

BIOLOGY - SECONDARY EDUCATION MAJOR, BACHELOR OF SCIENCE (BS)

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

Secondary Education Program Prerequisites

All prerequisite courses must have been completed within the last 6 years.

A grade $\geq$ B- in all prerequisite courses is required for admission to the Education program.

CMST 201 or CMST 340	PUBLIC SPEAKING INTERCULTURAL COMMUNICATION	5
EDUC 201	INTRODUCTION TO EDUCATION	3
ENGL 201	COLLEGE COMPOSITION: ANALYSIS, RESEARCH AND DOCUMENTATION (or approved equivalent)	5
SOST 300	PEOPLES AND GOVERNANCE OF THE PACIFIC NORTHWEST	5
SPED 363	INTRODUCTION TO SPECIAL EDUCATION	4
PSYC 204	EDUCATIONAL PSYCHOLOGY	5
Quantitative and Symbolic Reasoning proficiency*		5
Total Credits		32

* Quantitative and Symbolic Reasoning courses (<http://catalog.ewu.edu/undergraduate-degree/#mathcompproficiencytext>)

Grade Requirements: A cumulative GPA $\geq$ 2.8 for all courses, $\geq$ C in each required biology course and required supporting course, $\geq$ B- in each required education course.

Required Biology Courses

BIOL 171 & 171L	BIOLOGY I and BIOLOGY I LAB	5
BIOL 172 & 172L	BIOLOGY II and BIOLOGY II LAB	5
BIOL 173 & 173L	BIOLOGY III and BIOLOGY III LAB	5
BIOL 270 & 270L	BIOLOGICAL INVESTIGATION and BIOLOGICAL INVESTIGATION LAB	3
BIOL 310	FUNDAMENTALS OF GENETICS	5
BIOL 340	BIOETHICS	2
BIOL 423	EVOLUTION	5
BIOL 440	ECOLOGY	4
BIOL 441	ECOLOGY LAB	2
BIOL 490 & 490L	SENIOR CAPSTONE and SENIOR CAPSTONE LAB	5
Choose one of the following		5
BIOL 301 & 301L	MICROBIOLOGY and MICROBIOLOGY LAB	
BIOL 302 & 302L	BOTANY and BOTANY LAB	
BIOL 303 & 303L	INVERTEBRATE ZOOLOGY and INVERTEBRATE ZOOLOGY LAB	
BIOL 304 & 304L	VERTEBRATE ZOOLOGY and VERTEBRATE ZOOLOGY LAB	
Choose one of the following		4
BIOL 351	PRINCIPLES OF ANIMAL PHYSIOLOGY	
BIOL 352	PRINCIPLES OF PLANT PHYSIOLOGY	
BIOL 353	PRINCIPLES OF MICROBIAL PHYSIOLOGY	
Choose one of the following		5
BIOL 380	DATA ANALYSIS FOR BIOLOGISTS	

MATH 380	ELEMENTARY PROBABILITY AND STATISTICS	
MATH 142	PRECALCULUS MATH II	
Required Supporting Courses		
CHEM 171	GENERAL CHEMISTRY I	4
CHEM 171L	GENERAL CHEMISTRY LABORATORY I	1
CHEM 172	GENERAL CHEMISTRY II	4
CHEM 172L	GENERAL CHEMISTRY LABORATORY II	1
CHEM 173	GENERAL CHEMISTRY III	4
CHEM 173L	GENERAL CHEMISTRY LABORATORY III	1
PHYS 115	INVESTIGATING PHYSICAL SCIENCE	5
Required Education Courses		
EDUC 303	FOUNDATIONS OF ASSESSMENT	3
EDUC 309	FOUNDATIONS OF SECONDARY CLASSROOM MANAGEMENT	3
EDUC 341	SECONDARY STRATEGIES, MANAGEMENT, ASSESSMENT	3
EDUC 386A	FIELD EXPERIENCE AND PRACTICUM	3
EDUC 386B	FIELD EXPERIENCE AND PRACTICUM	3
EDUC 413	CONTENT AREA LITERACY: MANAGEMENT AND ASSESSMENT FOR SECONDARY EDUCATION CANDIDATES	3
EDUC 426	SECONDARY STUDENT TEACHING 5-12	12
EDUC 427	GENERAL STUDENT TEACHING K-12	3-15
SCED 390	SCIENCE TEACHING METHODS	5
Required Senior Capstone		
SCED 490A	SCIENCE TEACHING CAPSTONE SEMINAR	3
SCED 490B	SCIENCE TEACHING CAPSTONE FIELD APPLICATION	2
Total Credits		118-130

University Competencies and Proficiencies

English (<http://catalog.ewu.edu/undergraduate-degree/#newitemtext>)
 Quantitative and Symbolic Reasoning (<http://catalog.ewu.edu/undergraduate-degree/#mathcompproficiencytext>)
 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/#generaleducationrequirementstext>) (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/#universitygraduationrequirementstext>) (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 expected to graduate (undergraduate and post-baccalaureate).

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

1. The catalog *in effect at the student's first term* of current matriculation is used to determine **BACR** (Breadth Area Core Requirements) **and** **UGR** (Undergraduate Graduation Requirements).
2. 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 BS in Biology - Secondary Education from EWU should be able to:

- demonstrate understanding of core concepts in biology;
- show evidence of integrating the three dimensions of the Next Generation Science Standards;
- 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;
- describe the procedures for responding to potential safety hazards in the laboratory, classroom, and field.