



Department of
Integrative Biology
UNIVERSITY OF WISCONSIN-MADISON

Zoology Focus options

Zoology is a flexible bioscience major with many different courses that count towards the major. Within this flexibility it gives students the opportunities to delve into various biology areas or focus in an area of their interest. Below are the 3 focuses. The numbers in parentheses represent the number of credits. You are not forced to only take courses in one focus area.

Ecology, Evolution, and Animal Behavior Focus

Students preparing for work in ecology, conservation, evolution, environmental protection, or marine biology will find appropriate courses listed below. This area provides students with various fieldwork opportunities depending on the courses they choose.

- **ZOOLOGY 300 — INVERTEBRATE BIOLOGY AND EVOLUTION (3)**
- **ZOOLOGY 301 — INVERTEBRATE BIOLOGY AND EVOLUTION LAB (2)**
- **ZOOLOGY 303 — AQUATIC INVERTEBRATE BIOLOGY (3)**
- **ZOOLOGY 304 — MARINE BIOLOGY (2)**
- **ZOOLOGY 315 — LIMNOLOGY-CONSERVATION OF AQUATIC RESOURCES (2)**
- **ZOOLOGY 316 — LABORATORY FOR LIMNOLOGY-CONSERVATION OF AQUATIC RESOURCES (3)**
- **ZOOLOGY 320 — FIELD MARINE BIOLOGY (3)**
- **ZOOLOGY 335 — HUMAN/ANIMAL RELATIONSHIPS: BIOLOGICAL AND PHILOSOPHICAL ISSUES (3)**
- **ZOOLOGY 360 — EXTINCTION OF SPECIES (3)**
- **ZOOLOGY 410 — EVOLUTIONARY BIOLOGY (3)**
- **ZOOLOGY 415 — GENETICS OF HUMAN HISTORY (3)**
- **ZOOLOGY 425 — BEHAVIORAL ECOLOGY (3)**
- **ZOOLOGY 430 — COMPARATIVE ANATOMY OF VERTEBRATES (5)**
- **ZOOLOGY 450 — MIDWESTERN ECOLOGICAL ISSUES: A CASE STUDY APPROACH (2)**
- **ZOOLOGY 460 — GENERAL ECOLOGY (4)**
- **ZOOLOGY 473 — PLANT-INSECT INTERACTIONS (3)**
- **ZOOLOGY 510 — ECOLOGY OF FISHES (3)**
- **ZOOLOGY 511 — ECOLOGY OF FISHES LAB (2)**
- **ZOOLOGY 542 — INVERTEBRATE PALEONTOLOGY (3)**
- **ZOOLOGY 611 — COMPARATIVE AND EVOLUTIONARY PHYSIOLOGY (3)**
- **ZOOLOGY 612 — COMPARATIVE PHYSIOLOGY LABORATORY (2)**

- ZOOLOGY 619 — BIOLOGY OF MIND (3)
- ZOOLOGY 620 — NEUROETHOLOGY SEMINAR (2)
- ZOOLOGY 624 — MOLECULAR ECOLOGY (3)
- ZOOLOGY 651 — CONSERVATION BIOLOGY (3)
- ZOOLOGY 660 — CLIMATE CHANGE ECOLOGY (3)
- ZOOLOGY 672 — HISTORICAL ECOLOGY (2)
- ZOOLOGY 674 — BEHAVIORAL NEUROENDOCRINOLOGY SEMINAR (2)
- ZOOLOGY 677 — INTERNSHIP IN ECOLOGY (2)

Courses outside of zoo that count towards the major. 6 credits Max

- ANTHRO 458 — PRIMATE BEHAVIORAL ECOLOGY (3)
- ANTHRO 668 — PRIMATE CONSERVATION (3)
- ENVIR ST 361 — WETLANDS ECOLOGY (3)
- ENVIR ST 375 — FIELD ECOLOGY WORKSHOP (3)
- ENTOM 450 — BASIC AND APPLIED INSECT ECOLOGY (3)
- F&W ECOL 306 — TERRESTRIAL VERTEBRATES: LIFE HISTORY AND ECOLOGY (3)
- PSYCH 449 — ANIMAL BEHAVIOR (3-4)
- PSYCH 450 — PRIMATES AND US: INSIGHTS INTO HUMAN BIOLOGY AND BEHAVIOR (3)

Cell, Neuro, and Developmental Biology Focus

These courses serve as an introduction to advanced work and research at the molecular and cellular levels in areas such as embryological development, immunology, genetics, neurobiology and related biotechnology. This area is also appropriate for students preparing for medical careers.

- **ZOOLOGY 370 — GENERAL MOLECULAR BIOLOGY**
- **ZOOLOGY 415 — GENETICS OF HUMAN HISTORY**
- **GENETICS 466 — PRINCIPLES OF GENETICS* (3)**
- **ZOOLOGY 470 — INTRODUCTION TO ANIMAL DEVELOPMENT (3)**
- **ZOOLOGY 500 — UNDERGRADUATE NEUROBIOLOGY SEMINAR (1)**
- **ZOOLOGY 523 — NEUROBIOLOGY (3)**
- **ZOOLOGY 555 — LABORATORY IN DEVELOPMENTAL BIOLOGY (3)**
- **ZOOLOGY 570 — CELL BIOLOGY (3)**
- **ZOOLOGY 603 — ENDOCRINOLOGY (3-4)**
- **ZOOLOGY 604 — COMPUTER-BASED GENE AND DISEASE/DISORDER RESEARCH LAB (2)**
- **ZOOLOGY 619 — BIOLOGY OF MIND (3)**
- **ZOOLOGY 620 — NEUROETHOLOGY SEMINAR (2)**
- **ZOOLOGY 624 — MOLECULAR ECOLOGY (3)**
- **ZOOLOGY 655 — MODELING NEURODEVELOPMENTAL DISEASE (3)**
- **ZOOLOGY 674 — BEHAVIORAL NEUROENDOCRINOLOGY SEMINAR (2)**

Courses outside of zoo that count towards the major. 6 credits Max

- **ANAT&PHY 335 — PHYSIOLOGY* (5)**
- **ANAT&PHY 338 — HUMAN ANATOMY LABORATORY (2)**
- **BIOCHEM 501 — INTRODUCTION TO BIOCHEMISTRY (3)**
- **BIOCHEM 507 — GENERAL BIOCHEMISTRY I (3)**
- **GENETICS 545 — GENETICS LABORATORY (2)**
- **M M & I 341 — IMMUNOLOGY (3)**
- **PATH-BIO 528 — IMMUNOLOGY (3)**
- **PSYCH 454 — BEHAVIORAL NEUROSCIENCE (3-4)**

Animal Lovers and Pre-Vet Focus

This course list is more geared towards students interested in learning about animal biology, their anatomy, physiology, and more. There are several common Pre-vet requisites that are also included on this list which makes being a zoo student and a pre-vet so compatible. These courses are also compatible for students interested in animal care careers.

- **ZOOLOGY 300 — INVERTEBRATE BIOLOGY AND EVOLUTION (3)**
- **ZOOLOGY 301 — INVERTEBRATE BIOLOGY AND EVOLUTION LAB (2)**
- **ZOOLOGY 302 — INTRODUCTION TO ENTOMOLOGY (4)**
- **ZOOLOGY 303 — AQUATIC INVERTEBRATE BIOLOGY (3)**
- **ZOOLOGY 350 — PARASITOLOGY (3)**
- **ZOOLOGY 405 — INTRODUCTION TO MUSEUM STUDIES IN THE NATURAL SCIENCES (2-3)**
- **ZOOLOGY 430 — COMPARATIVE ANATOMY OF VERTEBRATES (5)**
- **GENETICS 466 — PRINCIPLES OF GENETICS* (3)**
- **ZOOLOGY 510 — ECOLOGY OF FISHES (3)**
- **ZOOLOGY 511 — ECOLOGY OF FISHES LAB (2)**
- **ZOOLOGY 520 — ORNITHOLOGY (3)**
- **ZOOLOGY 521 — BIRDS OF SOUTHERN WISCONSIN (3)**
- **ZOOLOGY 611 — COMPARATIVE AND EVOLUTIONARY PHYSIOLOGY (3)**
- **ZOOLOGY 612 — COMPARATIVE PHYSIOLOGY LABORATORY (2)**

Courses outside of zoo that count towards the major. 6 credits Max

- **ANTHRO 668 — PRIMATE CONSERVATION (3)**
- **BIOCHEM 501 — INTRODUCTION TO BIOCHEMISTRY (3)**
- **BIOCHEM 507 — GENERAL BIOCHEMISTRY I (3)**
- **ENTOM 450 — BASIC AND APPLIED INSECT ECOLOGY (3)**
- **F&W ECOL 306 — TERRESTRIAL VERTEBRATES: LIFE HISTORY AND ECOLOGY (3)**
- **F&W ECOL 548 — DISEASES OF WILDLIFE (3)**
- **MICROBIO 303 — BIOLOGY OF MICROORGANISMS (3)**
- **MICROBIO 304 — BIOLOGY OF MICROORGANISMS LABORATORY (2)**

*Genetics 466 counts like a regular zoology course and does not effect the 6 credit max of non-zoo credits for the major.

*Only 3 credits of ANAT&PHY 335 Physiology counts toward the 6 credits of approved non-ZOOLOGY subject courses.

For more information on these courses check out course search enroll app. Also, many of the zoology courses have sample syllabi, while they may not be super recent it should give you a better idea of what the course may be like. <https://integrativebiology.wisc.edu/courses/>

Please, check prerequisites before attempting to enroll in any course.