

COURSE INFORMATION - GRADUATE

Ecology of Inland Waters and Estuaries

Biology 434, Fall 1999
(T, Th: 0930-1045; Th: 1100-1350)

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Course Description:

Ecology of Inland Waters and Estuaries includes study of both fresh waters and estuaries. While limnology is historically defined as the scientific study of lakes, many contemporary aquatic ecologists would broaden the context to include both inland flowing waters and estuaries. Thus, BIO 434 is a comparative ecosystem study of standing and flowing fresh waters and estuaries.

BIO 434 will provide a broad overview of the physical, chemical, biological, and ecological aspects of lentic (lakes and ponds), lotic (streams and rivers), and estuarine ecosystems. The overall approach will be comparative. That is, differences in physical and chemical processes (*e.g.*, nutrient cycles, energy flow), patterns of production, community structure and dynamics among lotic, lentic, and estuarine ecosystems will be emphasized.

The laboratory sessions in BIO 434 will include field observations and laboratory analyses of aquatic ecosystems, including selected freshwater and estuarine wetlands.

Prerequisites:

The prerequisites for BIO 434 are BIO 122 (General Biology II) and CHEM 122 (General Chemistry II) or their equivalents.

Office Hours:

Monday, 1300 to 1400; Tuesday, 1300 to 1500; Wednesday, 1100 to 1400; Thursday, 1400 to 1500

To schedule an appointment at other times or to notify the instructor of an expected absence:

Phone: 860-832-2658 (has voice mail)
E-mail: penniman@ccsu.edu

Class Policies:

Class attendance is expected. Material will be presented in class that is not in the assigned text (and will be included on exams). Laboratory attendance is required as per departmental policy.

If you need course adaptations or accommodations because of a disability; if you have emergency medical information to share with the instructor; or if you need special arrangements in case the building must be evacuated, please make an appointment to discuss these issues with the instructor as soon as possible.

Required Text and Supplemental Readings:

The required text for the course is:

Horne, A.J. and C.R. Goldman. 1994. *Limnology Second Edition*. McGraw-Hill, Inc., New York, NY. 576 pp.

Other reading assignments, for both lectures and laboratories, will be placed on reserve in the Burritt Library. All reading assignments should be completed prior to attending the corresponding class.

Course information (this sheet), schedules, and other materials for BIO 434 are available on-line at: <http://www.biology.ccsu.edu/penniman/bio434/bio434.html>.

Grading:

Examinations will include two (lecture) exams during the semester and a final exam. The final will be comprehensive, while the two semester exams will only cover information for the period immediately before each individual exam. There will be two laboratory exams and several laboratory write-ups (*i.e.*, syntheses of laboratory results, not complete laboratory reports). A student library research report (described below) is required. Additionally, a research literature review will be required of graduate students.

The grade for the course is made up of a total of 550 points divided as follows:

Semester exams (2 @ 15% each)	30%	150	(75 points each)
Final exam	20%	100	
Student report	15%	75	
Student research literature review	+++	50	
Lab exams (2 @ 7.5% each)	15%	75	(37.5 points each)
Lab projects (4 @ 5% each)	20%	100	(25 points each)
Total	100% +	500 + 50 points	

Student Report:

A student report is required, 12 to 15 pages in length (typed, double-spaced, no larger than 12-point font and one-inch margins, and not using right justification; required length not including figures, tables, bibliography, etc.), on a subject (pertinent to the course) of the student's choice (approved by the instructor). The report should not be merely a summary review of the subject but should represent some original synthesis by the student. The student should include a bibliography and should appropriately reference information within the text. Please do not include a folder or cover with the report, merely staple the report's pages together.

The report should include at least twenty references (*i.e.*, citations) pertaining to the subject area. The citations can include newspaper and magazine articles, references from the Internet, articles from the primary literature, etc. The citations may not include the text used for this class or similar texts. However, at least 75% of the citations must be "traditional" primary literature sources (*i.e.*, not from the Internet, newspaper, etc.).

The report should be an original writing exercise by the student. Students should be aware of the CCSU policy on plagiarism (*Student Handbook 1997-1998 Policy on Academic Honesty*, http://www.ccsu.edu/ResLife/z-04.htm#academic_honesty). Material (*i.e.*, text and

information) taken from another source and presented in the report must be cited (*e.g.*, footnoted). That is, unless the information is presented in the writer's (*i.e.*, the student's) own words, the information must be clearly attributed to the original source (*i.e.*, in quotation marks). While it is entirely acceptable to directly quote information from another source, this must be clearly indicated (with quotation marks) in the writer's report. However, merely altering a few words from the original author's format still constitutes plagiarism. Additionally, for the BIO 434 report assignment, no more than approximately 5% of the student's report should be direct, verbatim quotations. Students should consult a writing style manual (*e.g.*, *Council of Biological Editors Style Manual*) to determine the appropriate format for citations in the text, footnotes, and bibliographic references. Further guidance on format and citation/bibliographic style will be provided in class.

Students will submit (in writing) their choice of report topic by **12 October** for approval. Students will submit an outline of the report and their list of bibliographic references (properly formatted) for review and approval by **04 November**. Students **may** submit typed final draft reports for review by the instructor prior to **11 November**. The instructor will return the edited draft report within one week for the student to revise as indicated. **Final reports will be due no later than 02 December**. Five points per day (*i.e.*, week-day) will be subtracted for overdue reports. No report will be accepted after **09 December**.

Student research literature review (Graduate students only):

Graduate students enrolled in BIO 434 will have the additional requirement of preparing a written literature review of at least five related papers from the primary literature on a subject (pertinent to the course) of the student's choice (approved by the instructor). Note that the subject area must be different from that used for the student's research report described above. Students will write a five-page report summarizing the research area reviewed and present the summary to the class in a 10-15 min oral report. Guidelines for the written report are equivalent to those described above for the student research report.

Graduate students will submit (in writing) their choice of report topic by **12 October** for approval. Students will submit an outline of the report and their list of bibliographic references (properly formatted) for review and approval by **04 November**. Students **may** submit typed final draft reports for review by the instructor prior to **11 November**. The instructor will return the edited draft report within one week for the student to revise as indicated. **Final written reports will be due no later than 02 December. Graduate students will give their oral presentations during the 09 December laboratory session.**