

Program: **Biology**
 Major: **Biology-Biomedical Sciences**
 Degree: **Bachelor of Science (B.S.)**

Dept: **Biology**
 College: **Mathematics and Science**
 Major Code: **6001**

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

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**

**Minimum
Required Hours**

Support Courses

Support Courses.....0-6

Students majoring in Biology-Biomedical Sciences 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-Biomedical Sciences 73

Biology Core 20

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 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

Physics..... 4

Required course:

- PHY 1114 General Physics I and Lab

****Guided Electives..... 28**

Selected from the following:

- BIO 3254 Comparative Vertebrate Anatomy and Lab
- BIO 3311 Intro to Genetics Lab Methods
- BIO 3414 Histology and Lab
- BIO 3703 Evolution
- BIO 3803 Mammalian Physiology I
- BIO 3813 Mammalian Physiology II
- BIO 4134 Developmental Biology and Lab
- BIO 4264 Mammalogy & Lab
- BIO 4334 Environmental Microbiology & Lab
- BIO 4343 Molecular Biology Techniques & Lab
- BIO 4414 Virology and Lab
- BIO 4454 Molecular Cell Physiology & Lab
- BIO 4504 Mycology & Lab
- BIO 4515 Pathogenic Micro and Immunology & Lab
- BIO 4622 Methods of Human Dissection & Prosection
- BIO 4743 Population Genetics & Lab
- BIO 4763 Biology of Cancer
- BIO 4774 Parasitology and Lab
- CHEM 3323 Organic Chemistry II
- CHEM 3332 Organic Chemistry II Lab
- CHEM 3403 Biochemistry I
- CHEM 4103 Biochemistry II
- PHY 1214 General Physics II and Lab

*A maximum of 2 credit hours from the following list of capstone courses may apply toward the 28 credit hours of guided electives.

- 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

Program: **Biology**- continued
 Major: **Biology-Biomedical Sciences**
 Degree: Bachelor of Science (B.S.)

Dept: Biology
 College: Mathematics and Science
 Major Code: 6001

**Minimum
Required Hours**

- CONTINUED FROM PREVIOUS PAGE -

BIO	4930	Individual Study in Biology
BIO	4950	Internship in Biology
BIO	4960	Institute in Biology
BIO	4970	Study Tour in Biology

*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 above 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.

Minimum hours required 125*

*Total hours required for this major may exceed the minimum 124 credit hour institutional requirement and will vary according to course selection. It is recommended students complete high school algebra II, trigonometry, physics, and two years of a second language in high school. Graduating seniors must take a national assessment exam in Biology as a graduation requirement for the B.S. in Biology-Biomedical Sciences.

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.](#)**

**Students accepted to graduate medical and allied health professional schools (e.g. Chiropractic, Dentistry, Medicine, Optometry, Osteopathic Medicine, Pharmacy, Veterinary Medicine) prior to completing this degree will be allowed to transfer a maximum of 30 credit hours from the first year of medical course work toward the guided electives and electives included in this degree.

To be eligible, students must have successfully completed the following minimum requirements from UCO before matriculation into the professional program: 1) 94 credit hours total; 2) 30 credit hours in residence at UCO; 3) 15 upper division credit hours in the major; 4) 50% of the total major credit hours; and 5) all regular degree requirements, including general education. (Students must apply for their bachelor's degree within two years of completing their UCO work, but no later than graduation from medical school.)