

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

This major satisfies the endorsement requirements for grades 5–12.

Note:

- BAE students must complete both the courses below and the secondary education core courses;
- the option requires more than 12 quarters to complete at 15 credits per quarter.

Grade Requirements: a cumulative GPA ≥ 2.8 for all courses $\geq C$ in each course in student's curriculum in Biology.

Secondary Education students must complete the required Secondary Education Core and the following courses.

Required Biology Courses		
BIOL 171	BIOLOGY I	5
BIOL 172	BIOLOGY II	5
BIOL 173	BIOLOGY III	5
BIOL 270	BIOLOGICAL INVESTIGATION	3
BIOL 301	MICROBIOLOGY	5
BIOL 302	BOTANY	5
BIOL 310	FUNDAMENTALS OF GENETICS	5
BIOL 340	BIOETHICS	2
BIOL 423	EVOLUTION	5
BIOL 440	ECOLOGY	4
BIOL 441	ECOLOGY LAB	2
Choose one of the following		5
BIOL 303	INVERTEBRATE ZOOLOGY	
BIOL 304	VERTEBRATE ZOOLOGY	
Choose one of the following		4-5
BIOL 334	HUMAN ANATOMY AND PHYSIOLOGY III	
BIOL 351	PRINCIPLES OF ANIMAL PHYSIOLOGY	
BIOL 352	PRINCIPLES OF PLANT PHYSIOLOGY	
BIOL 353	PRINCIPLES OF MICROBIAL PHYSIOLOGY	
Required Supporting Courses		
CHEM 171 & 171L & CHEM 172 & CHEM 172L & CHEM 173 & CHEM 173L	GENERAL CHEMISTRY I and GENERAL CHEMISTRY LABORATORY I and GENERAL CHEMISTRY II and GENERAL CHEMISTRY LABORATORY II and GENERAL CHEMISTRY III and GENERAL CHEMISTRY LABORATORY III	15
SCED 390	SCIENCE TEACHING METHODS	5
Choose one of the following		5
BIOL 380	DATA ANALYSIS FOR BIOLOGISTS	
MATH 142	PRECALCULUS MATH II	
MATH 380	ELEMENTARY PROBABILITY AND STATISTICS	
Required Senior Capstones—must be taken concurrently		
SCED 490A	SCIENCE TEACHING CAPSTONE SEMINAR	3

SCED 490B	SCIENCE TEACHING CAPSTONE FIELD APPLICATION	2
Total Credits		85-86

School of Education (<http://catalog.ewu.edu/ps/se/>)

Secondary Education Core

EDUC 303 & EDUC 309 & EDUC 341 & EDUC 386A & EDUC 413	FOUNDATIONS OF ASSESSMENT and FOUNDATIONS OF SECONDARY CLASSROOM MANAGEMENT and SECONDARY STRATEGIES, MANAGEMENT, ASSESSMENT and FIELD EXPERIENCE AND PRACTICUM and CONTENT AREA LITERACY: MANAGEMENT AND ASSESSMENT FOR SECONDARY EDUCATION CANDIDATES	15
EDUC 386B & EDUC 427	FIELD EXPERIENCE AND PRACTICUM and GENERAL STUDENT TEACHING K-12 (These are variable credit courses. The minimum for each is 3 credits.)	6-15
EDUC 426	SECONDARY STUDENT TEACHING 5-12	12
Total Credits		33-42

Plan of Study

The following plan of study is for a student with zero credits. Individual students may have different factors such as: credit through transfer work, Advanced Placement, Running Start, or any other type of college-level coursework that requires an individual plan.

Courses could be offered in different terms, checking the academic schedule is paramount in keeping an individual plan current. **Students should connect with an advisor to ensure they are on track to graduate.**

All Undergraduate students are required to meet the Undergraduate Degree Requirements (<http://catalog.ewu.edu/undergraduate-degree/>).

First Year			
Fall Quarter	Credits Winter Quarter	Credits Spring Quarter	Credits
BIOL 171	5 BIOL 172	5 BIOL 173	5
ENGL 101	5 BIOL 270	3 CHEM 172 & 172L (Natural Science BACR 2)	5
Humanities & Arts BACR 1 ¹	5 CHEM 171 & 171L (Natural Science BACR 1)	5 ENGL 201	5
	15	13	15
Second Year			
Fall Quarter	Credits Winter Quarter	Credits Spring Quarter	Credits
CHEM 173 & 173L	5 BIOL 310	5 BIOL 334, 351, 352, or 353	4-5
CMST 200, 201, or 340	4-5 BIOL 380	5 Diversity - graduation requirement ¹	5
EDUC 201	3 PSYC 204	5 Social Science BACR 1 ¹	5
Humanities & Arts BACR 2 ¹	5		
	17-18	15	14-15
Third Year			
Fall Quarter	Credits Winter Quarter	Credits Spring Quarter	Credits
BIOL 301	5 BIOL 302	5 BIOL 303 or 304	5
BIOL 440	4 BIOL 423	5 BIOL 340	2
BIOL 441	2 Global Studies - graduation requirement ¹	5 EDUC 303	3
SPED 363	4	EDUC 413	3

		Social Science BACR 2 ¹		5
		15	15	18
Fourth Year				
Fall Quarter	Credits Winter Quarter	Credits Spring Quarter	Credits	
EDUC 309	3 EDUC 427	4 EDUC 426	12	
EDUC 341	3 EDUC 386B	3		
EDUC 386A	3 SCED 490A (Senior Capstone - graduation requirement)	3		
SCED 390	5 SCED 490B (Senior Capstone - graduation requirement)	2		
Elective - certificate, minor, or general elective	3 Elective - certificate, minor, or general elective	2		
		17	14	12

Total Credits 180-182

¹ University Graduation Requirements (UGR) and Breadth Area Course Requirements (BACR) courses may be less than 5 credits and additional credits may be required to reach the required 180 total credits needed to graduate. Students should connect with an advisor to ensure they are on track to graduate.

University Competencies and Proficiencies

English (<http://catalog.ewu.edu/undergraduate-degree/#newitemtext>)
 Quantitative and Symbolic Reasoning (<http://catalog.ewu.edu/undergraduate-degree/#mathcompproficiencies>)
 Placement and Clearance (<http://catalog.ewu.edu/placement/>)
 Prior Learning/Sources of Credit AP, CLEP, IB (<http://catalog.ewu.edu/prior-learning/>)

General Education Requirements (<http://catalog.ewu.edu/undergraduate-degree/#generaleducationrequirements>) (GER)

- Minimum Credits—180 cumulative credit hours
 - 60 upper-division credits (300 level or above)
 - 45 credits in residence (attendance) at Eastern, with at least 15 upper-division credits in major in residence at Eastern
- Minimum Cumulative GPA ≥ 2.0

Breadth Area Core Requirements (BACR)

Humanities and Arts (<http://catalog.ewu.edu/undergraduate-degree/#humanitiesandfineartsgecrtext>)
 Natural Sciences (<http://catalog.ewu.edu/undergraduate-degree/#naturalsciencesgecrtext>)
 Social Sciences (<http://catalog.ewu.edu/undergraduate-degree/#socialsciencesgecrtext>)

University Graduation Requirements (<http://catalog.ewu.edu/undergraduate-degree/#universitygraduationrequirements>) (UGR)

Diversity Course List (<http://catalog.ewu.edu/undergraduate-degree/#cultureandgenderdiversityintheuslisttext>)
 World Language (<http://catalog.ewu.edu/undergraduate-degree/#worldlanguagetext>) (for Bachelor of Arts)
 Global Studies Course List (<http://catalog.ewu.edu/undergraduate-degree/#internationalstudiesrequirementtext>)

Minor or Certificate (<http://catalog.ewu.edu/undergraduate-degree/#majorminororcertificateugrtext>)
 Senior Capstone Course List (<http://catalog.ewu.edu/undergraduate-degree/#capstonecourselisttext>)

Application for Graduation (use EagleNET (<https://inside.ewu.edu/eaglenet/>)) must be made at least two terms in advance of the term you expect to graduate (undergraduate and post-baccalaureate).

Use the Catalog Archives (<http://catalog.ewu.edu/archives/>) to determine *two important catalog years*.

Requirements in Degree Works (<https://inside.ewu.edu/records-and-registration/degree-works/>) are based on these two catalog years:

- The catalog *in effect at the student's first term* of current matriculation is used to determine **BACR** (Breadth Area Credit Requirements) **and** **UGR** (Undergraduate Graduation Requirements).
- The catalog *in effect at the time the student declares a major or minor* is used to determine the program requirements.

Students who earn a BAE in Biology/Secondary from EWU should be able to:

- apply best practices to teach biology that are outlined in the Next Generation Science Standards;
- demonstrate effective strategies for teaching biology to a community of diverse students;
- demonstrate understanding of core concepts in biology;
- describe the procedures for responding to potential safety hazards in the laboratory, classroom, and field;
- shows evidence of integrating the three dimensions of the Next Generation Science Standards.