

# BACHELOR OF SCIENCE IN EDUCATION DEGREE IN SECONDARY EDUCATION - PHYSICS WITH GENERAL SCIENCE CONCENTRATION

Additional Graduation Requirements (<https://catalog.una.edu/undergraduate/academic-procedures-requirements/graduation-requirements/>)

Code	Title	Hours
<b>General Education Component: Physics with General Science Concentration</b>		
Area I (Written Composition)		6
EN 111	First-Year Composition I	
EN 112	First Year Composition II	
Area II (Humanities and Fine Arts)		12
Two literature courses in sequence (EN 211/EN 212, EN 221/EN 222, EN 231/EN 232) or one literature course and one additional humanities elective		
One Humanities or Fine Arts Elective		
COM 201	Fundamentals of Speech	
Area III (Natural Sciences and Mathematics)		12
MA 125	Calculus I	4
BI 111	Principles of Biology	4
BI 112	Principles of Biology	4
Area IV (History, Social and Behavioral Sciences)		12
ED 299	Human Growth and Development <sup>1</sup>	
Area V ( <a href="https://www.una.edu/areav/">https://www.una.edu/areav/</a> )		
<b>Professional Education Secondary: Physics with General Science Concentration (Grades 6-12)</b>		
Note: ASBI/FBI background clearance is a prerequisite for all Professional Education Courses.		
ED 292	Preprofessional Seminar and Laboratory Experience	1
ED 381	Instructional Technology for the High School	3
ED 375	Content Literacy	3
EEX 340	Introduction to Students with Exceptional Learning Needs	3
SCED 480	Teaching Science in the Secondary Schools	3
ED 333W	Learning Theories and Student Development	3
ED 382	Classroom Management for Diverse Learning Environments and Communities	3
ED 401	Evaluation of Teaching and Learning	3
ED 477	Curriculum and Teaching	4
ED 482	High School Student Internship	12
<b>Alabama State Board of Education Approved Teaching Field: Physics with General Science Concentration</b>		
BI 375	Cell Biology	4
BI 306	Genetics	4
CH 111	General Chemistry	3

CH 111L	General Chemistry Laboratory	1
CH 112	General Chemistry	3
CH 112L	General Chemistry Laboratory	1
CH 311	Organic Chemistry	4
CH 311L	Organic Chemistry Laboratory	1
ES 131	Earth Science/Physical Geology	4
ES 132	Historical Geology	4
PH 241	General Physics I	4
PH 242	General Physics II	4
One course with accompanying lab from the following:		4-5
CH 321 & 321LW	Quantitative Analysis and Quantitative Analysis Laboratory	
CH 322 & 322LW	Instrumental Analysis and Instrumental Analysis Laboratory	
CH 381 & 381L	Physical Chemistry and Physical Chemistry Laboratory	
CH 381L	Physical Chemistry Laboratory	
One course from the following:		3-4
ES 302	Energy	
ES 303	Sustainable Food and Agriculture	
ES 320W	Environmental Justice	
ES 410	Tectonics	
ES 455W	Paleobiology	
One course from the following:		3-5
BI 307	Microbiology	
BI 312	Evolution	
BI 421	Ecology	
CH 312 & 312L	Organic Chemistry and Organic Chemistry Laboratory	
PH 123	Exploring the Cosmos I	
PH 124	Exploring the Cosmos II	
PH 356W	Intermediate Laboratory	
<b>Total Hours</b>		<b>140</b>

<sup>1</sup> The CLEP examination may be taken for this course

## Notes:

- Candidates may take the following professional education courses prior to admission to TEP: Preprofessional Seminar and Laboratory Experience (ED 292), Content Literacy (ED 375), Instructional Technology for the High School (ED 381), Introduction to Students with Exceptional Learning Needs (EEX 340), and a content methods course.
- Courses that are taken to fulfill general education requirements which are also included in a teaching field may count in both areas.
- Candidates who plan to seek certification in another state should contact the State Department of Education in that state to find out whether or not a comparable certificate exists in that state.
- All requirements must be completed with a minimum of 120 credit hours.