

# ZOOLOGY MAJOR

## GRADUATION REQUIREMENTS

1. Complete all Zoology Core, Major Electives, Physical Sciences/Math, and AUCC Requirements.
2. **Minimum of 120 total credits.**
3. Minimum of **42 upper division credits** (300 level or above).  
\*30 upper division credits must be in-residence at CSU
4. Minimum of **2.0 CUMULATIVE GPA.**

## ALL UNIVERSITY CORE CURRICULUM (AUCC)

**Must earn at least a 2.0 cumulative GPA in the AUCC courses.**

### Categories 1 & 2: Fundamental Competencies

- 1A. Fundamental Competency – CO 150 (3 credits) \_\_\_\_\_
- 1B. Fundamental Competency (3 credits) fulfilled by major
- 1C. Fundamental Competency (3 credits) \_\_\_\_\_
2. Advanced Writing (3 credits) \_\_\_\_\_

### Category 3: Foundations and Perspectives

- 3A. Bio/Phys Sciences (7 credits) fulfilled by major
- 3B. Arts/Humanities (6 credits) \_\_\_\_\_
- 3C. Social/Behavioral (3) \_\_\_\_\_
- 3D. Historical Perspectives (3) \_\_\_\_\_

### Category 4: Depth and Integration

LIFE 320 and BZ 350 (see CORE Requirements below)

## GRADE REQUIREMENTS

**Must earn at least a C- in all Biology Core & Major Elective courses. This also applies to courses taken as substitutions for these requirements.**

## ZOOLOGY CORE REQUIREMENTS

- LIFE 102 Attributes of Living Systems (4) \_\_\_\_\_
- LIFE 103 Biology of Organisms (4) \_\_\_\_\_
- BZ 220 Introduction to Evolution (3) \_\_\_\_\_
- BZ 212 Animal Bio: Invertebrates (4) \_\_\_\_\_
- BZ 214 Animal Bio: Vertebrates (4) \_\_\_\_\_
- BZ 310 Cell Biology (4) \_\_\_\_\_
- BZ 350 Molecular & General Genetics (4) \_\_\_\_\_
- LIFE 320 Ecology (3) \_\_\_\_\_

## MAJOR ELECTIVES

**Select a minimum of 15 credits of electives listed on back of the check sheet.**

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## PHYSICAL SCIENCES/MATH

### CHEMISTRY

CHEM 111 (4) \_\_\_\_\_ CHEM 112 (1) \_\_\_\_\_  
**AND**  
CHEM 113 (3) \_\_\_\_\_ CHEM 114 (1) \_\_\_\_\_

### ORGANIC CHEMISTRY

CHEM 245 (4) \_\_\_\_\_ CHEM 246 (1) \_\_\_\_\_  
**OR**  
CHEM 341\* (3) \_\_\_\_\_ CHEM 343 (3) \_\_\_\_\_  
CHEM 344 (2) \_\_\_\_\_

### BIOCHEMISTRY

BC 351 (4) \_\_\_\_\_  
**OR**  
BC 401 (3) \_\_\_\_\_ BC 403 (3) \_\_\_\_\_

### PHYSICS

PH 121 (5) \_\_\_\_\_ PH 122 (5) \_\_\_\_\_  
**OR**  
PH 141 (5) \_\_\_\_\_ PH 142 (5) \_\_\_\_\_

### CALCULUS

MATH 155 (4) \_\_\_\_\_ **OR** MATH 160 (4) \_\_\_\_\_

### STATISTICS

STAT 301 (3) \_\_\_\_\_ **OR** STAT 307 (3) \_\_\_\_\_

\* Chemistry requires C or better in CHEM 341 to move on to CHEM 343.

**\*With approval of the Curriculum Committee, up to 3 credits of the following can be applied toward a student's major electives:**

- \*BZ 384 Supervised College Teaching
- \*BZ 487 Internship
- \*BZ 495 Independent Study
- \*BZ 498 Laboratory or Field Research

**Must complete a minimum of 15 credits from the Major Electives list. At least 8 credits must be “BZ” courses. The following is a list of Zoology-related electives that can be used to fulfill the Major Electives requirement:**

BZ 240 (3)	Synthetic Biology – Principles and Applications	BZ 479 (3)	Biology & Behavior of Dogs (online)
BZ 300 (3)	Animal Behavior	BZ 492A-G (1)	Seminar (topic dependent on instructor)
BZ 311 (4)	Developmental Biology	BZ 496 (1)	Group Study – Biology (Honors)
BZ 320 (3)	Biogeographic Approaches to Conservation	BZ 515 (3)	Physiological Ecology of Marine Vertebrates
BZ 329 (4)	Herpetology	BZ 526 (3)	Evolutionary Ecology
BZ 330 (4)	Mammalogy	BZ 535 (3)	Behavioral & Cognitive Ecology
BZ 335 (4)	Ornithology	BZ 544 (2)	Effective Science Presentations
BZ 339 (3)	Field Practicum (summer only)	BZ 560 (3)	Teaching & Communicating Science
BZ 340 (4)	Field Mammalogy (summer only)	BZ 562 (2)	Computational Approaches in Molecular Ecology
BZ 342 (3)	Exploring Range Shifts in a Changing World	BZ 565 (1)	Next Generation Sequencing
BZ 348 (4)	Theory of Pop. & Evolutionary Ecology	BZ 568 (3)	Sustaining River Ecosystems in a Changing World
BZ 349 (3)	Tropical Ecology & Evolution		
BZ 360 (3)	Bioinformatics & Genomics		
BZ 390 (3)	Biology of Sex		
BZ 401 (3)	Comparative Animal Physiology	<b>Up to 7 credits may be used from the following courses:</b>	
BZ 414 (3)	Vertebrate Climate Change Responses	AB 303 (2)	Entomology Lab
BZ 415 (4)	Marine Biology	AB 340 (3)	Insect Biotechnology
BZ 418 (4)	Ecology of Infectious Disease	ANEQ 320 (3)	Principles of Animal Nutrition
BZ 420 (3)	Evolutionary Medicine	ANEQ 322 (2)	Pet Nutrition
BZ 424 (3)	Principles of Systematic Zoology	ANEQ 323 (2)	Zoo Nutrition
BZ 425 (3)	Conservation & Population Genomics	ANTH 370 (3)	Primates
BZ 430 (3)	Animal Behavior & Conservation	ANTH 470 (4)	Paleontology Field School
BZ 433 (4)	Behavioral Genetics	BSPM 302 (2)	Applied & Gen Entomology
BZ 435A (2)	Study Abroad-Honduras: Dolphin Behavior & Physiology	BMS 300 (4)	Principles of Human Physiology
BZ 435B (3)	Study Abroad-Mexico: Practices in Marine Biology & Ecology	BMS 305 (4)	Domestic Animal Gross Anatomy
BZ 435C (3)	Study Abroad-Kenya: Biology & Behavior of African Mammals	FW 300 (2)	Biology & Diversity of Fishes
BZ 435D (3)	Study Abroad-Madagascar: Biology & Behavior of Primates	FW 301 (1)	Ichthyology Lab
BZ 449A (4)	Study Abroad-Ecuador: Ecology/Conservation-Ecuadorian Biodiversity	FW 400 (3)	Conservation of Fish in Aquatic Ecosystems
BZ 455 (3)	Human Heredity & Birth Defects	FW 405 (3)	Fish Physiology
BZ 460 (4)	Genome Evolution	GEOL 342 (3)	Paleontology
BZ 462 (5)	Parasitology & Vector Biology	MIP 300 (3)	General Microbiology
BZ 471 (3)	Stream Biology & Ecology	MIP 302 (2)	General Microbiology Lab
BZ 472 (1)	Stream Biology & Ecology Lab	MIP 315 (3)	Human & Animal Disease
BZ 475 (3)	Marine Mammalogy	MIP 342 (4)	Immunology
BZ 477 (2)	Genome Editing	MIP 343 (2)	Immunology Lab
BZ 478 (3)	Biology & Behavior of Cats (online)	NR 312 (3)	Applied Insect Ecology
		PHIL 325 (3)	Philosophy of Natural Science
		PHIL 326 (3)	Philosophy of Biology

**TRACK 1 HONORS PROGRAM STUDENTS ARE REQUIRED TO TAKE THE FOLLOWING COURSES TO FULFILL THE AUCC CURRICULUM**

**Category 1: Fundamental Competencies**

HONR 192 First Year Seminar (3) \_\_\_\_\_

HONR 193 Seminar (3) \_\_\_\_\_

**Category 2: Fundamental Competency**

Advanced Writing (3) \_\_\_\_\_

**Category 3B: Arts/Humanities**

HONR 292B Seminar (3) \_\_\_\_\_

HONR 392 Seminar (3) \_\_\_\_\_

**Category 3C: Social/Behavioral**

HONR 492 Senior Seminar (3) \_\_\_\_\_

**Category 3D: Historical Perspectives and 1C: Fundamental Competency**

HONR 399 Pre-Thesis (1) \_\_\_\_\_

HONR 499 Thesis (3) \_\_\_\_\_