



University of Puerto Rico at Mayagüez
College of Arts and Sciences
Department of Biology
Undergraduate Program in Zoology



Course Syllabus

BIOL 4446 - Introduction to Entomology

Semester: 2 nd Semester 2006/2007	Credit hours: 3 credit hours	Contact hours: 5 contact hours
Course instructor: Dr. Nico M. Franz Office: B-304; Lab: B-323 E-mail: franz@uprm.edu Phone: (787) 832-4040, x3005 academic.uprm.edu/~franz/	Location, dates, and times: Lecture: Tuesday - 2:30 pm to 4:30 pm, Room B-390 Lab: Thursday - 2:30 pm to 5:30, Lab B-322 Field trips: various prearranged dates and times	
Prerequisites: BIOL 3022, or BIOL 3425, or BIOL 4015.	Concurrent requisites: None.	
Description: A thorough introduction to the biology of insects, including anatomy and physiology, systematics and evolution, ecology and behavior, and applied aspects. Emphasis is placed on the practice of identification (orders and principal families) and the preparation of an insect collection.		
Descripción: Una introducción profunda a la biología de los insectos, incluso anatomía y fisiología, sistemática y evolución, ecología y comportamiento, y aspectos aplicados. Se pone énfasis en la práctica de la identificación (órdenes y familias principales) y la preparación de una colección de insectos.		
Objectives: <ul style="list-style-type: none">- To understand and apply core themes and methods relevant to modern entomology.- To acquire working skills related to the collection, preparation, and identification of adult insects to the ordinal level, and to recognize principal families, focusing on the Puerto Rican fauna.		
Teaching strategies: x conference x laboratory x field trips x practical (insect collection)		
Course materials: <ul style="list-style-type: none">- Gullan, P. J. & P. S. Cranston. 2005. The Insects: an Outline of Entomology, 3rd Edition. Blackwell Publishing, Malden, MA. 505 pp. [required; link to purchase]- Johnson, N. F. & C. A. Triplehorn. 2005. Borror and DeLong's Introduction to the Study of Insects, 7th Edition. Brooks Cole. 864 pp. [optional]- White, R. E. & D. J. Borror. 1998. A Field Guide to Insects, 2nd Revised Edition. Houghton Mifflin. 448 pp. [optional]- Select articles and other resources made available to students via UPRM's WebCT service.		

Course schedule: [*subject to changes]

Date	Lecture	Lab
Jan. 11 (Thu)	-	Introduction, collecting at Miradero
Jan. 16 (Tue)	Diversity and importance	-
Jan. 18 (Thu)	-	Insect mounting and labeling
Jan. 23 (Tue)	External anatomy	-
Jan. 25 (Thu)	-	External anatomy
Jan. 30 (Tue)	Internal anatomy [Test I]	-
Feb. 1 (Thu)	-	Internal anatomy
Feb. 6 (Tue)	Sensory systems	-
Feb. 8 (Thu)	-	Insect orders I
Feb. 13 (Tue)	Systematics	-
Feb. 15 (Thu)	-	Insect orders II [Test II]
Feb. 20 (Tue)	No class - George Washington	-
Feb. 22 (Thu)	-	Hemiptera & Collection I
Feb. 27 (Tue)	Phylogeny & evolution	-
Mar. 1 (Thu)	-	Coleoptera
Mar. 6 (Tue)	Reproduction	-
Mar. 8 (Thu)	-	Hymenoptera [Test III]
Mar. 13 (Tue)	Development	-
Mar. 15 (Wed)	-	Diptera
Mar. 20 (Tue)	Aquatic insects	-
Mar. 22 (Thu)	-	No class - Abolition of Slavery
Mar. 27 (Tue)	Insects & plants [Test IV]	-
Mar. 29 (Thu)	-	Lepidoptera & Collection II
Apr. 3 (Tue)	No class - Semana Santa	-
Apr. 5 (Thu)	-	No class - Semana Santa
Apr. 10 (Tue)	Hosts & parasitoids	-
Apr. 12 (Thu)	-	Polyneoptera
Apr. 17 (Tue)	Social insects I [Test V]	-
Apr. 19 (Thu)	-	Paraneoptera/Holometabola
Apr. 24 (Tue)	Social insects II	-
Apr. 26 (Thu)	-	TBA
May 1 (Tue)	Medical & agricultural insects	-
May 3 (Thu)	-	Collection III [Test VI]
May 8 (Tue)	Course evaluation & end	

Total contact hours:

30 lecture + 45 lab = 75 hours

Field trips:

At least 5 field trips will be offered (weekday or weekend, day or night) to various locations, including UPRM's Miradero Forest and nearby State Forests (e.g., Maricao, Guánica, Susúa). 3 field trips are mandatory, including one extended trip to either Toro Negro or El Yunque.

Available resources:

If the need arises, students will be required to contribute to purchasing equipment necessary to complete the laboratory sessions and collection projects.

Grading strategies and their relative weight:

<u>Task</u>	<u>Percent</u>
5 tests	$5 \times 10\% = 50\%$
3 collections	$10\% + 10\% + 20\% = 40\%$
x course participation	10%
Total:	100%

Grading system:

quantifiable (letter grade) not quantifiable

Special needs:

Students with special needs must identify themselves with the instructor and institution in order to receive proper accommodation in their courses and evaluations. Please contact the Servicio a Estudiantes con Impedimentos at (787) 832-4040, ext. 3250 or 3258, for additional information.

Annex

WebCT. Course resources will be made available through UPRM's WebCT service portal at <http://webct.uprm.edu>. Students are expected to access the Webpage several times per week for documents and announcements.

Tests. 6 tests will be presented at regular intervals; and the best 5 tests will enter into the course grade. The tests will be approximately 30 minutes in length, and take the form of freely written answers to topics introduced in the lectures and labs. Make-up tests will only be offered in select and well justified cases. There is no midterm and no final. [total: 200 points]

Collection. The collection is a very central part of the course. 3 dates will be offered to hand in 20, 20, and 40 insects, respectively, for a total of 80 insects (more if available). The collections should consist mainly of adults, with proper mounting, labeling, and identification to the lowest possible taxonomic level at a given time. More specific information on the requirements for each collection will be announced at a later point. [total: 160 points]

