

**Degree Requirements: Biology (310)–Bachelor of Science**

School of Arts and Sciences

Department of Agriculture, Biology, and Health Sciences

Catalog Year: 2024-2025

General Education Requirements (44-46 hours)		
Communication (9 hours)	American History (3 hours)	Behavioral Science (3 hours)
ENGL 1113; ENGL 1213; COMM 1113	HIST 1483 or 1493	FAMS 1123, PSY 1113, SOCI 1113
Mathematics (3-5 hours)	Political Science (3 hours)	Economics (3 hours)
MATH 1513, 1613, 2215, 2713	PS 1113	AGRC 2013, ECON 2003, ECON 2013, GEOG 3023
Science* (8-9 hours)	Humanities* (6 hours)	Health and Wellness* (4 hours)
Biological Science: BIOL 1364/L Physical Science: CHEM 1361/1364	Diversity (3 hours) Aesthetics (3 hours) *One course taken from each category.	SES 2003, 2013, 2023, MSL 1112, PE 1--1, 2--1, 2--2 *Requirement waived for some students.
General Education Non-PE Electives (To total at least 44 hours, if needed)*.		
Gen ed electives must be selected from the list of approved general education courses, (MSL- and PE-prefixes excluded).		
University Requirements		
UNIV 1001 (1 hour)	Computer Literacy (BIOL 4901)	Capstone Experience (BIOL 3901, 4901)
Major Requirements (44-63 hours)		
Required Core Courses (14-25 hours)	Option (19-49 hours)	
BIOL 1364/L Principles of Biology I/Lab ((FA, SP) BIOL 1474/L Principles of Biology II/Lab (FA, SP) BIOL 2144/L Botany/Lab (Conc CMB & OB only) (SP) BIOL 2154/L Zoology/Lab (Conc CMB & OB only) (FA) BIOL 3014/L Genetics/Lab (FA, SP) BIOL 3043 Evolution (Conc CMB & OGB only) (FA) BIOL 3901 Biology Capstone I (FA) BIOL 4901 Biology Capstone II (SP) FA=Fall; SP=Spring; SU=Summer	Choose one of the following: Cellular and Molecular Biology Organismal Biology Medical Laboratory Science (See next page for course list)	
Additional Requirements (22-34 hours)		
CHEM 1361/1364 General Chemistry I/General Chemistry I Lab (All Options) CHEM 1471/1474 General Chemistry II/General Chemistry II Lab (All Options) CHEM 3314/L Organic Chemistry I/Lab (All Options) CHEM 3324/L Organic Chemistry II/Lab (Options CMB & MLS) CHEM 4403 Biochemistry I (Options CMB & MLS) MATH 1613 Plane Trigonometry (or higher) (Options CMB & OB) MATH 1513 or higher (Option OB) PHYS 1115/L Physics I/Lab OR PHYS 2015/L Physics I for Science and Engineering Majors I/Lab (Options CMB & OB) PHYS 1215/L Physics II/Lab OR PHYS 2025/L Physics II for Science and Engineering Majors I/Lab (Option CMB)		
General Electives (To Complete 124 hours)		
Graduation Requirements		
Department Requirements Minimum 124 Total Credit Hours Minimum 40 Upper Division Credit Hours Minimum 55 Liberal Arts & Science CreditHours Minimum 30 Credit Hours in Residence at CU		Minimum 60 Credit Hours at a 4-Year Institution Minimum ½ of Major Upper Div Hours Completed at CU 15 of last 30 Credit Hours or ½ of Major Completed at CU Retention GPA 2.0; Cameron GPA 2.0 Complete Graduation Application Online

Degree Requirements: Biology (310)–Bachelor of Science (Cont'd)**Option (19-49 hours)****Cellular and Molecular Biology (CMB)***Required Courses (8 hours)*

BIOL 3174/L Molecular Biology/Lab

BIOL 4174/L Cell Biology/Lab

Electives (11-12 hours)

BIOL 3054/L Plant Taxonomy/Lab

BIOL 3064/L Ecology/Lab

BIOL 3074/L Natural History of the Vertebrates/Lab

BIOL 3084/L Ornithology/Lab

BIOL 3093 Immunology

BIOL 3104/L Comparative Vertebrate Anatomy/Lab

BIOL 3114/L Mammalogy/Lab

BIOL 3124/L Histology/Lab

BIOL 3184/L Principles of Anatomy/Lab

BIOL 3194/L Fundamentals of Microbiology/Lab

BIOL 4004/L Physiology/Lab

BIOL 4054/L Vascular Plant Morphology/Lab

BIOL 4064/L Advance Ecology/Lab

BIOL 4114/L Advanced Microbiology/Lab

BIOL 4121-4 Special Studies (4 hours max)

BIOL 4153 Biometry

BIOL 4163 Physiology & Molecular Biology of Plants

BIOL 4421-3 Biology Internship (3 hours max)

Medical Laboratory Science (MLS)*Required Courses (49 hours)*BIOL 2134/L Human Physiology/Lab **OR** BIOL 4004/L Physiology/Lab

BIOL 3093 Immunology

BIOL 3174/L Molecular Biology/Lab

BIOL 3194/L Fundamentals of Microbiology/Lab

BIOL 4174/L Cell Biology/Lab

MLS 4117 Clinical Microbiology*

MLS 4125 Clinical Chemistry*

MLS 4236 Clinical Hematology*

MLS 4246 Clinical Immunology*

MLS 4325 Clinical Chemistry II*

MLS 4351 Topics in Medical Technology*

*Acceptance into an approved Oklahoma Consortium of Clinical Laboratory Science Affiliates (OCCLSA) clinical training program and departmental permission is required.

Organismal Biology (OB)*Required Courses (8 hours)*

BIOL 3064/L Ecology/Lab

BIOL 3054/L Plant Taxonomy/Lab **OR** BIOL 3074/LNatural History of Vertebrates/Lab **OR** BIOL 3104/L

Comparative Vertebrate Anatomy/Lab

Electives (11-12 hours)

BIOL 3054/L Plant Taxonomy/Lab

BIOL 3074/L Natural History of the Vertebrates/Lab

BIOL 3084/L Ornithology/Lab

BIOL 3093 Immunology

BIOL 3104/L Comparative Vertebrate Anatomy/Lab

BIOL 3114/L Mammalogy/Lab

BIOL 3124/L Histology/Lab

BIOL 3174/L Molecular Biology/Lab

BIOL 3184/L Principles of Anatomy/Lab

BIOL 3194/L Fundamentals of Microbiology/Lab

BIOL 4004/L Physiology/Lab

BIOL 4054/L Vascular Plant Morphology/Lab

BIOL 4064/L Advanced Ecology/Lab

BIOL 4114/L Advanced Microbiology/Lab

BIOL 4121-4 Special Studies (4 hours max)

BIOL 4153 Biometry

BIOL 4163 Physiology and Molecular Biology of Plants

BIOL 4174/L Cell Biology/Lab

BIOL 4421-3 Biology Internship (3 hours max)