

# Zoology, B.S.

Zoology is the study of animals, the most diverse group of organisms on Earth. The field of Zoology includes the structure, embryology, evolution, classification, habits, and distribution of all animals, both living and extinct, and how they interact with their ecosystems. This curriculum will allow students to examine the diversity, anatomy, physiology, evolution, behavior, and ecology of animals while also giving students a strong background in the fundamentals of biological science. A degree in Zoology can open the door to a wide variety of careers in different industries. Studying Zoology will prepare students for veterinary, dental, or graduate school, and provides them with highly employable career options in animal care (e.g. aquaria, zoos, aviaries), wildlife biology, conservation, and government agencies. A degree in Zoology allows students to easily enter the workforce or continue to a professional or graduate program.

## Matriculation Requirements

BIOL 1610 College Biology I BB with C- or higher and approval of Biology Department advisor.

## Program Requirements

Code	Title	Credit Hours
<b>Total Credit Hours</b>		<b>120</b>
<b>General Education Requirements:</b>		<b>39 Credits</b>
ENGL 1010 or ENGL 1005	Introduction to Academic Writing CC Literacies and Composition Across Contexts CC	3
ENGL 2010	Intermediate Academic Writing CC	3
MATH 1050 or MATH 1055	College Algebra QL College Algebra with Preliminaries QL	4
Complete one of the following:		3
HIST 2700 & HIST 2710	US History to 1877 AS and US History since 1877 AS (6)	
HIST 1700	American Civilization AS (3)	
HIST 1740	US Economic History AS (3)	
POLS 1000	American Heritage AS (3)	
POLS 1100	American National Government AS (3)	
Complete the following:		
PHIL 2050 or PHIL 205G	Ethics and Values IH Ethics and Values IH GI	3
HLTH 1100 or EXSC 1097	Personal Health and Wellness TE Fitness for Life TE	2
Distribution Courses:		
BIOL 1610	College Biology I BB	4
CHEM 1210	Principles of Chemistry I PP	4
CHEM 1220	Principles of Chemistry II PP	4
Humanities Distribution		3
Fine Arts Distribution		3
Social/Behavioral Science		3
<b>Discipline Core Requirements</b>		<b>48 Credits</b>
BIOL 1615	College Biology I Laboratory	1
CHEM 1215	Principles of Chemistry I Laboratory	1
CHEM 1225	Principles of Chemistry II Laboratory	1
BIOL 1620 & BIOL 1625	College Biology II and College Biology II Laboratory	4
BIOL 3400	Cell Biology	3
BIOL 3500	Genetics	3
BIOL 3700	General Ecology	3

BIOL 4500	Principles of Evolution WE	3
BIOL 492R	Professional Development	1
BIOL 4940	Student Seminar WE	2
BIOL 497R	Biology Colloquium (0.5 cr, two required)	1
PHYS 2010 & PHYS 2015	College Physics I PP and College Physics I Lab	5
CHEM 2310 & CHEM 2315	Organic Chemistry I and Organic Chemistry I Laboratory	5
STAT 2040	Principles of Statistics QL	4
ZOOL 3100 & ZOOL 3105	Vertebrate Zoology and Vertebrate Zoology Laboratory	4
ZOOL 3200 & ZOOL 3205	Invertebrate Zoology and Invertebrate Zoology Laboratory	4
Choose one of the following (courses with lab count as one course)		3
ZOOL 1090	Introduction to Human Anatomy and Physiology BB (3)	
ZOOL 2320 & ZOOL 2325	Human Anatomy and Human Anatomy Laboratory (4)	
ZOOL 2420 & ZOOL 2425	Human Physiology and Human Physiology Laboratory (4)	
<b>Elective Requirements</b>		<b>33</b>
		<b>Credits</b>
Choose any four from the following (courses with separate labs count as one course).		12
BIOL 3300	Developmental Biology (3)	
BIOL 3800	Conservation Biology (3)	
BIOL 3850	Marine Biology (3)	
BIOL 4000	Freshwater Ecology (4)	
ZOOL 3300	Herpetology (3)	
ZOOL 3430	Entomology (3)	
ZOOL 3500	Mammalogy (3)	
ZOOL 4000	Animal Behavior (3)	
ZOOL 4100	Parasitology (4)	
ZOOL 4300	Histology (4)	
ZOOL 4500	Comparative Vertebrate Zoology (3)	
ZOOL 4600	Ornithology (4)	
BIOL 490R or ZOOL 490R	Special Topics in Biology (1-4) Special Topics in Zoology	
Choose any five from the following. At least one must be BOT, and at least one must be MICR (courses with separate labs count as one course).		15
BIOL 3100	Introduction to Data Analysis for Biologists (3)	
BIOL 3200	Guided Research Experience (1-3)	
BIOL 3705	General Ecology Laboratory (1)	
BIOL 369R	Introduction to Undergraduate Research (1)	
BIOL 489R	Student Research (1-4)	
BIOL 490R or ZOOL 490R	Special Topics in Biology (1-4) Special Topics in Zoology	
BOT 2050	Field Botany BB (3)	
BOT 2100	Flora of Utah BB (3)	
BOT 3500	Mycology (4)	
BOT 3800	Ethnobotany WE (4)	
BOT 4300	Native Trees and Shrubs of Utah (3)	
BOT 4500	Introduction to Grasses (3)	
BOT 4800	Plant-Herbivore Interactions (3)	
BOT 490R	Special Topics in Botany (1-4)	

MICR 3150	Microbial Ecology WE (4)	
MICR 3200	Emerging and Re Emerging Diseases and Zoonoses (3)	
MICR 3450	General Microbiology (3)	
MICR 4100	Parasitology (4)	
MICR 4300	Pathogenic Microbiology (4)	
MICR 4500	Virology (3)	
MICR 4600	Arthropod-Borne Pathogens (3)	
GEOG 3600	Introduction to Geographic Information Systems (4)	
CHEM 2320 & CHEM 2325	Organic Chemistry II and Organic Chemistry II Laboratory (5)	
CHEM 3600	Biological Chemistry (3)	
MATH 1210	Calculus I QL (4)	
PHYS 2020 & PHYS 2025	College Physics II PP and College Physics II Lab (5)	
Additional credits according to credit and upper division requirements		6

## Graduation Requirements

1. Complete the required minimum credit hours.
2. If an AA or AS degree has been earned, a maximum of 64 of these credits may apply toward the BS.
3. At least 30 credit hours in residence at UVU or satellite sites are required, with 10 hours earned during the last 45 hours.
4. A minimum of 40 credits must be upper-division (numbered 3000 or above).
5. A minimum of 40 credits must be in the Biology Department (BIOL, BOT, BTEC, MICR, or ZOOZ prefixes), 30 of which must be upper-division. A minimum of nine Department credits must be taken at UVU.
6. Except for 490R Special Topics courses, a maximum cumulative total of 13 credits in any combination of upper division Departmental courses with an "R" designation may count toward graduation.
7. Complete Biology Department core courses with a grade of "C-" or higher in each course.
8. Achieve a minimum overall GPA of 2.0 with a minimum GPA of 2.25 in biology department courses.
9. Complete the appropriate application for graduation form.
10. Successful completion of at least one Global/Intercultural course (e.g. PHIL 205G).
11. Successful completion of at least two Writing Enriched (WE) courses.

## Graduation Plan

This graduation plan is a sample plan and is intended to be a guide. Your specific plan may differ based on your Math and English placement and/or transfer credits applied. You are encouraged to meet with an advisor and set up an individualized graduation plan in Wolverine Track (<http://www.uvu.edu/wolverinetrack/>).

### First Year

Semester 1		Credit Hours
BIOL 1610 & BIOL 1615	College Biology I BB and College Biology I Laboratory	5
ENGL 1010	Introduction to Academic Writing CC	3
MATH 1050	College Algebra QL	4
FINE ARTS		3
<b>Credit Hours</b>		<b>15</b>
Semester 2		Credit Hours
BIOL 1620 & BIOL 1625	College Biology II and College Biology II Laboratory	4
ENGL 2010	Intermediate Academic Writing CC	3
HUMANITIES		3
SOCIAL/BEHAVIORAL SCIENCE		3
PE/HLTH		2
<b>Credit Hours</b>		<b>15</b>

### Second Year

Semester 3		Credit Hours
BIOL 3500	Genetics	3
ZOOL 3200 & ZOOL 3205	Invertebrate Zoology and Invertebrate Zoology Laboratory	4

HISTORY GE		3
CHEM 1210 & CHEM 1215	Principles of Chemistry I PP and Principles of Chemistry I Laboratory	5
<b>Credit Hours</b>		<b>15</b>
<b>Semester 4</b>		
CHEM 1220 & CHEM 1225	Principles of Chemistry II PP and Principles of Chemistry II Laboratory	5
PHIL 205G	Ethics and Values IH GI	3
ZOOL 3100 & ZOOL 3105	Vertebrate Zoology and Vertebrate Zoology Laboratory	4
STAT 2040	Principles of Statistics QL	4
<b>Credit Hours</b>		<b>16</b>
<b>Third Year</b>		
<b>Semester 5</b>		
BIOL 3400	Cell Biology	3
BIOL 3700	General Ecology	3
CHEM 2310 & CHEM 2315	Organic Chemistry I and Organic Chemistry I Laboratory	5
ELECTIVE		4
<b>Credit Hours</b>		<b>15</b>
<b>Semester 6</b>		
PHYS 2010 & PHYS 2015	College Physics I PP and College Physics I Lab	5
ZOOL 1090	Introduction to Human Anatomy and Physiology BB	3
ELECTIVES		7
<b>Credit Hours</b>		<b>15</b>
<b>Fourth Year</b>		
<b>Semester 7</b>		
BIOL 4500	Principles of Evolution WE	3
Electives		12
<b>Credit Hours</b>		<b>15</b>
<b>Semester 8</b>		
BIOL 492R	Professional Development	1
BIOL 4940	Student Seminar WE	2
BIOL 497R	Biology Colloquium	1
ELECTIVES		10
<b>Credit Hours</b>		<b>14</b>
<b>Total Credit Hours</b>		<b>120</b>

## Program Learning Outcomes

1. Apply the process of science through the use of hypothesis testing in the design and completion of scientific experiments
2. Critically evaluate scientific information
3. Quantitatively analyze scientific data through graph interpretation, statistical analysis, and problem solving
4. Effectively communicate scientific information in both written and oral formats
5. Explain fundamental zoological concepts including cell biology, genetics, evolution, ecological principles, organismal biology, and biodiversity