ANIMAL BIOLOGY, BACHELOR OF SCIENCE

College of Agricultural & Environmental Sciences

Animal Biology Major (https://abi.ucdavis.edu/);
Faculty (https://entomology.ucdavis.edu/people/?first=&last=&title=&unit=&field_sf_person_type_target_id%5B0%5D=26)

The Animal Biology major offers students training in the biological and natural sciences as they apply to animals. The major covers basic biological sciences foundational to understanding animal evolution, systematics, ecology, physiology and molecular biology. Students in the Animal Biology major are encouraged to think beyond particular groups of animals in which they are interested and to consider science as a process and a way of learning new things about them, and of advancing society. The program emphasizes biological principles used in research and in solving societal conflicts with animals in agriculture, urban areas, or natural environments.

The Program

The major consists of core courses in the sciences that build an understanding of animal biology from the molecular to the ecological and evolutionary levels of organization. After completing these core courses, students choose an interdisciplinary practicum project from general animal biology, predicated on their ultimate career goals. They plan this emphasis of study in a required discussion-seminar course and in consultation with a mentor. The program includes a senior thesis, which each student employs the process and principles of science to propose and carry out the practicum project they choose, integrating the disciplines of the major. The Animal Biology major emphasizes research in biological principles as opposed to animal care and husbandry.

Practicum Research & Career Alternatives

The Animal Biology program and professional research interests of each student guides him or her in Practicum and career choices. On- and off-campus Practicum research opportunities occur in research laboratories, at field situations, in zoos and public aquariums, with governmental agencies, national and state parks with private industry, and in international programs. A degree in Animal Biology prepares students for careers in research, teaching, academia, governmental regulation, health, or agriculture where these emphasize integrative biology of animals. Careers in veterinary medicine, animal husbandry and animal management remain open to Animal Biology majors as well, however, other preparation may be required. Students in the major focus on gaining research experience, and become well prepared to continue their training at the graduate or professional level in a variety of biological disciplines.

Lead Faculty Advisor

M. McMunn

Academic Advisor

E. Galvan Hack

Advising Center for the major, including peer advising, located in 150 Hutchison Hall, 530-754-4131; Academic Advisor located in 160 Hutchison Hall; 530-754-7277; abi-advising@ucdavis.edu.

The major requirements below are in addition to meeting University Degree Requirements (https://catalog.ucdavis.edu/undergraduate-education/university-degree-requirements/) & College Degree Requirements (https://catalog.ucdavis.edu/undergraduate-education/college-degree-requirements/); unless otherwise noted. The minimum number of units required for the Animal Biology Bachelor of Science is 123.

Code	Title	Units
Preparatory Subject Matter		
Animal Biology		*8*
ABI 050A	Animal Biology Laboratory	
ABI 050B	Animal Biology	
ABI 050C	Animal Biology	
Biological Science		*15*
BIS 002A	Introduction to Biology: Essentials of Life on Earth	
BIS 002B	Introduction to Biology: Principles of Ecology & Evolution	
BIS 002C	Introduction to Biology: Biodiversity & the Tree of Life	
Chemistry		*21-23*
CHE 002A	General Chemistry	
CHE 002B	General Chemistry	
CHE 002C	General Chemistry	
Choose a series:		
CHE 008A & CHE 008B	Organic Chemistry: Brief Course and Organic Chemistry: Brief Course	
CHE 118A & CHE 118B	Organic Chemistry for Health & Life Sciences and Organic Chemistry for Health & Life Sciences	
Mathematics; choose a series:		*9-12*
MAT 016A & MAT 016B DISCO & MAT 016C DISCO	and and (Discontinued)	
MAT 017A & MAT 017B & MAT 017C	Calculus for Biology & Medicine and Calculus for Biology & Medicine and Calculus for Biology & Medicine	
MAT 021A & MAT 021B & MAT 021C	Calculus and Calculus and Calculus	
Physics		*12*
PHY 007A	General Physics	
PHY 007B	General Physics	
PHY 007C	General Physics	
Statistics; choose one:		*4*
STA 013	Elementary Statistics	
or STA 013Y	Elementary Statistics	
STA 100	Applied Statistics for Biological Sciences	
Preparatory Subject Matter Subtotal		69-74
Depth Subject Matter		
Animal Biology		*5*
ABI 187	Animal Biology Seminar	
ABI 189	Senior Practicum	
ABI 189D	Senior Practicum Discussion	

Biological Science		*4*
BIS 101	Genes & Gene Expression	
or BIS 101V	Genes & Gene Expression	
Choose a series:		6-10
ABI 102	Animal Biochemistry & Metabolism	
ABI 103	Animal Biochemistry & Metabolism	
BIS 102	Structure & Function of Biomolecules	
BIS 103	Bioenergetics & Metabolism	
Choose one:		3-5
NPB 101	Systemic Physiology	
NPB 117	Avian Physiology	
ENT 102	Insect Physiology	
WFC 121	Physiology of Fishes	
Choose one:		3-4
APC 100/NPB 123	Comparative Vertebrate Organology	
ENT 101	Functional Insect Morphology	
Evolution & Ecology		*4*
EVE 100	Introduction to Evolution	
Choose one:		4
ESP 100	General Ecology	
ESP 121	Population Ecology	
EVE 101	Introduction to Ecology	
EVE 102	Population & Quantitative Genetics	
Depth Subject Matter Subtotal		29-36
Restricted Electives		
Focused specialty upper division courses as outlined in the student's major proposal (from ABI 187) with approval of an advisor.		25
Restricted Electives Subtotal		25
Total Units		**123-135**