

The University of Tennessee at Martin
Department of Agriculture and Natural Resources
Spring 2009

Soil Science 430 (630)

Wetland Science

3 credit hours

Lecture - 3 hours per week. Opportunities for field experience will be available during the semester.

Prerequisite – Chem 111 or 121, Biol 120 or 140, Math 140 or consent of instructor

Instructor: Dr. Paula Gale
Office: 218B Brehm Hall
Phone: 881-7326 (office)
email: pgale@utm.edu

Office hours: 9 - 10 am, Mon-Fri or by appointment

Textbooks: Environmental Laboratory. 1987. "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

Available online at: <http://el.erdc.usace.army.mil/elpubs/pdf/wlman87.pdf>

US Army Corps of Engineers. 2008. *Interim Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region*. ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-30.

Vicksburg, MS: U.S. Army Engineer Research and Development Center.

Available online at: <http://el.erdc.usace.army.mil/elpubs/pdf/trel08-30.pdf>

Course Description:

Principles and problems associated with the conservation and management of wetland environments, with special emphasis given to identification and delineation procedures in the SEUS.

Course Objectives:

To acquaint the student with the importance of the role of wetlands in the environment through the study of their general occurrence, distribution, development, and use along with their physical, chemical, hydrological, and biological characteristics.

Each student who successfully completes the course should have a practical understanding of the following:

1. History, extent, definitions and status of wetland resources.
2. Hydrology, biology and chemistry of wetland environments.

3. Types and distribution of wetland environments and ecosystems.
4. Management, creation, restoration and classification of wetlands.
5. Wetland indicators and criteria used for wetland delineations and determinations.

Study Guides:

This class will be organized using the Blackboard (Bb) course management software. In the Bb section of this class you will find links to the textbooks, study guides for each section, supplemental links and websites, copies of the lecture slides and audio/visual copies of the lectures recorded with the Apreso system.

Exams will be derived primarily from the study guides. Lectures will cover only 1/2 to 2/3 of each study guide's material, but you will be held responsible for the entire study guide, unless informed otherwise in specific instances. A good study strategy is the completion of your own set of notes over each study guide prior to the exam covering that material.

Grading Procedures:

2 - one hour exams @ 100 points	200
5 - homework exercises @ 20 points	100
- peer evaluations	150
1 - presentation @ 50 points	50
1 - term paper @ 100 points	<u>100</u>
Total possible points	600

Percentage required for a given grade: A=90%; B=80%; C=70%; D=60%.

Term Paper and Presentation: A term paper and presentation covering a wetland ecosystem of your choice will be required. This special project will represent 25% of your grade. Topics will be selected at the beginning of the semester. Presentations will begin on April 1, 2009 and term papers will be due on March 2nd, the week before Spring Break.

Class Policies:

Class attendance is expected. Students will be expected to show respect for the instructor and fellow students by following the standards of academic integrity as outlined in the Student Handbook. Disruptive behavior during class will result in the perpetrator being asked to leave. Failure to work individually on an exam will result in a 0.

Any student eligible for and requesting academic accommodations due to a disability is requested to provide a letter of accommodation from Student Success Center within the first two weeks of the semester.

Academic Integrity

As stated in the student handbook (available online or inside the student phone directory) the University of Tennessee at Martin is dedicated to providing quality undergraduate education. In order to meet this objective it is important that the integrity of the academic process be maintained. “Integrity of the academic process requires fair and impartial evaluation by faculty and honest academic conduct by students.” The document goes on to list 14 possible violations of a student’s obligation to academic integrity. Number 10 on this list relates to plagiarism. “Indulges in plagiarism by presenting as one’s own, for academic evaluation, the ideas, representations, or works of another person or persons without customary and proper acknowledgement of sources.”

Plagiarism is the use of another’s ideas or writings without proper acknowledgement, in other words, submitting someone else’s work and claiming it as your own. Sometimes plagiarism is blatant “turning in as your own work something that you copied from the internet” and sometimes it is vague “providing proper documentation for sources but leaving out quotation marks around sections that are copied”. Listed below are websites that define what constitutes plagiarism, provide examples and suggest ways to avoid it.

<http://www.plagiarism.org/>

<http://www.aug.edu/sociology/plagiarism.html>

<http://ollie.dcccd.edu/library/Module4/M4-VII/plagar.htm>

All writing assignments for this course will be submitted through and evaluated for plagiarism using the Bb Safe Assignment tool.

University Policy on the use of cell phones or other electronic devices with photographic capabilities:

CELLULAR PHONES, PAGERS, AND OTHER ELECTRONIC DEVICES SHALL NOT BE USED IN A MANNER THAT CAUSES DISRUPTION IN THE CLASSROOM, LIBRARY, OR WITHIN UNIVERSITY-OWNED OR UNIVERSITY-OPERATED FACILITIES, NOR WILL THESE DEVICES BE USED IN AN INAPPROPRIATE MANNER. THIS INCLUDES ABUSE OF CELLULAR OR OTHER ELECTRONIC DEVICES WITH PHOTOGRAPHIC CAPABILITY. UTILIZING THESE DEVICES FOR PURPOSES OF PHOTOGRAPHING TEST QUESTIONS, OTHER FORMS OF ACADEMIC MISCONDUCT, OR ILLEGAL ACTIVITY, SUCH AS PHOTOGRAPHING INDIVIDUALS IN SECURE AREAS SUCH AS LAVATORIES, DORM ROOMS, OR LOCKER ROOMS WHEN A PERSON HAS A REASONABLE EXPECTATION OF PRIVACY, IS PROHIBITED.

Tentative Outline
 Soil Science 430 (630)
 Wetland Science
 Spring 2009
 M-W-F 12:00 – 12:50
 258 Brehm Hall

Topic No.	Approx. Beginning Date	Subject Matter
1	Jan. 12	Introduction and definitions
2	Jan. 15	Concepts for identification and delineation
3	Jan. 23	Plant indicators and sampling
4	Jan. 30	Soils
<u>First exam - Feb. 20 - topics 1 – 4</u>		
5	Feb. 22 <i>Mar. 2</i>	Hydrology <i>term papers due</i> <i>mid-term grades due</i>
	<i>Mar. 9 - 13</i>	<i>Spring Break</i>
6	Mar. 16	Problem areas
7	Mar. 23	Creation and restoration
8	Apr. 1	Presentations – Wetland Ecosystems
<u>Second exam - May 6 (7:45 am – 9:45 am) - topics 1 through 8</u>		

**Wetland Science
Special Project
Spring 2009**

The following is a list of guidelines for putting together your term paper and presentation on a wetland topic of your choice. You need to select a wetland system from the list that follows or choose one of the ecological profiles found in Table 3 on page 16 of the text and let me know of your choice. I am interested in getting the widest possible variety of topics so you may be asked to choose another topic.

Suggested Wetland Systems:

tidal salt marshes	wet meadow
tidal freshwater marshes	wet prairie
mangrove wetlands	prairie potholes
freshwater marshes	playas
northern peatlands	bottomland hardwood forests
southern deepwater swamps	everglades
riparian wetland	vernal pools
agricultural wetlands	pocosins
cypress domes and strands	other

specific ecosystems such as: Wetlands of the Middle East, Barataria Basin, Okefenokee Swamp

Topics will be selected on a first come basis. I will bring a sign up sheet beginning the first day of class and this sheet will be used to record topics. Once your topic has been selected, you need to investigate the system using the library and the internet and any other resources you wish. Some suggestions for the types of information to include in your summary follow:

- Description
- Geographic extent
- Geomorphology and hydrology
- Chemistry
- Ecosystem structure
 - canopy vegetation
 - fire
 - tree adaptations
 - understory vegetation
 - consumers
- Ecosystem function
- Ecosystem values
- Management problems and concerns
- References

Note: Not all of the above apply to all systems. So don't waste your time looking for tree adaptations for systems that have no trees.

The final product.

Your compiled information will be presented to the class as a 15 minute presentation, using visual aids. The expectation is that of a professional oral presentation lasting 11-13 minutes using Powerpoint slides. You will also need to turn in an 8 to 10 page summary (term paper) of the information that you have collected. (For graduate credit the term paper needs to be 12 – 15 pages in length.)

The presentation will be worth 50 points and evaluated using the following guidelines. Presentations will begin on April 1, 2009.

Title and Organization	15 points
Presentation	15 points
Visual Aids	10 points
Subject Comprehension	10 points

The 8 to 10 page summary will be worth 100 points. It will be evaluated in a similar manner to the oral presentation using the following guidelines. Term papers are due on Monday, March 2, 2009.

Timeliness and neatness	10 points
Organization	20 points
Presentation and grammar	20 points
Subject Comprehension and Content	50 points

Visual aids (maps, graphs, tables) will enhance the presentation of your material in both the presentation and written summary.

Student Profile
Soil Science 430 (630)
Wetland Science
Spring, 2009

NAME: _____

MAJOR: _____

Answer the following question in the space provided below.

What is a wetland and why are wetlands important?

I have received a course syllabus for Soil Science 430 (630). I understand what is expected of me and what I can expect from the instructor.

SIGNATURE

DATE