Program: Biology  
Major: Biology  
Degree: Bachelor of Science (B.S.)

University of Central Oklahoma Undergraduate Catalog 2020-2021

Minimum Required Hours
University Core  (Total Listed 42-44)

For a full list of courses see University Core.

• Courses from the major may apply to the areas marked in the University Core.

Written and Oral Communication ................................. 9
Quantitative Reasoning/Scientific Method ................... 10-11
• Math ................................................................. 3
• Life Science ...................................................... 4
• Physical Science ............................................... 3-4
Critical Inquiry and Aesthetic Analysis ....................... 6
Aesthetic Analysis .................................................. 3
Critical Inquiry ..................................................... 3

Support Courses

Support Courses ................................................... 0-6

Students majoring in Biology are encouraged to complete the following courses in high school.

Two years of high school algebra and one year of Trigonometry OR
MATH 1453  Applied Algebra OR
MATH 1513  College Algebra AND
MATH 1593  Plane Trigonometry

Major Requirements

Biology ................................................................. 67

Biology Core (required of all degree candidates) .............. 26
Required Courses:
BIO 1204  Biology for Majors: Principles
BIO 1225  Biology for Majors: Diversity
BIO 2203  Cell Biology
BIO 2211  Cell Biology Laboratory
BIO 3054  Microbiology for Majors and Lab
BIO 3303  Genetics
BIO 3543  General Ecology
BIO 3703  Evolution
*BIO 4840  Capstone

Mathematics ........................................................... 6

Required courses:
MATH 2153  BioCalculus
STAT 2103  Intro Statistics for Sciences

Chemistry ............................................................. 15

Required courses:
CHEM 1103  General Chemistry I
CHEM 1112  General Chemistry I - Recitation/Lab
CHEM 1223  General Chemistry II
CHEM 1232  General Chemistry II - Recitation/Lab
CHEM 3303  Organic Chemistry I OR
CHEM 3013  Organic Chemistry for Life Sciences
CHEM 3312  Organic Chemistry I Lab OR
CHEM 3022  Organic Chemistry for Life Sciences Lab

American Historical and Political Analysis ......................... 6
American National Government ................................ 3
American History .................................................. 3

Cultural and Language Analysis ................................... 3-4
Second Language .................................................. 4
OR
Cultural Analysis .................................................. 3

Social and Behavioral Analysis ................................... 3

Life Skills ............................................................. 5
Required Health Course ......................................... 2
Elective Life Skills ................................................ 3

Minimum Required Hours

Physics ................................................................. 4

Required course:
PHY 1114  General Physics I and Lab

Upper Division Biology Electives
(to bring major total to 67)**................................ Both 16
AND/OR
** Any 3000/4000 level UCO BIO course or its equivalent AND/OR
CHEM 3403  Biochemistry I

** At least five courses taken for the B.S. in Biology must be BIO courses with a lab. These courses include the three lab courses required as part of the core: BIO 1225, BIO 2211, and BIO 3054.

*To enroll in a Capstone Experience, students must complete a minimum of 60 credit hours. This 0 credit hour course is designed to be taken in conjunction with a capstone experience. Capstone experiences may include the following courses or special projects in biology. Special projects include but are not limited to independent research, service learning, professional school applications, or other equivalent experiences as approved by the Capstone Coordinator. Approval of the Capstone Coordinator is required before starting any capstone experience. A reflective writing piece, which must receive a passing score, will be required for all capstones.

BIO 3000  Workshop in Biology
BIO 3990  Advanced Topics in Biology
BIO 4012  Intro to Biological Research
BIO 4871  Senior Seminar
BIO 4900  Practicum in Biology
BIO 4920  Workshop in Biology
BIO 4930  Individual Study in Biology
BIO 4950  Internship in Biology
BIO 4960  Institute in Biology
BIO 4970  Study Tour in Biology

A maximum of 2 credit hours of the courses listed above, whether taken in conjunction with the capstone experience or not, will apply to the 67 credit hours required in the major except when BIO 4012 is chosen. If BIO 4012 is chosen as the capstone experience, an additional 2 credit hours may be taken.

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**Electives to bring total to............................... 124**

General Physics II is a recommended elective.

Graduating seniors must take a national assessment exam in Biology as a graduation requirement for the B.S. in Biology.

**Minimum Grade Requirements**

1. Average in (a) all college course work, (b) course work at UCO, and (c) major courses....................................................... 2.00

2. A minimum grade of “C” must be earned in all courses in the major to count toward meeting degree requirements.

For other regulations pertaining to graduation, see [Academic Degree Requirements](#).