Entomology (ENTO)

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Department of Entomology Website (http://entomology.uark.edu)

Entomology is the branch of science concerned with the study of insects and related organisms. It involves studies of their biology, structure, identification, economic significance, and population management. The major emphasis of the curriculum is understanding insect biology and applying that knowledge in an integrated approach to insect-pest management.

Entomology is a graduate degree at the University of Arkansas. Undergraduate students interested in entomology can pursue a minor in entomology or pest management.

Minor in Entomology (ENTO-M)

The Entomology minor will consist of a minimum of 15 semester hours to include the following:

ENTO 3013	Introduction to Entomology	3
ENTO 4024	Insect Diversity and Taxonomy	4
Select three of the following:		8-9
ENTO 4013	Insect Behavior and Chemical Ecology	
ENTO 4043	Apiculture	
ENTO 4053	Insect Ecology	
ENTO 4133	Advanced Applied Entomology	
ENTO 400V	Special Problems	
Total Hours		15-16

Faculty

Bateman, Nick, Ph.D. (Mississippi State University), B.S. (University of Arkansas-Monticello), Assistant Professor, 2016.
Dowling, Ashley Patrick Gregg, Ph.D. (University of Michigan-Ann Arbor), B.S. (University of Arizona), Associate Professor, 2008.
Goggin, Fiona, Ph.D. (University of California-Davis), B.S. (Cornell University), Professor, 2001.
Hopkins, John D., Ph.D. (University of Arkansas), M.S., B.S. (Clemson), Associate Professor, 2002.
Johnson, Donn T., Ph.D., M.S. (Michigan State University), B.S. (University of Minnesota), Professor, 1978.
Joshi, Neelendra, Ph.D. (Pennsylvania State University), Assistant Professor, 2015.
Loftin, Kelly M., Ph.D. (New Mexico State University), M.S. (University of Arkansas), B.S. (Arkansas Tech), Associate Professor, 2002.
Lorenz, Gus M., Ph.D., B.S.A., M.S. (University of Arkansas), Distinguished Professor, 1997.
Steinkraus, Donald C., Ph.D. (Cornell University), M.S. (University of Connecticut), B.A. (Cornell University), Professor, 1989.
Stephen, Fred M., Ph.D. (University of California-Berkeley), B.S. (San Jose State University), University Professor, 1974.
Studebaker, Glenn, Ph.D., M.S. (University of Arkansas), B.S. (Missouri Southern University), Associate Professor, 1993.
Szalanski, Allen Lawrence, Ph.D. (University of Nebraska-Lincoln), M.S. (Kansas State University), B.S. (University of Manitoba), Professor, 2001.
Wiedenmann, Robert N., Ph.D., B.S. (Purdue University), Professor, 2005.

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Courses

ENTO 1021L. Insects in Science, the Arts, and Human History Laboratory. 1 Hour.
To educate students on the importance of insects in biology and science, human and animal medicine, ecosystems, agriculture, pollination, genetic research, the arts, and human culture and history. The lab will be a hands-on approach to reinforcing entomological concepts addressed in lecture. Pre- or corequisite: ENTO 1023

ENTO 1023. Insects, Science and Society. 3 Hours.
To educate students on the importance of insects in biology and science, human and animal medicine, ecosystems, agriculture, pollination, genetic research, the arts, and human culture and history. Corequisite: ENTO 1021L.

ENTO 3011L. Introduction to Insect Identification Lab. 1 Hour.
Introductory lab course on insect identification, collection, and curation techniques, primarily designed as an intensive add-on to ENTO 3013 for students wanting a more in-depth examination of insect diversity. Insect collection required. Course includes field trips. Students are encouraged to contact instructor before enrolling. Pre- or Corequisite: ENTO 3013.
This course is cross-listed with BIOL 3011L.

ENTO 3013. Introduction to Entomology. 3 Hours.
Fundamentals of insect biology including structure and function, development, ecology, behavior, plant feeding and disease transmission. Lecture 3 hours/week. Students interested in a more intensive examination of insects, including collection, curation, and identification techniques, should sign up for the separate one credit lab ENTO 3011L. Students are strongly encouraged to take BIOL 1543 before registering for this course.
This course is cross-listed with BIOL 3013.

ENTO 400V. Special Problems. 1-4 Hour.
Special problems.

ENTO 4013. Insect Behavior and Chemical Ecology. 3 Hours.
Basic concepts in insect senses and patterns of behavioral responses to various environmental stimuli. Previous knowledge of basic entomology is helpful, but not required. Lecture 2 hours, laboratory/discussion 2 hours per week. Corequisite: Lab component
This course is cross-listed with BIOL 4013.

ENTO 4024. Insect Diversity and Taxonomy. 4 Hours.
Principles and practices of insect classification and identification with emphasis on adult insects. Corequisite: Lab component. Prerequisite: ENTO 3013.
This course is cross-listed with BIOL 4024.

ENTO 4043. Apiculture. 3 Hours.
Review of social behavior of insects and its exemplification in Honeybees. Previous knowledge of basic entomology is helpful but not required. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component.

ENTO 4053. Insect Ecology. 3 Hours.
To develop understanding of important ecological concepts through study of dynamic relationships among insects and their environment. To become familiar with the literature of insect ecology, and interpretation and critique of ecological research. Previous knowledge of basic entomology and/or ecology will be assumed. Corequisite: Lab component.
This course is cross-listed with BIOL 4053.

ENTO 410V. Special Topics. 1-3 Hour.
Topics not covered in other courses or a more intensive study of specific topics in entomology. May be repeated for degree credit.

ENTO 4123. Insect Pest Management. 3 Hours.
Study of principles and concept of insect pest management. Areas covered include survey of arthropod pests and damage, population dynamics, damage thresholds, physcological units, prediction models, surveillance, arthropod sampling, strategies and tactics utilized to maintain pest populations below economic injury levels. Prerequisite: ENTO 3013.

ENTO 4133. Advanced Applied Entomology. 3 Hours.
Biology and ecology of major arthropod pests as model applied management systems. Activities include independent study, literature review and group discussions. Knowledge of general entomology and pest management is required. Self-learning modules are available. Lecture 2 hours/week and direct self-study laboratory 2 hours/week. Corequisite: Lab component. Prerequisite: ENTO 3013.

ENTO 462V. Internship. 3-6 Hour.
Supervised practical work experience in pest management to develop and demonstrate professional competence. A maximum of 6 hours credit per semester or summer session is permitted. Faculty approval of projects proposal prior to enrollment, and written or oral reports are required.