

EVSS 639 WETLANDS AND WATERSHEDS**Instructors:****Timothy Callahan**284 King Street, 3rd floor

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Required Text

Brooks KN et al. 2003. Hydrology and the Management of Watersheds (3rd ed.). Wiley-Blackwell, Inc. Supplemental readings and PDFs of lectures will be provided on OAKS – be sure to check this site frequently for updates.

Class Location and Meeting Times

Rita Hollings Science Center, Room 334 M 2:00 – 5:00 PM

(We also will have one Saturday field trip)

Prerequisites

CHEM 112 (or equivalent) and good standing in Graduate School of College of Charleston, or permission of instructors

Course Structure

Background. This course will emphasize the important concepts and principles of watershed processes with a focus on saltwater and freshwater wetland systems. Background information will be presented on watershed characterization (topography, land use/land cover, hydrology, water quality and geochemical processes).

Field Trips. Field trips to local watershed sites will provide hands-on examination of principles, concepts, and issues. You should outfit yourself with the following basic gear:

Cold weather gear, knee boots, hat, insect repellent, rain-resistant field notebook

Field Trips Schedule

We hope to make 3 or 4 trips. More on this later as we coordinate schedules.

Homework Projects. Quantitative projects (homework sets) will be assigned when appropriate and shall be turned in for assessment on the due date by the beginning of class. Work should always be presented in a clear and thorough manner with a strict adherence of the College of Charleston Honor Code.

Exams. There will be a mid-term exam and a final exam.

Reports and Article Critiques. Because watershed science is a rapidly expanding discipline, articles from the recent literature will be assigned to each student for critique and class discussion. Careful review of scientific data and interpretations is expected.

Submission Guidelines. All work should be prepared in MS Word format (doc or docx) and uploaded to OAKS within the Dropbox. Note: graphs and figures included in Mac version of Word may not show on

PC-version of Word used by the instructors. It is your responsibility to ensure compatibility of your documents.

Journal articles or report topics will be assigned prior to class discussion, and each student should come prepared to discuss the paper's main points, the strengths and weaknesses of the paper, and the relevance of the data shown in figures and tables.

Q-R-S approach: When reviewing articles use the Question-Response- Summary method. This involves recording thought-provoking **questions** for later in-class discussion; noting your **response** to certain aspects of the subject (either individual article or literature review topic); and providing a short **summary** or synopsis of the article/topic.

Critiques should be 800 words or less; reports should be no greater than 1,600 words, including Figures, Tables, and Appendices. A quarter-page figure or table is equivalent to 100 words, a half-page figure or table is 200 words, and a full page figure or table is 400 words. Double-spaced and standard font type, 1-inch margins on all pages.

Citation format:

CBE format, as described in *Scientific Style and Format: The CBE Manual for Authors, Editors, and Publishers* (6th ed.), 1994. The "References" or "Literature Cited" section at the end of your paper should be in alphabetical order based on the first author's surname. Citations in the text should include the authors' surnames and date of publication. See

www.lib.washington.edu/help/guides/42cbe.pdf.

Presentation. For one of the reports, each student will present the major findings of the research topic as a 15-minute oral presentation to the class.

Assessment

Reports: 30%. Presentation 5%. Critiques: 15. Homework projects: 15. Exams: 35%.

Grading scale: A: 94 - 100% B: 82 - 87 C: 70 - 79
 B+: 88-93 C+: 77 - 81 F: below 70
 (follows the standard Graduate School grading scale)

Expected Outcomes

- Understanding of the principles and concepts of hydrology and water quality at the watershed scale.
- Understanding of the important hydrological and biogeochemical processes affecting both modern and ancient wetland environments.
- Ability to apply knowledge to decision-making situations regarding watershed and wetlands characterization, management, and regulation.

Student Responsibilities

- Attend and participate in all classroom and field meetings. Excessive absence is defined as missing four or more class sessions, whether excused or unexcused, and may result in your dismissal from the course with a grade of "WA" (equivalent to an "F").
- As a College of Charleston student, you have agreed to follow an honor code. See <http://www.cofc.edu/generaldocuments/handbook.pdf>. Specifically, be aware of the following aspects listed on the last page of this syllabus.
- During times of class discussion, you may find that your ideas and opinions may conflict with others in the class, or perhaps your past experiences do not coincide with what is presented during lecture. Please respect each other's viewpoints and treat everyone in the class with courtesy.

- Course auditors: you are required to attend all class lectures and field trips to receive audit credit.

Tentative Class Schedule Class meets Mon 2:00-5:00 PM

<i>Watershed and Wetlands Characterization</i>	
January 10 - 31 (3 classes)	
Field Trip: Jan. 24	Urban watershed (North Charleston)

<i>Watersheds: Concepts and Principles</i>	
February 7 - 28 (3 classes)	
Field Trip: Feb. 12 (SATURDAY)	Freshwater non-tidal wetlands
Field Trip: Feb. 21	Tidal wetlands

<i>Watershed and Wetlands Research</i>	
March 14 - April 11 (5 classes)	
Field Trip: Apr. 4	Lowland watersheds (Francis Marion NF)

<i>Watershed and Wetlands Management</i>	
April 18 – 25 (2 classes)	

Notes:

January 17	NO CLASS (MLK Day)
February 28	Midterm Exam
March 7	No Class: Spring Break
May 2, 12:00-3:00 pm	Final Exam

The Honor Code, College of Charleston

The Honor Code specifically forbids the following:

1. Lying: knowingly furnishing false information, orally or in writing, including but not limited to deceit or efforts to deceive relating to academic work, to information legitimately sought by an official or employee of the College, and to testimony before individuals authorized to inquire or investigate conduct; lying also includes the fraudulent use of identification cards and fabrication of data, endnotes, footnotes and other information related to academic work.
2. Cheating: the actual giving or receiving of unauthorized, dishonest assistance that might give one student an unfair advantage over another in the performance of any assigned, graded academic work, inside or outside of the classroom, and by any means whatsoever, including but not limited to fraud, duress, deception, theft, talking, making signs, gestures, copying, electronic messaging, photography, unauthorized reuse of previously graded work, unauthorized dual submission, unauthorized collaboration and unauthorized use or possession of study aids, memoranda, books, data, or other information. The term cheating includes engaging in any behavior related to graded academic work specifically prohibited by a faculty member in the course syllabus or class discussion.
3. Attempted cheating: a willful act designed to accomplish cheating, but falling short of that goal.
4. Stealing: the unauthorized taking or appropriating of property from the College or from another member of the college community. Note also that stealing includes unauthorized copying of, and unauthorized access to, computer software.
5. Attempted stealing: a willful act designed to accomplish stealing, but falling short of that goal.

6. Plagiarism:

6.1. The verbatim repetition, without acknowledgement, of the writings of another author. All significant phrases, clauses, or passages, taken directly from source material must be enclosed in quotation marks and acknowledged either in the text itself and/or in footnotes/endnotes.

6.2. Borrowing without acknowledging the source.

6.3. Paraphrasing the thoughts of another writer without acknowledgement.

6.4. Allowing any other person or organization to prepare work which one then submits as his/her own.

7. Penalties (Sanctions) for Violations of the Honor Code

7.1. XF – Transcript Notation (See Appendix A for full description.)

a) The grade of “XF” has been added to our grading options at the College. The grade of XF means failure due to academic dishonesty. If a student is found responsible for an act of serious academic dishonesty, the instructor for that course must assign an XF. The XF remains on the student's official transcript for a minimum of 2 years. After 2 years, the student can petition the Honor Board for removal of the X. The F will remain.

b) Instructors, with assistance from the Dean of Students if requested, will assess whether the behavior of the student falls into one of three classes:

Class 1 – act involves significant premeditation; conspiracy and/or intent to deceive, e.g., purchasing a research paper. Penalties: XF and either suspension or expulsion assigned if student found responsible by Honor Board.

Class 2 – act involves deliberate failure to comply with assignment directions, some conspiracy and/or intent to deceive, e.g., use of the Internet when prohibited, some fabricated endnotes or data, copying several answers from another student's test. Penalties: XF and other sanctions assigned if student found responsible by Honor Board.

Class 3 – act mostly due to ignorance, confusion and/or poor communication between instructor and class, e.g., unintentional violation of the class rules on collaboration. Penalties: Student and instructor agree upon the response and forward agreement to the Dean of Students. See “Class 3 Report and Resolution Form” on the Student Affairs, Honor System website.

7.2. Other penalties for violations of the Honor Code range up to and include expulsion from the College. Other penalties may be combined with the XF. Attempted cheating, attempted stealing, and the knowing possession of stolen property shall be subject to the same punishment as the other offenses. Because the potential penalties for an Honor Code violation are extremely serious, all students should be thoroughly familiar with the above definitions and be guided by them.