

## **ENT 3590: Urban Entomology**

**Instructor:** Brian T. Forschler  
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**Term:** Spring 2009

**Class Schedule:** Monday, Wednesday, and Friday from 10:10 am to 11:00 am  
in Room 426 BioScience Bldg.

**Laboratory Schedule:** Monday from 1:25 pm to 3:20 pm in Room 426 Bioscience Bldg.

**Office Hours:** Tuesdays 4:00-5:00 p.m. or by appointment.

**Prerequisites:** NONE but...BIO1070-1070L, BIO1080-1080L, or ENT 2010 are recommended.

**Textbook:** None required.

### **Course Objectives:**

1. Recognize the major groups of domestic, peridomestic, occasional invader and structural insects common to the human habitat.
2. Understand the biology of selected insects and arthropods and those parameters of the human habitat that foster and promote association with these potential pests.
3. Demonstrate an understanding of the concepts of pest management based on identification of the pest and tailoring a tactic toward the 'weak link' in the biology of the target pest.
4. Participate in reducing the environmental risks associated with pesticide exposure from the uneducated use of arthropod pest management tactics in and around households and structures.

**Course assignments:**

Weekly reading assignments will be presented to the class from the current scientific or popular press literature requiring each student to provide written summaries (1-2 paragraphs maximum) incorporating their own opinions based on one or more questions provided by the instructor as a problem solving exercise.

A collection of 30 insects, properly identified and preserved, will be required and must be presented to the lab instructor no later than the day of the laboratory exam (April 28). Weekly laboratory exercises will require a written summary be prepared and presented to the laboratory instructor by the next laboratory period following the last day of data collection for that particular exercise. The format required of the written summaries will vary according to the exercise. Laboratories exercises will involve following protocols, recording data, and interpreting results from experiments involving aspects of the biology and control of various household and structural insect pests; participating in field trips that may require a return visit to the site on the students own time; and developing proficiency in the use of dichotomous morphological keys and sight identification of the principle household and structural insect pests.

There will be at least two field trips as part of the laboratory section of the course. These trips will be conducted within the Athens area and require no overnight travel.

There is no attendance policy. However, it should be noted that it is the responsibility of each student to attend class knowing that, without an assigned textbook, lecture material is very important toward obtaining a good grade.

Three written lecture exams and one laboratory exam also will be required.

There will be no make-up exams given. If you miss a regularly scheduled exam you have the option of receiving no points for that test or preparing a 20-page discussion on a topic of the instructor's choice.

**Grading:** Final grades will be based on the following:

<u>Assignment</u>	<u>Points Available</u>
First written exam	100
Second written exam	100
Third/Final written exam	200
Laboratory reports (30 points each)	240
Weekly literature reports (10 points each)	150
Laboratory exam	150
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TOTAL	940

## Course Outline: Spring 2008

- Unit 1            History of insect synanthropy and mans attempts at control  
Laboratory exercise: The Scientific Method: the how and why of experimentation.
- Unit 2            Insect biology/physiology primer  
Laboratory exercise: Insect culture: the pet-insect project.
- Unit 3            Control Strategies: Monitoring, insecticides, biologicals, mechanical, or habitat alteration?  
Laboratory exercise: Insect feeding - dye markers: an experiment in observation, data collection, and interpretation.
- Unit 4            Domestic pests: Roaches  
Laboratory exercise: Monitoring insect populations: a field experiment at several local establishments.
- Unit 5            Domestic pests: Food and fabric pests; 1st Test: **February 13**  
Laboratory exercise: Roach management; repellents, baits, IGR's, biologicals: an experiment in roach control using several tactics and techniques.
- Unit 6            Domestic pests: Fleas, lice, and mites.  
Laboratory exercise: Insect identification
- Unit 7            Peridomestic pests: Spiders and bugs.  
Laboratory exercise: Insect identification
- Unit 8            Peridomestic pests: The flies  
Laboratory exercise: Termite control; repellents, baits, IGR's, biologicals: an experiment in termite control using several tactics and techniques.
- Unit 9            Peridomestic pests: The ants  
Laboratory exercise: Insect identification
- Unit 10           Occasional invader pests: Stingers and biters; 2nd Test: **March 20**  
Laboratory exercise: Insect identification
- Unit 11           Occasional invader pests: Nuisance pests  
Laboratory exercise: Insect identification
- Unit 12           Structural pests: Termites  
Laboratory exercise: Soil/insecticide interactions: an experiment to illustrate the concept of bioavailability.

- Unit 13      Structural pests: Wood borers, ants, and beetles  
Laboratory exercise: Insect identification
- Unit 14      Site specific, prescription synanthropy-friendly management options  
Laboratory exercise: Insect identification
- Unit 15      Site specific, prescription synanthropy-friendly management options;  
Laboratory exercise: Collections due. Lab Exam – **April 27**
- Final Exam    **May 8, 2009 at 8:00 am**

The course syllabus provides a general plan for the course; deviations may be necessary.

## EDUCATIONAL OUTCOMES

Students will have the ability to identify the major groups of arthropod pests found in and around man-made structures and have sufficient knowledge of the biology and ecology of pest species to effectively participate in reducing environmental risks associated with unwarranted pesticide uses in managing arthropod pests in human habitats.

Students will be prepared to enter the job market as knowledgeable candidates for pest control technician or managerial positions with agencies or industries dealing with product development, sales, regulatory issues and related urban pest management initiatives. In addition, students will be prepared to make intelligent, environmentally compatible arthropod pest management decisions as property owners.