

Aquatic Insects of North America
BIOL 4560
Spring 2012



Instructor: Dr. James H. Kennedy
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EESAT 310D
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Office Hours: M. & W. 1:30 - 2:30 or by appointment

Time and Room

Lecture: 11:00 - 12:20 Tuesday & Thursday (EESAT 358)

Lab: 1:00 - 4:50 Thursday (EESAT 358)

Required Text: *An Introduction to the Aquatic Insects of North America* (4th Edition)- Editors Merritt, Cummins and Berg.

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

AQUATIC INSECTS is a basic course in the taxonomy and biology of the insects most commonly encountered in freshwater habitats. Emphasis is placed on identification of aquatic insects and important aspects of their biology such as life cycles, habitat preferences, feeding habits, adaptations to environments, and functions in ecosystems. The course is primarily intended for persons interested in careers in aquatic ecology, fisheries science, and environmental science.

OBJECTIVES:

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

1. Demonstrate knowledge of the taxonomy of aquatic insects (adults and immatures) and identify:
 - a. basic morphological structures common to all aquatic insects.
 - b. all aquatic insects to order on sight.
 - c. common aquatic insects to family on sight.
 - d. most immature aquatic insects to genus with taxonomic keys and microscope.
2. Describe selected aspects of the biology of aquatic insects:
 - a. behavior
 - b. habitat preferences
 - c. feeding habits
 - d. life history
 - e. metamorphosis
 - f. physiology
 - g. reproduction
 - h. adaptations to freshwater environment
 - i. functions in aquatic ecosystems

3. Demonstrate current methods used in aquatic entomology:
 - a. collecting
 - b. preserving
 - c. preparing specimens for study
 - d. curating
4. Have the competency to use aquatic insects as a tool in:
 - a. aquatic ecology studies
 - b. bioassessments
 - c. teaching

Course Outline and Tentative Schedule

Date	Topic	Readings
17 January	Introduction, Introduction to General Entomology	M,C&B ¹ pp. 1-14, 139-156.
19 January	Aquatic Ecology: Habitats , Habits & Trophic Levels	M,C&B pp.55 – 103, 105 – 122.
24 January	Aquatic Ecology: Habitats , Habits & Trophic Levels Continued	M,C&B pp.55 – 103, 105 – 122.
26 January	Ephemeroptera	M,C&B pp. 181 - 225 ... Table 11 A
31 January	Ephemeroptera Cont'd	Same
02 February	Odonata	M,C&B pp. 237 -284 ... Table 12 A
07 February	Odonata Cont'd	Same
09 February	Examination 1 (Lectures 19 Jan - 09 February)	
14 February	Plecoptera	M,C&B pp. 311-375 ... Table 14 B
16 February	Plecoptera Cont'd	Same
21 February	Hemiptera	M,C&B pp. 385- 413 ... Table 15 A
23 February	Hemiptera Cont'd	Same
28 February	Megaloptera	M,C&B pp. 425- 435 ... Table 16 A
01 March	Field Trip depart 11:00	
06 March	Minor Orders	M,C&B pp. 295-306, 425- 435, 553-564, 673 - 677. Tables 13 A, 16A, 19A, 21A.
08 March	Examination 2 (Lectures 16 February -04 March)	
13 March	Trichoptera	M,C&B pp. 439 - 530 ... Table 18 A
15 March	Trichoptera	Same
20 & 22 March Spring Break		
27 March	Trichoptera - Lepidoptera	
29 March	Coleoptera	M,C&B pp. 571 - 648 ... Table 20 A
03 April	Coleoptera	
05 April	TBA	
10 April	Examination 3 (Lectures 13 March -05 April)	
12 April	Turner Falls Overnight Field Trip	
17 April	Diptera	M,C&B pp. 687-722, 723-746 ,... Table 22 B
19 April	Diptera	

24 April	Communities	M,C&B pp. 105 - 122
26 April	Applications	M,C&B pp.123- 137
01 May	Applications	None
03 May	Induction into the UNT Dead Nymph Society and Aquatic Insect Feast	

¹ M,C&B = Merritt and Cummins... *An Introduction to the Aquatic Insects of North America*

Final Examination: May 5-11, 2012 Final Examinations. *Aquatic Insects of North America* final is scheduled for 8 May 2012. The examination includes information from all areas that was covered during the semester.

Grading: The grade you earn in Aquatic Entomology is an average of your lecture grade and laboratory grade.

The Lecture grade is composed of examinations (90%) and participation (10%). There are three 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. The participation points are the easiest points to earn, just come to class, participate in the days activities, don't sleep during class, don't read newspapers or novels during class and you will earn the 10 %.

The final Aquatic Entomology grade is calculated by averaging your lecture and laboratory scores.

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.

Office Hours: If you are having problems, you are encouraged to talk with me as soon as possible. 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.

Important Dates: **January 30, 2012:** Last day to withdraw from course without instructor permission. **March 27, 2012:** Last day to withdraw with Instructor approval required. Automatic W assigned. **March 27, 2012:** Instructor approval required. W or WF may be assigned. **If you decide to drop the course you must obtain a note from the lab instructor certifying you turned in the lab equipment before the course instructor will sign the drop slip, no exceptions.** A grade of F or WF will be assigned if equipment is not returned or paid for.

Dishonesty: Academic dishonesty in this class is unacceptable and will not be tolerated in any form. Cheating can impact 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 4560/5570 Aquatic Insects of North America Policy on Plagiarism and Cheating*

Disability Accommodation: The University of North Texas is committed to both the spirit and

letter of federal equal opportunity legislation; reference Public Law 92-112 – The Rehabilitation Act of 1973 as amended. With the passage of new federal legislation entitled Americans with Disabilities Act (ADA), pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens. 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 your written accommodation request before the 12th class day.

BIOL 4560/5570 AQUATIC INSECTS OF NORTH AMERICA 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. Please consult the [University of North Texas Center for Student Rights and Responsibilities](http://www.unt.edu/csrr/) at <http://www.unt.edu/csrr/> including the [Code of Student Conduct](http://www.unt.edu/csrr/code_of_student_conduct.htm) at http://www.unt.edu/csrr/code_of_student_conduct.htm which include the following text:

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

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,
- c. the acquisition, without permission, of tests or other academic material belonging to a faculty member, staff member or student of the university, or
- d. dual submission of a paper or project, or resubmission of a paper or project to a different class without express permission from the instructor(s).
- e. any other act designed to give a student an unfair advantage.

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
- b. 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).

Plagiarism and/or cheating and disciplinary action for such are defined by the UNT Policy Manual Code of Student Conduct and Discipline as further defined in the next two paragraphs as quoted from this manual: "Plagiarism and cheating refer to the use of unauthorized books, notes, or otherwise securing help in a test; copying tests, assignments, reports, or term papers; representing the work of another as one's own; collaborating, without authority, with another student during an examination or in preparing academic work; or otherwise practicing scholastic dishonesty." "Academic dishonesty matters may first be considered by the faculty member who may assign penalties such as failing, reduction or changing of a grade in a test, course, assignment, or other academic work, denial of a degree and/or performing additional academic work not required of other students in the course. If the student does not accept the decision of the faculty member, he/she may have his/her case heard by the academic department chairperson or head for review of his/her case. If the student does not accept the decision of the academic department chairperson, he/she may then follow the normal appeal procedures listed in Disciplinary Procedures."

Penalties for Academic Misconduct

- (1) I have read the BIOL 456/5570 Policy on Plagiarism and Cheating located in the course syllabus which is also included in this document..
- (2) I understand that instructors of this course have a zero tolerance policy for plagiarism and cheating and that there are penalties outlined as:
 - First offense: A A0@ 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 collaborative event: An assignment of F (Fail) for the final course grade may be issued in the case of a first offense.

Print Name: _____

Signature: _____

Date: _____

¹ This document has been modified from the course syllabus for UNT SLIS 5600/4600 Policy on Academic Misconduct: Plagiarism and cheating.

<http://courses.unt.edu/efiga/FACULTYPAGE/StudentStatementPlagiarism.htm>