PLNTS 4710, 7710

SYSTEMATIC ENTOMOLOGY

Prerequisite:

Introductory Entomology or 10 hr Biological Sciences.

Required Texts:

C. A. Triplehorn, and N. F. Johnson. 2005. Borror and DeLong's introduction to the study of insects. 7th ed. Thompson, Brooks/Cole, Belmont, CA , 864 p.

Other Useful References:

Borror, D. J. 1960. Dictionary of word roots and combining forms. Mayfield Pub., Palo Alto, California, 134 p.

Merritt, R. W., K. W. Cummins, and M. B. Berg. 2008. An introduction to the aquatic insects of North America. 4th ed. Kendall/Hunt, Dubuque, Iowa, 862 p.

Objectives:

1. Recognize orders and common families of insects.
2. Understand the basis of relationships among taxa using both morphological and biological attributes.
3. Develop collecting techniques and identification skills necessary in taxonomic entomology.
4. Appreciate the importance of taxonomy to biological, medical, and agricultural sciences.
5. Become familiar with important sources of literature for various taxonomic groups of insects.

PLNTS 4710, 7710

10:00-10:50 MWF **lecture**
12:00-1:50 MF **lab**

LECTURE SCHEDULE

Date	Topic
	Course introduction; Historical perspective
	Systematic theory; Fossil insects
	Apterygota, Ephem. key characteristics
	Ordinal relationships
	Apterygota, Ephemeroptera
	Odonata key characteristics
	no class
	Ephemeroptera, Odonata
	Orthoptera key characteristics
	Orthoptera, Grylloblattaria, Phasmida, Mantodea
	Blattaria, Isoptera
	Orthopteroid orders, Psocodea key characteristics
	Isoptera, Dermaptera, Embiidina,
	Plecoptera
	Homoptera key characteristics
	Lecture Exam
	Zoraptera, Psocoptera, Pthiraptera
	Heteroptera key characteristics
	Hemiptera: Homoptera
	Hemiptera: Heteroptera, Thysanoptera
	Neuroptera, Coleoptera key characteristics
	Holometabola overview, Neuroptera
	Coleoptera
	Coleoptera
	Coleoptera
	Mecoptera, Siphonaptera, Strepsiptera
	Mecop, Siphonap key characteristics
	Lecture Exam
	Hymenoptera
	Hymenoptera key characteristics
	Hymenoptera
	Trichoptera

Amphiesmenoptera key characteristics
Lepidoptera
Lepidoptera
Diptera: Nematocera
Diptera: Brachycera, Cyclorrhapha
Diptera: Cyclorrhapha
Diptera key characteristics, course evaluation
Break
Break
Break
dendrogram
open
open
open
open
Final Exam (TBA)

LABORATORY SCHEDULE

Date	Topic
	Techniques, Myriapoda, Insecta, Apterygota
	Ephemeroptera
	Off, Odonata
	Orthoptera, Mantodea, Blattaria
	Isoptera, Dermaptera, Psocodea, Thysanoptera
	Homoptera
	Heteroptera
	Neuroptera, Coleoptera
	Lab Exam, Coleoptera
	Coleoptera, Siphonaptera, Mecoptera
	Hymenoptera
	Trichoptera
	Lepidoptera
	Break
	Diptera
	Lab Exam

PLNTS 4710, 7710

Assignments

Various assignments will be given in this course. Some will be associated with points, others will not. All must be successfully completed regardless of point value. The following assignments and quizzes will be required in addition to the exams and collection.

	Points
Pinning Techniques	10
Labels	10
Quizzes	10 each
Special Taxon (7710 only)	100

Course Points

The following grade distribution represents the letter grade that students enrolled in each level will receive based on their overall percentage of accumulated course points. For 4710, plus/minus grading will be applied at 33% increments within each range.

4710	100 - 90	A
	89.99 - 75	B
	74.99 - 60	C
	59.99 - 50	D
	< 50	F
7710	100 - 90	A
	89.99 - 75	B
	74.99 - 60	C
	< 60	F

Each major component (lab, lecture, collection) of the course must be passed in order to pass the course. Course points will be apportioned as follows:

Quizzes and Assignments	~150
Special Taxon Project (7710 only)	100
Lecture Examinations (3@100 pts)	300
Laboratory Examinations (2@150 pts)	300
Collection	300
TOTAL COURSE POINTS (4710)	~1,050
TOTAL COURSE POINTS (7710)	~1,150

Quizzes and Assignments – Quizzes will be administered at the discretion of the instructor. Usually, quizzes will be announced. Several assignments will be given at the outset of the course, and others can be given throughout the remainder of the course.

Special Taxon Project – The student will choose a taxon, gain instructor's approval, and search the literature for appropriate taxonomic literature, including keys. The student will be expected to specialize on and build a substantial collection of that taxon in addition to the main collection, and identify the undetermined Museum holdings. This project is for the graduate students enrolled in 7710 only.

Lecture Examinations – The lecture examinations will cover material given during class lectures, labs, and any outside reading or assignments, including the introductory information on each order in your textbook. All information given is "fair game." The examinations will be comprehensive; however, each will emphasize the most recent information (i.e., since the previous examination).

Laboratory Examinations – Stations will be set up and specimens displayed. Students will be expected to sight identify each specimen in a one-minute time limit. All taxonomic levels from Kingdom to Family (or Subfamily) pertaining to that specimen may be asked.

Collection – The collection should include only adult (except termites and Apterygota) specimens collected by that student or other students in the class with which he/she has traded. Students are encouraged to begin their collection prior to the first day of class. See the "Insect Collections" handout for more information.

Academic Honesty:
Academic honesty is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards academic dishonesty as an extremely serious matter, with serious consequences that range from probation to expulsion. When in doubt about academic honesty in any activity, consult the course instructor.

The University has specific academic dishonesty administrative procedures. Although policy states that cases of academic dishonesty must be reported to the Office of the Provost for possible action, the instructor may assign a failing grade for the assignment or a failing grade for the course, or may adjust the grade as deemed appropriate. The instructor also may require the student to repeat the assignment or to perform additional assignments.

Assisting Students with Special Needs:
If you need accommodations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please inform me immediately. You may visit with me after class or in my office.

To request academic accommodations (for example, a note-taker), students must also register with Disability Services (AO38 Brady Commons, 882-4696). Disability Services is the campus office responsible for reviewing documentation provided by students requesting academic accommodations, and for accommodations planning in cooperation with students and instructors, as needed and consistent with course requirements.