ENTOMOLOGY, BACHELOR OF SCIENCE

College of Agricultural & Environmental Sciences

The Major Program

The Entomology major is a general biological science program. The curriculum is designed to develop an understanding of fundamental biological concepts by studying insects. Insects offer unique opportunities to study biological systems and are model experimental animals. Many insects are either pests, or beneficial species that have great importance to the economy, environment or public health. Students may focus on specific areas of interest including agricultural entomology; insect systematics & evolution; behavior & ecology; medical entomology; and insect molecular biology, physiology & toxicology.

The Program

Students begin their study in Entomology with selected insect biology courses. After completing these courses, students may enroll in courses in their particular area of interest. The faculty encourages students to do research internships in their laboratories.

Career Alternatives

Entomology graduates find careers in many different areas of applied or basic biology. Graduates have the opportunity to continue in professional graduate programs such as veterinary or human medicine, or get advanced degrees leading to careers in biotechnology, conservation biology, or academic teaching and research. Many graduates have participated in internship programs with the California Department of Food and Agriculture and found careers in insect diagnostic laboratories, conducting insect surveys, and/or developing entomological collections. Other graduates have worked in agriculture in the area of insect pest management. Graduates are prepared for managerial and technical positions with state and federal agencies and in agricultural production and supporting industries. Some Entomology graduates pursue careers in primary, secondary, and college level science education.

Major Advisors

L. Kimsey, S. Nadler

Code	Title	Units
Preparatory Subject Matter		
Biological Science		
BIS 002A	Introduction to Biology: Essentials of Life on Earth	5
BIS 002B	Introduction to Biology: Principles of Ecology & Evolution	5
BIS 002C	Introduction to Biology: Biodiversity & the Tree of Life	5
Chemistry		
CHE 002A	General Chemistry	5
CHE 002B	General Chemistry	5
Choose a series:		6-8
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	
Math		
Choose a series:		6-8
MAT 016A	Short Calculus	
MAT 016B	Short Calculus	
OR		
MAT 017A	Calculus for Biology & Medicine	
MAT 017B	Calculus for Biology & Medicine	
OR		
MAT 021A	Calculus	
MAT 021B	Calculus	
Physics		
PHY 001A	Principles of Physics	3
PHY 001B	Principles of Physics	3
Choose one:		3-4
STA 013	Elementary Statistics	
or STA 013Y	Elementary Statistics	
STA 032	Gateway to Statistical Data Science	
STA 100	Applied Statistics for Biological Sciences	
PLS 120	Applied Statistics in Agricultural Sciences	
Preparatory Subject Matter Subtotal		46-51
Depth Subject Matter		
Biological Science		
BIS 101	Genes & Gene Expression	4
Evolution & Ecology		
EVE 100	Introduction to Evolution	4
General Entomology		
ENT 100	General Entomology	4
ENT 100L	General Entomology Laboratory	2
ENT 102	Insect Physiology	4
Choose one:		3-4
MIC 102	Introductory Microbiology	
MIC 162	General Virology (Discontinued)	
PLB/PLP 148	Introductory Mycology	
PLP 120	Introduction to Plant Pathology	
Choose one:		4
ENT 105	Insect Ecology	
ESP 100	General Ecology	
EVE 101	Introduction to Ecology	
Choose BIS 105 or a series:		3-10
BIS 105	Biomolecules & Metabolism	
OR		
BIS 102 & BIS 103	Structure & Function of Biomolecules and Bioenergetics & Metabolism	
OR		
ABI 102 & ABI 103	Animal Biochemistry & Metabolism and Animal Biochemistry & Metabolism	
Choose at least 3 units:		3-7
ENT 103	Insects Systematics	
ENT 104	Behavioral Ecology of Insects	

ENT 107	California Insect Diversity	
ENT 109	Field Taxonomy & Ecology	
NEM 110	Introduction to Nematology	
Depth Subject Matter Subtotal		31-43
Restricted Electives [1]		
Upper division Entomology (ENT) and Nematology (ENM) courses.		14
Upper division electives related to student's interest with approval of advisor. Any courses in the life sciences, scientific writing, or statistics will be automatically approved; see advisor for other choices.		9
Restricted Electives Subtotal		23
Total Units		**100-117**

[1] Note: No more than a total of 6 units from ENT 192, ENT 197T and ENT 199 may count toward fulfilling depth subject matter or restricted elective units.