Upcoming New Course

ENTOM 6520 - Malaria Biology and Control
2 credits. Instructor: NEVBD staff
(Pending Approval)

Malaria represents one of the most daunting global health challenges of the 21st century. Understanding this disease and the biological, social, and epidemiological dimensions of its persistence can aid future global health practitioners in their efforts to eradicate malaria and the many health and economic burdens it creates. This course will delve into the biology of malaria parasites and their interactions with invertebrate and vertebrate hosts during the different phases of their complex life cycles. Global disease trends, prospects for reducing disease burdens, and the most promising and innovative approaches currently in use or under development to control insect vectors and prevent transmission will be thoroughly discussed.

Lec: TBA

Upcoming Opportunities

Fall 2020

ENTOM 3340/3341/3342 – Tropical Field Entomology 4 credits. Multi-semester course. FA (wk 8-14), Winter (Jan 5-20) , SP (wk 1-7). Prerequisite: ENTOM 2120 Corequisite: ENTOM. 3341, ENTOM 3342. Instructor: B. Danforth, J. Dombroskie, P. O’Grady, R. Reed.
Course fee: $2000

Introduction to insect biodiversity, ecology and behavior in a neotropical rainforest environment. Fall disc., followed by two weeks in January at Las Cruces and La Selva Biological Stations in Costa Rica. Final course project completed in Spring semester.

Seminars

ENTOM 6900 (BIOEE 6900) Ecology and Evolution of Infectious Diseases Graduate-level discussion of the ecology, epidemiology, genetics, and evolution of infectious disease in animal and plant systems. 1 credit. Instructor: A. Hajek,
Sem: TBA

ENTOM 7570 (BIOEE 7570) Spatial Population Ecology Examines the role of space for individuals, populations and communities in ecology. Open to anyone (undergraduates with prior permission). 1 credit. Instructor: S. van Nouhuys
Sem: T 3:35 - 4:25 pm

ENTOM 7640 (BIOEE/BIONB) Plant Insect Interactions (PIG) Group intensive study of current research in plant- insect interactions including chemical defense, coevolution, insect community structure, population regulation, biocontrol, tritrophic interactions and mutualism. Instructors: A. Agrawal, J. Thaler
Sem: F 9:00 – 10: 00 am

ENTOM 4940 Special Topic in Entomology-Advanced topics in applied statistics for biologists. 1 credit. Instructor: H. Grab
Sem: W 2:55 – 4:10 pm
Why are chilies so spicy? This course examines the chemical basis of interactions between species and is intended for students with a basic knowledge of chemistry and biology. Focuses on the ecology and chemistry of plants, animals, and microbes. Stresses chemical signals used in diverse ecosystems, using Darwinian natural selection as a framework. Topics include: plant defenses, microbial warfare, communication in marine organisms, and human pheromones.


Insects are the most abundant and diverse animals on earth. This course explores the bizarre biology of insects and their interaction with humans. We will examine both the detrimental roles insects play (e.g., pests and vectors of disease) as well as their beneficial roles (e.g., pollinations, edible insects, insect products such as waxes, dyes, and silk). We will also explore the symbolic representation of insects in art, literature, and religion. In addition to the two lectures, students taking the course for 3 credits will meet once per week (on Friday) for discussion and documentary films on the biology of insects.

**Lec:** M, W 10:10 - 11:00 am  
**Disc:** F 10:10 - 11:00 am

ENTOM 4440 - Integrated Pest Management (PLSCS 4440) 4 credits. Prerequisite: introductory biology or permission of instructor. Lec/lab Instructors: J. E. Losey, A. DiTommaso

Lectures integrate the principles of pest control, ecology, and economics in the management of pests across multiple systems. Labs consist of exercises to reinforce concepts presented in lecture and demonstrate pest monitoring techniques and the application of computer technology to management problems.

**Lec:** M, W, F 9:05 - 9:55 am  
**Lab:** T 1:25 - 4:25 pm

ENTOM 4700 - Ecological Genetics of Infection and Disease (BIOEE 4800) 4 credits. Prerequisite: BIOEE 1780. Recommended: introductory course in genetics and/or statistics. S-U or letter grades. Instructor: B. Lazzaro.

Special offering of Ecological Genetics. The standard Ecological Genetics course focuses on the application of population genetic concepts in ecological or applied contexts, with emphases on measuring adaptation in natural populations, detecting the effects of population demography, and determining the genetic basis of quantitative traits. In this special offering, the contextual examples will be related to host-microbe interactions and the establishment and spread of infectious disease in natural populations of animals and plants. Illustrative examples will be drawn from the primary research literature to demonstrate experimental techniques and methods of data analysis on single-gene, multi-locus and genome-wide scales. Although the examples used class will focus on infection, resistance, and host-pathogen co-evolution, the experimental and methodological approaches can also be applied to other ecologically relevant traits and processes.

**Lec:** T, R 10:10 - 11:25 am  
**Disc:** (1) W 10:10 - 11:00 am (2) TBA

ENTOM 3690 - Chemical Ecology (BIOEE/BIONB 3690) 3 credits. Prerequisites: one semester of introductory biology for majors or non-majors and one semester of introductory chemistry for majors or non-majors or equivalents, or permission of instructor. Instructors: J. Thaler, A. Agrawal, R. Raguso

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**Lec:** M, W, F 11:15 - 12:05 pm

ENTOM 4900 - Toxicology of Insecticides 3 credits. Instructor: J. Scott

Dr. Scott will teach the history, metabolism, and mechanism of action of genetically modified, synthetic, and naturally occurring insecticides. Discusses insecticide resistance, resistance management, and new approaches to insect control, including genetically modified organisms.

**Lec:** T, R 8:40 - 9:55 am