

Entomology (ENTO)

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 equivalent to 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.

Special Topics course available to both undergraduate and graduate students, to address emerging issues and timely topics. This would supplement our graduate-only special topics course. 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, physiological 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.

ENTO 500V. Special Problems. 1-4 Hour.

Special problems. Prerequisite: Graduate standing. May be repeated for up to 4 hours of degree credit.

ENTO 5013. Morphology of Insects. 3 Hours.

Origin, evolution, and functional significance of external insect structure. Structure and function of major internal systems. Previous knowledge of basic entomology is helpful, but not required. Lecture 2 hours, laboratory 4 hours per week. Corequisite: Lab component.

ENTO 5043. Apiculture. 3 Hours.

To acquaint the student with social insects in general and honey bees in particular, to promote an interest in apiculture as a hobby, occupation, and/or science, to give the students the basic knowledge of how to keep honey bees, and to increase awareness of the contribution that pollinating insects make to agriculture, natural ecosystems, and human life. Prerequisite: Instructor consent.

ENTO 5123. Biological Control. 3 Hours.

Theoretical and practical basis for biological control of arthropod pests and weeds via parasites, predators, and pathogens. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component.

ENTO 5133. Insect Molecular Genetics. 3 Hours.

A hands on course in insect molecular genetic techniques including molecular diagnostics and population genetics. Students will learn how to apply advanced molecular genetic methodologies and Internet database resources to insects that they are using for their graduate research.

This course is cross-listed with BIOL 5133.

ENTO 5153. Insect Pest Management. 3 Hours.

Study of principles and concept of insect pest management. Areas covered include a survey of arthropod pests and damage, population dynamics, damage thresholds, physiological units, prediction models, surveillance, arthropod sampling, strategies and tactics utilized to maintain pest populations below economic injury levels. Prerequisite: Instructor consent.

ENTO 5163. Advanced Applied Entomology. 3 Hours.

Topics will include the integration of tactics, integration of disciplines and specific case histories in insect management, or use of insects to manage weeds. Prerequisite: Instructor consent.

ENTO 600V. Master's Thesis. 1-6 Hour.

Master's Thesis. Prerequisite: Graduate standing. May be repeated for degree credit.

ENTO 6071. Seminar. 1 Hour.

Fall: special topics not covered in regular course work. Spring: critical review of research papers in entomology. Seminar will be taken by graduate student majors for both semesters. May be repeated for up to 6 hours of degree credit.

ENTO 6113. Insect Physiology and Molecular Biology. 3 Hours.

Overview of insect physiology and modern molecular techniques to study physiological processes. Previous knowledge of basic entomology is helpful, but not required. Two lectures per week (1 hour 20 minutes each).

This course is cross-listed with BIOL 6113.

ENTO 6213. Insect Toxicology. 3 Hours.

Toxicology of chemicals to insects and humans including techniques of testing collecting data, and factors that influence reactions to different classes of insecticides. Previous knowledge of organic physiological chemistry is helpful, but not required. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component.

ENTO 700V. Doctoral Dissertation. 1-18 Hour.

Doctoral Dissertation. Prerequisite: Graduate standing. May be repeated for degree credit.