken through Liberty University
- 33.25 Hours must be completed through Liberty University
- Grad App** Submission of Degree Completion Application must be completed within the last semester of a student's anticipated graduation date

Course Sequence

Course	Title	Hours
First Year		
First Semester		
BIBL 104	Survey of Old and New Testament	4
ENGL 101	Composition and Rhetoric	3
RLGN 104	Christian Life and Biblical Worldview	4
UNIV 104	Instructional Technology for Successful Online Learning	0-3
EDGT 175	School of Education Gate 1 – UG Initial Licensure - Distance	0

Course	Title	Hours
EDUC 201	Introduction to Education and Classroom Technology	3
Hours		14-17

Second Semester

COMS 101	Speech Communication	3
THEO 104	Introduction to Theology Survey	4
Information Literacy Elective (ENGL 102) ¹		3
MATH Elective (MATH 131) ¹		4
EDGT 275	School of Education Gate 2 – UG Initial Licensure - Distance	0
PSYC 210	Developmental Psychology	3

Hours **17**

Second Year

First Semester

HIUS 221	Survey of American History I	3
EDUC 221	Content Area Reading and Differentiated Teaching and Learning	3
Natural Science Elective (PHYS 231) ¹		4
MATH 132	Calculus and Analytic Geometry II	4
PHSC 121	Introduction to Astronomy	3
PHSC 122	Elements of Astronomy Lab	1

Hours **18**

Second Semester

ENGL 201	American Literature I	3
EDUC 188	Practicum in Education I: Distance ²	0
EDUC 235	Content Instructional Design	3
EDUC 350	Behavior and Individual Differences	3
PHSC 210	Elements of Earth Science	3
PHSC 211	Elements of Earth Science Lab	1
PHYS 232	University Physics II	4

Hours **17**

Third Year

First Semester

EDSC 419	Teaching Science Content Methods for the Middle and Secondary School	3
EDSC 488	Science Lab Practicum in Schools ^{2,3}	0
EDUC 360	Foundations of Education	3
PHSC 311	Oceanography	3
PHSC 312	Meteorology	3
PHYS 305	Introduction to Modern Physics	3
PHYS 310	Numerical Methods in Physics	3

Hours **18**

Second Semester

BIOL 101	Principles of Biology	3
EDUC 388	Practicum in Education III: Distance ²	0
EDUC 425	Content Measurement and Evaluation	3
EDUC 435	Content Curriculum Fundamentals	3
PHYS 321	Mechanics	3
PHYS 331	Electricity and Magnetism	3
MATH 410	Matrix and Linear Algebra	3

Hours **18**

Course	Title	Hours
Fourth Year		
First Semester		
CSTU 101	Western Culture	3
CHEM 108	Chemistry for Health Science Professionals	4
EDGT 375	School of Education Gate 3 – UG Initial Licensure - Distance	0
PHSC 313	Mineralogy and Petrology	4
PHYS 432	Thermodynamics and Statistical Mechanics	3
PHYS 440	Wave Optics	4
Hours		18
Second Semester		
EDST 475	The Reflective Educator: Resource Seminar	3
Student Teaching Option ^{2,4}		9
Hours		12
Total Hours		132-135

**Relevant 300-400 level PHYS courses require successful completion of MATH 430.

¹ Refer to the list of approved general education electives at www.liberty.edu/gened before enrolling in foundational skills requirements

² Liberty University School of Education Background check is required for all practicums and student teaching

³ EDSC 488 is a required practicum course that requires a background check; candidates should not plan to take this course in summer sessions.

⁴ Choose one of the following Student Teaching options: EDST 460, 461, 464, 465, 466, or 467