BIOLOGY MAJOR, BACHELOR OF SCIENCE IN BIOLOGY (BS)

Graduation Requirements: complete the Educational Testing Service (ETS) Major Field Test for Biology.

See the Biology Department website (https://www.ewu.edu/cstem/biology/biology-bs/#guides) for additional information about advising tracks including Pre-Veterinary medicine, Pre-Pharmacy, and many others.

Grade Requirements: a cumulative GPA ≥2.0 for all courses in student's curriculum in Biology.

Required Biology Courses		
BIOL 171	BIOLOGY I	5
BIOL 172	BIOLOGY II	5
BIOL 173	BIOLOGY III	5
BIOL 270	BIOLOGICAL INVESTIGATION	3
BIOL 310	FUNDAMENTALS OF GENETICS	5
Choose one of the following		
BIOL 301	MICROBIOLOGY	5
or BIOL 302	BOTANY	
or BIOL 303	INVERTEBRATE ZOOLOGY	
or BIOL 304	VERTEBRATE ZOOLOGY	
Choose one of the following		
BIOL 423	EVOLUTION	4-5
or BIOL 440	ECOLOGY	
Choose one of the following		
BIOL 436	CELL BIOLOGY	5
or BIOL 438	MOLECULAR BIOLOGY	
Choose one of the following		
BIOL 334	HUMAN ANATOMY AND PHYSIOLOGY III	4-5
or BIOL 351	PRINCIPLES OF ANIMAL PHYSIOLOGY	
or BIOL 352	PRINCIPLES OF PLANT PHYSIOLOGY	
or BIOL 353	PRINCIPLES OF MICROBIAL PHYSIOLOGY	
Required Supporting Courses		
BIOL 380	DATA ANALYSIS FOR BIOLOGISTS	5
or MATH 161	CALCULUS I	
or MATH 380	ELEMENTARY PROBABILITY AND STATISTICS	
CHEM 171	GENERAL CHEMISTRY I	15
& 171L	and GENERAL CHEMISTRY LABORATORY I	
& CHEM 172	and GENERAL CHEMISTRY II	
& CHEM 172L	and GENERAL CHEMISTRY LABORATORY II	
& CHEM 173	and GENERAL CHEMISTRY III	
& CHEM 173L	and GENERAL CHEMISTRY LABORATORY III	
Electives–21 of 36 credits must be in Biology, non-Biology electives must be approved by faculty advisor.		**36**
Required Senior Capstone		
BIOL 490	SENIOR CAPSTONE	5
Total Credits		**102-104**

University Competencies and Proficiencies

English (http://catalog.ewu.edu/undergraduate-degree/#newitemtext)
Quantitative and Symbolic Reasoning (http://catalog.ewu.edu/undergraduate-degree/#mathcompproficienciestext)
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)
Foreign Language (http://catalog.ewu.edu/undergraduate-degree/#foreignlanguageugrtext) (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).

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Use the Catalog Archives (https://catalog.ewu.edu/archives/) to
 determine two important catalog years (http://catalog.ewu.edu/
undergraduate-degree/#activecatalogruletext).
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Degree Works (https://inside.ewu.edu/records-and-registration/
degree-works/) calculates based on these two catalog years.
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a. 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).
b. The catalog *in effect at the time the student declares a major or minor* is used to determine the program requirements.

Students who successfully earn a BS in Biology from EWU should be able to do the following:

- apply basic concepts of cell biology, including understanding key terms;
- apply basic concepts of ecology and evolution, including understanding key terms;
- apply basic concepts of molecular biology and genetics, including understanding key terms;
- apply basic concepts of organismal biology, including understanding key terms;
- apply basic statistics to analyze and interpret quantitative data;
- compose written documents that communicate information in a manner consistent with scientific norms;
- deliver presentations that communicate information in a manner consistent with scientific norms;
- use scientific practices to generate evidence to support or refute proposed explanations for natural phenomena.