Biology of Insects 4070/5070
Fall 2011

Instructor: Dr. James H. Kennedy
Regents Professor
Department of Biological Sciences
Office: EESAT 310D,
Telephone 940-565-2981
Email (preferred method of contact), kennedy@unt.edu

Office Hours: Monday & Wednesday 3:00 - 4:00 or by appointment. See note below.

Required Text: *The Insects An Outline of Entomology* 4th Edition by P. J. Gullan and P.S. Cranston.

Attendance: Attendance is expected in both the lecture and the laboratory.

INSECT BIOLOGY (Entomology) is a basic course in the study of insects. Insects are the most diverse group of animals found on Earth, outnumbering all other species of animals and plants combined. Course emphasis is placed on understanding what contributes to the success of insects and to become familiar with their diversity of forms and behaviors. The course will examine insect adaptations to environments, and their functions in ecosystems. The course is primarily intended for persons interested in research or teaching careers in ecology, conservation and environmental science.

OBJECTIVES:

The overall course objective is to examine the role that insects play in the ecosystems they inhabit and to understand how ecosystems influence the insects that live in them.

Upon completion of this course a student should be able to:

1. Demonstrate knowledge of the taxonomy of adult insects and identify:
   a. basic morphological structures common to all insects.
   b. all insects to order on sight.
   c. common insects to family on sight.
   d. most insects to family and genus with taxonomic keys and microscope.

2. Describe selected aspects of the biology of insects:
   a. behavior
   b. habitat preferences
   c. feeding habits
   d. life history
   e. metamorphosis
   f. physiology
   g. reproduction

h. adaptations to the environment
i. functions in ecosystems

3. Demonstrate current methods used in entomology:
   a. collecting
   b. preserving
   c. preparing specimens for study
   d. curating

TENTATIVE SCHEDULE

Date	Topic	Reference
	Structure and Function	
25 Aug. 2011	**Introduction: Class policies, Definition of insects, Biodiversity of Insects**	Chap 1,& notes
30 Aug. 2011	**Arthropods other than Insects, Evolution, Classification**	Chap 1 Chap 7
01 Sep. 2011	**General morphology of Adult insects, Integument**	Chap 2
06 Sep. 2011	**Integument cont'd**	Chap 2
	MAJOR LIFE SYSTEMS	
08 Sep. 2011	**Circulatory System**	Chap 3
13 Sep. 2011	**Circulatory System Cont'd and Ventilatory System**	Chap 3
15 Sep. 2011	**Ventilatory System**	Chap. 3
20 Sep. 2011	**Alimentary System**	Chap. 3
22 Sep. 2011	**EXAMINATION #1**	
27 Sep. 2011	**Excretory System**	Chap. 3
29 Sep. 2011	**The Nervous System ... Neurons & synapses, motor nerves, neuromuscular junctions, interneurons and the ventral nerve cord**	Chap. 3
04 Oct. 2011	**Nervous system Cont'd**	Chap. 3

06 Oct. 2011	**Sensory Mechanisms and receptors ... mechanoreceptors, chemoreceptors.**	Chap. 4 (Section 4.1 - 4.2)
11 Oct. 2011	**Sensory Mechanisms light, etc. Cont'd**	
13 Oct. 2011	**Exocrine and Endocrine Glands and their Functions**	Chap. 3 (Section 3.3)
18 Oct 2011	**Reproduction : Male systems and Female systems**	Chap. 3 (Sections 3.81 - .82)
20 Oct. 2011	**Examination #2**	
25 Oct. 2011	**Life cycles: Embryonic Development, Growth, and Reproduction**	Chap. 6
27 Oct. 2011	**Life Cycles cont'd**	
01 Nov. 2011	**Insects and Plants**	Chap 10
03 Nov. 2011	**Insects and Plants ... Cont'd**	
08 Nov. 2011	**Insect Societies**	Chap. 11
10 Nov. 2011	**Insect Societies ... Cont'd**	
15 Nov. 2011	**Introduction to Medical Entomology**	
17 Nov. 2011	**Medical Entomology Cont'd**	
22 Nov. 2011	**Examination #3**	Chap 14
24 Nov. 2011	**No Class Thanksgiving Vacation ... Go south & collect insects.**	
29 Nov 2011	**Forensic Entomology**	Chap 9 section 9.4
01 Dec 2011	**Forensic Entomology Cont'd**	
06 Dec. 2011	**Overview**	Chap 1
08 Dec. 2011	**Insects are food**. **Dead Bug Society**.	Chap 1
15 Dec. 2011	**FINAL EXAMINATION ... 10:30 - 12:30 EESAT 360**	

Please note that this syllabus is tentative. I will make every attempt to cover the materials in the syllabus as outlined but reserve the right to make changes.

Grading: The grade you earn in Insect Biology is an average of your Lecture grade and Laboratory grade. The Lecture grade is composed of examinations (90%) and participation (10%). There are two lecture examinations and a final examination. All examinations (lecture and final) are equally weighted and will be averaged to determine the lecture examination portion of your grade. Participation points are based on class attendance, and participation in class activities (both lecture and laboratory). The final Insect Biology grade is calculated by averaging your lecture and laboratory scores.

Final Insect Biology grade = (lecture percentage + laboratory percentage) / 2

A = 89.5 – 100
B = 79.5 – 89.4
C = 69.5 – 79.4
D = 59.5 – 69.4
F = 59.4 and below

Although I do not anticipate any reason to modify this grading plan, I reserve the right to do so if circumstances warrant. I will inform the class if modifications to the grading scale are necessary.

Attendance: Students are expected to show up to class and lab on time. If you miss lecture more than 4 times (two weeks of classes) you will receive a 0 for participation. If you miss lecture 6 times (3 weeks), you will receive, at the discretion of the instructor, an incomplete or an "F" for the course.

Office Hours: If you are having problems, you are encouraged to talk with me as soon as possible, there is not much I can do for you during the last few weeks of the class. Please feel free to drop by during posted office hours. My office is in EESAT 310F or you may e-mail me for an appointment at *kennedy@unt.edu*. It is always a good idea to contact me (even for visits during posted office hours) before you visit.

Classroom Behavior: It is expected that student behavior will be courteous of the professor and other students. Students should arrive for class early and leave only at the end of class. If you arrive late please do not disrupt the class during your entrance. **If you missed the handouts for the class you will need to wait until the end of the class to receive them.** During lectures there should be no distracting behavior including the use of headphones or other unauthorized electronic devices. **Cell phones must be turned off during class.** Lap top computer may only be used for note taking and you must sit in the first row of the lecture hall. Students violating such norms will be asked and expected to leave the classroom.

Disability Accommodation: The Department of Biological Sciences, in cooperation with the Office of Disability Accommodation, complies with the Americans with Disabilities Act in making reasonable accommodations for qualified students with disabilities. Please present you written accommodation request before the 12th class day.

Dishonesty: Academic dishonesty in this class is unacceptable and will not be tolerated in any form. Cheating impacts the entire class. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Before you can proceed in either the lecture or laboratory you must have on file a signed ***BIOL 4070/5070 Biology of Insects*** *Policy on Plagiarism and Cheating*. This policy is applicable in lecture and laboratory.

BIOL 4070/5070 BIOLOGY OF INSECTS
POLICY ON PLAGIARISM AND CHEATING [1]

University Policy: Your Instructors (lecture and laboratory) support and will enforce the University of North Texas policies concerning academic misconduct. Academic dishonesty in this class is unacceptable and will not be tolerated in any form. Please consult the website www.vpaa.unt.edu/academic-integrity.htm for details.

Categories of Misconduct for which students are subject to discipline falls into the following categories: **Acts of Dishonesty, including but not limited to:**

1. Academic dishonesty -- cheating. The term "cheating" includes, but is not limited to:
    a. copying or any unauthorized assistance in taking quizzes, tests, or examinations,
    b. dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments,
2. Academic dishonesty -- plagiarism. The term "plagiarism" includes, but is not limited to:
    a. the knowing or negligent use by paraphrase or direct quotation of the published or unpublished work of another person without full and clear acknowledgment, and the knowing or negligent unacknowledged use of materials prepared by another person or by an agency engaged in the selling of term papers or other academic materials (for example turning in insects not collected by you without proper acknowledgment).

Penalties for Academic Misconduct

- First offense: A "0" will be recorded as the score for that activity **AND** the final course grade reduced by one complete grade.
- Second offense: Assignment of F (Fail) for the final course grade.
- For grievous infractions such as, but not limited to, a systematic or collaboratory event: An assignment of F (Fail) for the final course grade may be issued in the case of a first offense. An example of a grievous 1st offense that will result in an "F" in the course would be turning in collections that you have stolen, borrowed, or otherwise not personally collected and try to pass them off as your work.

I acknowledge that:

(1)I have been provided a copy of and read the BIOL 4070/5070 Policy on Plagiarism and Cheating located in the course syllabus.

(2)I understand that instructors of this course have a zero tolerance policy for plagiarism and cheating and that policies as outlined in the syllabus will be enforced, without exception.

Print Name: _____

Signature: _____

Date: _____