

**BIOL 3850/5850 – MEDICAL & VETERINARY ENTOMOLOGY SPRING 2018  
SYLLABUS & COURSE POLICIES**

**Lecture:** BC 2022 (M, W, F 9:00-9:50)

**Laboratory :** BC 2071 (Section A Thurs. 1-3:50; Section B Fri. 11-1:50)

**Instructor:** Dr. Mark Blackmore

**Office:** Bailey Science Center 2218. Tel. 259-5114; email = [mblackmo@valdosta.edu](mailto:mblackmo@valdosta.edu)

**Office Hours:** Mon 11-12; Tue 2-3; Wed 12-1 or by appointment

**Research Lab:** BC 2060, Tel. 245-6422

**Course scope and objectives:** This course is intended to introduce the student to the biology, ecology and behavior of insects that affect the health of humans, livestock, and other domestic or wild animals.

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 3200, BIOL 3250, or permission of instructor; admission to graduate program (BIOL 5850 only).

**Texts:** *Medical and Veterinary Entomology* 2<sup>nd</sup> 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 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: 40 pts

Exam II: 60 pts

Collection: 50 pts

TOTAL: 200 pts

LECTURE

Hour Exams 225 pts

Final Exam 75 pts

TOTAL: 300 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 229-245-2498 (V) and 229-375-5871 (VP). For more information, please visit <http://www.valdosta.edu/access> or email: [access@valdosta.edu](mailto:access@valdosta.edu)

### Tentative Lecture Schedule – Spring 2018

<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: Wed. Feb 7; Fri. March 9; Wed. April 18. Final Exam Friday May 4, 8-10 AM.*

### Tentative Lab Schedule

<u>LAB</u>	<u>Topic/Activity</u>
1	Classification, External morphology, Arthropod classes, Insect & Arachnid orders
2	<b>Quiz 1*</b> ; Life history stages, Dichotomous keys, Blattaria, Phthiraptera
3	<b>Quiz 2*</b> ; Hemiptera, Coleoptera & Siphonaptera
4	<b>Quiz 3*</b> ; Diptera part I (Nemotocera)
5	Diptera part II (Bracycera); Diptera part III (Cyclorhapha)
6	<b>Lab practicum I</b>
7	Lepidoptera & Hymenoptera
8	<b>Quiz 4*</b> ; Arachnid orders part I
9	<b>Quiz 5*</b> ; Arachnid orders part II
10	<b>Quiz 6*</b> ; Arachnid orders part III
11	Collections due
12	<b>Lab practicum II</b>
	<b>* Quiz covers material from previous labs)</b>

**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 or laboratory 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