

# BACHELOR OF SCIENCE IN EDUCATION DEGREE IN SECONDARY EDUCATION - CHEMISTRY

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

Code	Title	Hours
<b>General Education Component: Chemistry</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)		11-12
CH 111	General Chemistry	
CH 111L	General Chemistry Laboratory	
CH 112	General Chemistry	
CH 112L	General Chemistry Laboratory	
MA 112	College Algebra	
or MA 125	Calculus I	
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> )		17-19
PH 251	Technical Physics I	
PH 252	Technical Physics II	
One course chosen from the following:		
CIS 125	Business Applications of Microcomputer Software	
CS 135	Computer Skills for Problem-Solving	
CS 155	Computer Science I	
Math sequence chosen from the following:		
MA 126	Calculus II (or)	
MA 121 & MA 122	Calculus for Business and Life Sciences I and Calculus for Business and Life Sciences II	
<b>Professional Education Secondary: Chemistry (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

## Alabama State Board of Education Approved Teaching Field:

### Chemistry

CH 311	Organic Chemistry	4
CH 311L	Organic Chemistry Laboratory	1
CH 312	Organic Chemistry	4
CH 312L	Organic Chemistry Laboratory	1
CH 321	Quantitative Analysis	3
CH 321LW	Quantitative Analysis Laboratory	2
CH 322	Instrumental Analysis	3
CH 322LW	Instrumental Analysis Laboratory	2
CH 381	Physical Chemistry	4
CH 381L	Physical Chemistry Laboratory	1
<b>Total Hours</b>		<b>121-123</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.