

Instructor: Yixin Zhang

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Office Hours: T W Th 11:00-12:00 AM, or by appointment

TA: Susanna Scott

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Lecture: Tuesday, Thursday 9:30-10:45AM in 243 SCI

Laboratory: Thursday 2:00-5:00 PM in 243 SCI, plus some field trips (**You must attend at least two Saturday field trips.** If you cannot meet the field-trip requirement, you will owe the class time. Helping Dr. Zhang and TA with course-related activities will be your repayment.)

Required Textbooks:

Lecture – *The Insects: An Outline of Entomology*, 3rd ed (2004), by Gullan and Cranston

Lab – *An Introduction to the Aquatic Insects of North America*, 3rd ed, by Merritt & Cummins.

Course Objectives

Entomology 4465/5465 provides an introduction to the importance, diversity, and conservation of insects. Lectures cover the general morphology unique to each order and the biology and natural history of selected families. Laboratories emphasize aquatic insect identification.

Specific objectives of this course are:

1. To appreciate the value and importance of insect diversity.
2. To learn basic principles of insect morphology, ecology and evolution.
3. To identify orders and the common families in the larger orders.
4. To acquire knowledge of techniques for museum preparation and preservation of insects.
5. To become familiar with local aquatic insects and their habits and habitats.

Grading

Lecture Points		Lab Points	
Team project/paper	220	Quizzes	100
Lecture Exam I	110	Lab Exam I	100
Lecture Exam II	110	Lab Exam II (final)	120
Lecture Exam III	120	Collection/Project	240
Total	560		560

Course Total = 1120 points

Grades will be assigned with cutoffs at 90% (A), 80% (B), 70%(C), 60% (D).

Team Projects in Lecture: You will be assigned to a team. During every lecture you will complete a graded worksheet as a team worth up to 5 points. You can only earn these points if you come to lecture. If you arrive late to lecture and your team has already answered one or more of the worksheet questions, you will earn points only for the questions you help answer. **Be on time** – very often the first question is assigned in the first five minutes of lecture.

Lecture Exams: Three lecture exams will be given. Exam format will be multiple choices, short answer, and essay.

Lab Quizzes: There will be a short quiz every week covering material from the previous week (10×10 points). Your lowest score will be dropped. These will occur at the beginning of each lab. **Be on time.**

Lab Exams: There are two lab exams in the practical format to identify specimens and structures and answer questions about insect biology and classification. The first exam will cover the first 7 labs. The second exam will consist of two parts: part 1 will cover the last 4 labs and be worth 60 points; part 2 is comprehensive and worth 60 points.

Insect Collection: A collection/project will be required and will be worth a maximum of 240 points. See separate sheet for more details. ***Turning in the collection late will cost 10 points per day – this includes weekend days.*** You be assigned a collection kit of various materials to get you started with your collection. **FAILURE TO RETURN A COMPLETE COLLECTION KIT WILL RESULT IN NO GRADE BEING ASSIGNED FOR THE ENTIRE COURSE!**

Make up Policy: There is **NO** make-up available. **Lab exams cannot be made up.**

Academic Honesty: All students have to follow the code of academic conduct. Cheating, plagiarism and other academically dishonest activities will not be tolerated and will be dealt with harshly. Please review the Academic Honesty policies that apply to all Texas State students; for definitions of policies go to: <http://www.swt.edu/effective/upps/Upps-07-10-01.HTML>; and you will find The Honor Code at: <http://www.swt.edu/effective/upps/upps-07-10-01.html>.

(Note: The tentative schedule is subject to change)

Date	Lecture	Subject	Reading	Laboratory
1.15 T	1	Introduction		
1.17 Th	2	Introduction to Insect Diversity	Ch1	Introduction, Insect orders
1.22 T	3	External Anatomy - Molting	Ch2	
1.24 Th	4	External Anatomy – Head	Ch2	Arthropods Quiz1
1.29 T	5	External Anatomy - Thorax	Ch2	
1.31 Th	6	External Anatomy - Abdomen	Ch2	Morphology / Orders Quiz2
2.5 T	7	Internal Anatomy 1	Ch3	
2.7 Th	8	Internal Anatomy 2	Ch3	Odonata Quiz3
2.12 T	9	Internal Anatomy 3	Ch3	
2.14 Th		Exam I		Ephemeroptera Quiz4
2.9 T	10	Sensory Systems & Behavior 1	Ch4	
2.21 Th	11	Sensory Systems & Behavior 2	Ch4	Hemiptera/Megaloptera Q5
2.26 T	12	Reproduction 1	Ch5	
2.28 Th	13	Reproduction 2	Ch5	Trichoptera/Lepidoptera Q6
3.4 T	14	Development & Life Histories 1	Ch6	
3.6 Th	15	Development & Life Histories 2	Ch6	Lab Exam I
3.11 T		<i>Spring Break</i>		
3.13 Th		<i>Spring Break</i>		Field Trip – Aquatic Insects
3.18 T	16	Insect Systematics	Ch7	
3.20 Th	17	Insect Biogeography & Evolution	Ch8	Coleoptera I Quiz7
3.25 T		Exam II		
3.27 Th	18	Ground-dwelling Insects	Ch9	Coleoptera II Quiz8
4.1 T	19	Aquatic Insects	Ch10	
4.3 Th	20	Insects and Plants 1	Ch11	Diptera Quiz9
4.8 T	21	Insects and Plants 2	Ch11	
4.10 Th	22	Insect Societies	Ch12	Plecoptera Quiz10
4.15 T	23	Insect Predation & Parasitism	Ch13	
4.17 Th	24	Insect Defense	Ch14	Review/Collection Quiz11
4.22 T	25	Medical & Veterinary Entomology	Ch15	
4.24 Th	26	Pest Management	Ch16	Lab Exam II/Collections Due
4.29 T				
5.1 Th				
5.6 T		Exam III 8:30 – 11:00		