

**BIOL 3850/5850 – MEDICAL & VETERINARY ENTOMOLOGY SPRING 2013
SYLLABUS & COURSE POLICIES**

Lecture: BC 2022 (M, W, F 11:00-11:50)

Laboratory : BC 2071 (Thursday: Section A 9:30-12:20; Section B 1-3:50)

Instructor: Dr. Mark Blackmore

Office: Bailey Science Center 2218. Tel. 259-5114; email = mblackmo@valdosta.edu

Office Hours: M, W, F 1:15-1:45 or by appointment

Research Lab: BC 2060, Tel. 245-6422

Course scope and objectives: This course is intended to introduce the student to the study of insects, their biology, ecology and behavior. Factors contributing to the diversity and success of these arthropods and their interactions with humans will be emphasized. Students are expected to learn the characters used to identify the more common and important North American taxa and to assemble a broadly representative collection of locally-occurring species. These correspond to Department of Biology Educational Outcomes 2 (“Describe the evolutionary processes responsible for biological diversity, explain the phylogenetic relationships among the major taxa of life, and provide illustrative examples”) and 5 (Interpret ecological data pertaining to the behavior of the individual organism in its natural environment; to the structure and function of populations, communities and ecosystems, and to the human impacts on these systems and the environment.”)

Catalogue Description: BIOL 3850/5850 Overview of medical and veterinary entomology. Reviews basic biology of insects and other arthropods, with emphasis on species affecting health of humans, domestic animals and livestock. Diseases associated with arthropods and principles of forensic entomology will be considered. **4 credit hours. Prerequisite: BIOL 1107, BIOL 1108, or permission of instructor; admission to graduate program (BIOL 5850 only).**

Texts: *Medical and Veterinary Entomology* 2nd ed. 2009 by Gary Mullen & Lance Durden.

Course requirements & grading policy: Students are expected to attend all scheduled lectures and laboratory sessions, take examinations and turn in reference collection of medically important arthropods. **Attendance** will not be recorded after the Drop/Add period but students are responsible for all material presented in class. The Instructor is not be obligated to provide lecture notes or handouts to absentee students and reserves the right to offer make-up examinations to students with documented valid excuses (eg. a death in the immediate family). Due to the logistical problems of setting up laboratory practical exams, make-ups of these tests may not be available. Lecture topics will be covered in three one-hour examinations and a comprehensive final examination. These exams may consist of any combination of objective (fill-in, true-false, multiple choice) and subjective (essay, diagrams etc.) questions about material presented in class or in the text. ***Exams will be retained by the instructor*** for 1 calendar year; students may arrange to see these at any time. Laboratory material will be covered by 6 quizzes and 2 practical examinations (sight identification). Reading material assigned for the lab also may be covered on these tests but students will not be tested in the lab on subjects covered only in lecture. ***All tests are cumulative.*** Oral presentations and curatorial duties to improve the teaching collection also may be assigned; satisfactory completion will earn additional points.

Points for the course will be allocated as follows:

LABORATORY

Quizzes: 50 pts (10 each, low score dropped)

Exam I: 25 pts

Exam II: 75 pts

Collection: 50 pts

TOTAL: 200 pts

LECTURE

Hour Exams 200 pts

Final Exam 100 pts

TOTAL: 300 pts

Student Presentations.

Will not exceed 25 pts

The following scale will be used to assign final grades:

| <u>POINTS EARNED</u> | <u>GRADE</u> |
|----------------------|--------------|
| 450-500 | A |
| 400-449 | B |
| 350 - 399 | C |
| 300- 349 | D |
| < 300 | F |

Special needs: Students requesting classroom accommodations or modifications due to a documented disability must contact the Access Office for Students with Disabilities located in Farber Hall. The phone numbers are 245-2498 (V/VP) and 219-1348 (TTY).

Tentative Lecture Schedule – Spring 2013

| <u>Lecture Topics</u> | <u>Assigned Reading</u> |
|---|-------------------------|
| Introduction & Overview of Arthropods | Ch.1 |
| Morphological Adaptations of Parasitic Arthropods | Ch. 2 |
| Epidemiology of Vector-borne Diseases | Ch. 3 |
| Forensic Entomology | Ch. 4 |
| Cockroaches | Ch. 5 |
| Lice | Ch. 6 |
| True Bugs | Ch. 7 |
| Beetles & Fleas | Ch. 8 & 9 |
| Flies | Ch. 10 through 19 |
| Moths & Butterflies | Ch. 20 |
| Ants, Wasps & Bees | Ch. 21 |
| Scorpions & Solpugids | Ch. 22-23 |
| Spiders | Ch. 24 |
| Mites | Ch. 25 |
| Ticks | Ch. 26 |
| Molecular Tools Used in Med/Vet Entomology | Ch. 27 |

Tentative lecture exam dates: Mon. Feb 18; Fri. April 5. Final Exam Friday May 3, 12:30-2:30.

Tentative Lab Schedule

| <u>Week</u> | <u>Topic/Activity</u> |
|-------------|--|
| 1 | Classification, External morphology, Arthropod classes, Insect & Arachnid orders |
| 2 | Life history stages, Dichotomous keys, Blattaria, Phthiraptera |
| 3 | Quiz 1; Forensics lab |
| 4 | Hemiptera, Coleoptera & Siphonaptera |
| 5 | Quiz 2; Diptera part I (Nemotocera) |
| 6 | Diptera part II (Bracycera) |
| 7 | Diptera part III (Cyclorhapha) |
| 8 | Quiz 3; Discuss student presentations |
| 9 | Lab practicum I |
| 10 | Spring Break |
| 11 | Lepidoptera & Hymenoptera |
| 12 | Quiz 4; Arachnid orders part I |
| 13 | TBA |
| 14 | Quiz 5; Arachnid orders part II |
| 15 | Collections due |
| 16 | Lab practicum II |

Graduate Students: In addition to the requirements set forth above, students enrolled for Graduate Credit (BIOL 5850) will read and provide written critiques of assigned research papers (TBA) (20 points total) , and present 3 class lectures (10 points each).

Grade scale for graduate students:

| <u>POINTS EARNED</u> | <u>GRADE</u> |
|----------------------|--------------|
| 512-550 | A |
| 471-511 | B |
| 435 - 470 | C |
| 360- 434 | D |
| < 360 | F |