

CHEMISTRY/BIOCHEMISTRY/ SECONDARY MAJOR, BACHELOR OF ARTS IN EDUCATION (BAE)

This major satisfies the endorsement for grades 5-12.

See the Education Department for prerequisites and additional requirements.

Secondary Education Core

EDUC 200 & EDUC 303 & EDUC 309	ADMISSION TO TEACHER EDUCATION and FOUNDATIONS OF ASSESSMENT and FOUNDATIONS OF SECONDARY CLASSROOM MANAGEMENT (these three courses must be taken concurrently)	7
EDUC 201	INTRODUCTION TO EDUCATION	3
EDUC 341	SECONDARY STRATEGIES, MANAGEMENT, ASSESSMENT	4
EDUC 413	CONTENT AREA LITERACY: MANAGEMENT AND ASSESSMENT FOR SECONDARY EDUCATION CANDIDATES	4
EDUC 420	ADMISSION TO PROFESSIONAL CANDIDACY	1
EDUC 426	SECONDARY STUDENT TEACHING 7-12	15
PSYC 304	EDUCATIONAL PSYCHOLOGY	5
SPED 363	INTRODUCTION TO SPECIAL EDUCATION	4
30-hour multicultural education field requirement		

Required Courses

CHEM 151	GENERAL CHEMISTRY	5
CHEM 152	GENERAL CHEMISTRY	5
CHEM 153	GENERAL CHEMISTRY	5
CHEM 304	QUANTITATIVE ANALYSIS	6
CHEM 316 or CHEM 121	ENVIRONMENTAL CHEMISTRY CHEMISTRY AND ITS ROLE IN SOCIETY	5
CHEM 352	ORGANIC CHEMISTRY	4
CHEM 351	ORGANIC CHEMISTRY	4
CHEM 372	ORGANIC CHEM LABORATORY I	3
CHEM 390	CHEMICAL METHODS IN SECONDARY SCHOOL	2
CHEM 421	PHYSICAL CHEMISTRY	4
CHEM 422	PHYSICAL CHEMISTRY	3
CHEM 480	BIOCHEMISTRY	5
SCED 390	SCIENCE TEACHING METHODS	2

Required Supporting Courses

MATH 161	CALCULUS I	5
MATH 162	CALCULUS II	5
MATH 163	CALCULUS III	5
PHYS 151	GENERAL PHYSICS I	4
PHYS 152	GENERAL PHYSICS II	4
PHYS 153	GENERAL PHYSICS III	4
PHYS 161	MECHANICS LABORATORY	1
PHYS 162	HEAT AND OPTICS LABORATORY	1

PHYS 163	INSTRUMENTATION LAB I	1
Total Credits		126

For information on General Education, see Undergraduate Degree (<http://catalog.ewu.edu/archives/2016-2017/undergraduate-degree>).

Student Learning Outcomes—students will

- demonstrate a knowledge of major concepts in the areas of inorganic, organic, analytical and physical chemistry;
- demonstrate knowledge and skills sufficient for them to safely teach chemistry in the secondary school setting;
- demonstrate a capacity to use modern instrumentation and classical techniques for the analysis and/or separation of chemicals and an ability to interpret data;
- demonstrate effective oral and written communication skills and critical thinking skills as related to the field of chemistry;
- demonstrate knowledge of safe practices in the handling, usage and disposal of chemicals.