



ABIO 598R- Aquatic Biology Spring 2002

LECTURE: MW 1-2:15 P.M. SBDG 200

LABORATORY: M 2:30-5:45 P.M. SBDG 107

INSTRUCTOR: Dr. Heather Bennett

OFFICE: SBDG 209

TELEPHONE: 641-3472

E-MAIL: heatherb@aiken.sc.edu (often the quickest way to reach me!)

OFFICE HOURS: by appointment

TEXTBOOK: Allan, J. David (1995). *Stream Ecology: Structure and Function of Running Waters*. Kluwer Academic Publishers. 388 pp. Available in the USCA Bookstore and on-line at <http://www.Amazon.com> or Barnes and Noble (<http://www.bn.com>)

OTHER SUPPLIES AND EQUIPMENT: Clothes and comfortable, sturdy shoes that can get muddy and wet, hip waders (optional; a few pairs are available in the department), a good attitude!

COURSE DESCRIPTION: Field course covering biological, physicochemical and geological attributes of both lotic and lentic freshwater habitats. Emphasis on aquatic entomology, field data collection techniques, data analysis and critical reading of the primary literature in aquatic biology.

COURSE OBJECTIVES: By the end of this course, students will have

- 1) A broad understanding of the biology, chemistry and geology of aquatic habitats;
- 2) Collected and analyzed data for a field project, and presented the results of the project in the form of both a written and an oral report;
- 3) Read and analyzed critical papers from the primary literature.

METHODS OF PRESENTATION: There will be a variety of presentation styles in this course, including traditional lectures by the professor. Student discussion is often mandatory! Laboratory activities will include observation of both living and preserved organisms in the laboratory as well as many field trips to local habitats.

METHODS OF EVALUATION: Grades will be determined by lecture exams, the reading reports (instructions attached to this syllabus), a short insect keying quiz, and the project, which will include both a written and an oral report.

GRADING: You have the opportunity to earn a total of 500 points in this course. These points will be distributed in the following manner:

Lecture exams.....2@ 100 points each.....	200
Reading reports.....4@ 10 points each.....	40
Insect keying quiz.....	10
Project:.....	150
Biweekly progress reports....4@10 points each....	40
Paper draft.....	25
Oral report.....	35
Final report.....	50
Final exam.....	100
TOTAL.....	500

PLEASE NOTE: No late papers or other assignments will be accepted!

WHAT I EXPECT FROM YOU:

1. I expect you to have done the assigned reading *BEFORE* the lecture and lab.
2. I expect you to be an active and enthusiastic participant in all lecture and laboratory exercises. This particularly applies to field work, during which you can expect that you will get both wet and muddy. If you are not willing to get wet and/or muddy, this is probably not the class for you.
- 3.** I expect you to be respectful to the instructor and the other students in the course. This means coming *on time* to class and lab, and pulling your weight as a team member on the group project.

ADDITIONAL INFORMATION:

1. Attendance and Make-up Policy: It is in your best interest to attend every lecture and laboratory session. Do not schedule appointments during lecture and/or laboratory times. While you could get the lecture notes from a sympathetic classmate, it is virtually impossible to make up a laboratory. *If you are absent it is YOUR responsibility to find out what you missed!*

If you miss a lecture exam it is *your* responsibility to follow the following procedure in order to make it up:

- 1) You must contact me **NO LATER** than 2:00 P.M. on the day the test was administered to explain your absence. You can use e-mail or call my office. If I am not in my office, you will need to leave a message with Mrs. Cutsinger in the main office, or leave a message on the main office answering machine.
- 2) Make up exams will only be given under extreme circumstances, and only for those reasons outlined in the student handbook. Some examples of acceptable excuses are: illness/injury requiring a doctor's care, death in the immediate family (grandparent, parent or brother/sister), or official USCA activity such as a sport.

Examples of unacceptable excuses are: appointments of any kind, oversleeping, vacation at times other than official University holidays, car trouble, or funerals (unless I am notified at least 48 hours in advance of the funeral).

3) You must provide documentation of your absence upon my request. Examples of documentation include but are not limited to a doctor's note, official death notice, police report, written note from USCA coach, etc.

Make-up exams will be given at my discretion and convenience and may be in one of two formats (my choice): an oral exam, or a series of lengthy essay questions. ***No exceptions to these policies and procedures will be made.***

2. Honor pledge: You must endorse the following honor pledge on each lecture and laboratory assignment:

On my honor as a University of South Carolina at Aiken student, I have neither given nor received any unauthorized aid on this assignment or examination. To the best of my knowledge, I am not in violation of academic honesty.

3. If you need help: Please *ASK FOR HELP* if you need it. *MAKE AN APPOINTMENT* to see me or just drop by my office. I don't bite.

4. Disability statement: If you have a physical, psychological, and/or learning disability which might affect your performance in this class, please contact the Office of Disability Services, 126A B&E, (803) 641-3609, as soon as possible. The Disability Services Office will determine appropriate accommodations based on medical documentation.

LECTURE and LABORATORY SCHEDULE:

Date	Topic	Reading Assignment
January 14	Introduction to the Course	
16	Water	Chapter 1
21	Martin Luther King, Jr. Holiday; NO CLASSES	
23	Channels and Flow	Chapter 1
28	Discussion: Paper 1 Lab: Insect Taxonomy Aquatic Insect Orders and Life Histories	(on reserve)
30	Water Chemistry	Chapter 2
February 4	Discussion: Paper 2 Lab: Keying Quiz	
6	Physical Environment	Chapter 3
11	Discussion: Paper 3 Lab: Make leaf packs Experimental design	(on reserve)
13	Energy Sources	Chapters 4,5
18	Discussion: Paper 4 Lab: Field Trip : Sampling Gear Show and Tell ¹	
20	Trophic Relationships and Lotic Communities	Chapters 6 and 11
25	Discussion: Paper 5 Lab: Field Trip : Stream Microhabitats and Water Chemistry	(on reserve) EXPERIMENTAL DESIGN OF PROJECT IS DUE!
27	EXAM I	
March 4	Discussion: Paper 6 Lab: Field trip : Set up leaf pack experiments	
6	Ecosystems, Nutrients and Organic Matter	Chapter 12
11-15	SPRING BREAK	
18	PROJECTS	BIWEEKLY REPORT IS DUE!
20	Predation Herbivory	Chapter 7 Chapter 8
25	PROJECTS	
27	Competition	Chapter 9
April 1	PROJECTS	BIWEEKLY REPORT IS DUE!
3	Dispersal	Chapter 10

8	PROJECTS	
10	EXAM II	
15	PROJECTS	BIWEEKLY REPORT IS DUE!
17	Limnology I	(on reserve)
22	ORAL REPORTS OF PROJECTS ³	
24	Limnology II	(on reserve)
29	Last Day of Classes; Summary and Synthesis	FINAL DRAFT OF PAPER IS DUE!! ^{4,5}

¹ Yes, it will be cold on several of these field trips. Dress appropriately.

² Biweekly project reports are due at the beginning of the lab session

³ Oral presentations should last approximately 30 minutes each.

⁴ Final drafts of papers MUST follow EXACTLY the guidelines in the Department of Biology and Geology Student Research Handbook, available on the Web at <http://www.usca.sc.edu/biogeo/researchguide/>

⁵ NO LATE PAPERS WILL BE ACCEPTED!!



Format for Reading Reports

Every week for six (6) weeks this semester we will read and discuss papers from the primary literature in aquatic biology. I will assign the papers well in advance and copies will be placed on reserve in the library and in the main Biology/Geology office. For four (4) of these papers, you will submit a short reading report on the paper at the *beginning* of the class period in which we are scheduled to discuss the paper. You may choose any four of the six papers to report on. Reports are worth ten (10) points each. Reports must be typed using no larger than 12-point font and standard margins. You must use this format:

I. Give the title, author(s), date and source of each reading using the following bibliographic format:

Single author:

Smith, John Q. (1993). Title of his really great paper. International Journal of Underwater Basket Weaving 45: 35-56.

Multiple authors:

Doe, Jane M., Kent, Clark P. and Jones, Casey. (1985). Title of their really great paper. Annals of Superhero Activity 76: 93-104.

II. State the *senior* author's institutional affiliation.

III. In 3-5 complete sentences, summarize the main point(s) of the article.

IV. In 2-3 complete sentences each, please describe:

- A. the major strength of the reading
- B. the major weakness of the reading
- C. your overall opinion of the reading

V. In 1-2 complete sentences, state why you think this particular article was assigned.

PAGE LIMIT = 1 PAGE!!