

Wetland Ecology and Management
Plant Biology 445 and Zoology 445
Fall 2015

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Lectures: MW 2:00-2:50 pm, Lawson, 101

Laboratory: T 2:00-5:50 pm, Life Sciences 2, 423

Required Textbook: Wetlands, 5th edition. Mitsch and Gosselink. 2015. ISBN: 978-1-118-67682-0

Introduction

Wetlands provide important “goods and services”, including critical habitat for many aquatic and semi-aquatic species, floodwater storage, transformation of nutrients, and filtering of pollutants. These important systems, often called “kidneys of the landscape”, are disappearing at a rapid rate all over the globe. Recognition of their value and concerns over these losses has prompted conservation of wetlands to mitigate ongoing losses. Today’s challenges demand that a wetland biologist be a “jack of all trades” with expertise in ecology, soil science, hydrology, engineering and policy. Scientists, managers, and policy-makers alike need a common language and understanding to facilitate communication with each other and the public. The broad goal of this course is to provide such a foundation upon which the student of wetlands can build.

Course Objectives:

- 1) Become familiar with the principles of wetland ecology.
- 2) Learn about the applications of wetland ecology.

Exams

There will be two exams in this course, a mid-term and a final. The final is NOT comprehensive. Exam questions will consist of short-answer, fill-in-the-blank, multiple choice and essays. Exams will cover lecture and lab material and will be designed to test comprehension of concepts, processes and terminology.

Homework Questions

Each student will be required to turn in five essay homework questions during the course of the semester. Questions will cover a wide variety of topics, and all resources available to the class can be used to help formulate answers to questions.

Labs and Field Trips

We will have several field trips during the semester. During field trips, students will tour wetlands, collect samples and record data. In the lab, samples will be processed and data analyzed. Students should bring appropriate field clothes and footwear and be prepared to get wet and muddy!

Lab Reports

Students will work in small groups in the field and lab to process samples and analyze data. Each student will prepare individual lab reports, which will be written up as short scientific papers (handouts will be provided later in the semester).

Presentations

During the last lab period, each student will be required to give a 10-12 minute oral presentation a wetland topic of his/her choice.

Plant Collection

Each student is required to make a plant collection. The collection should include a total of 25 wetland species (must be facultative or obligate wetland species). Plants will be pressed, identified to species and tied to a code representing the type of wetland from which it was collected. Specimens may be collected from wetlands during field trips, as long as this doesn't interfere with sampling or other field activities.

Point Distribution

Item	Points
Mid-term Exam	150
Final Exam	150
Homework Questions	50
Presentation	50
Lab Reports	100
Plant Collection	50
Total	550

Grading Scale

A	89.5-100%
B	79.5-89.4%
C	69.5-79.4%
D	59.5-69.4%
F	< 59.5%

Lecture Schedule (Note: this schedule is tentative. Dates may change as the semester unfolds.)

Reading	Topic	Date
n/a	Introduction to Wetlands	Aug. 24 – Aug. 26
n/a	Adaptations to the Wetland Environment	Aug. 31 – Sept. 2
2	Wetland Definitions	Sept. 9 – Sept. 14
3	Wetlands of the World	Sept. 16
4	Wetland Hydrology	Sept. 21-Sept. 23
5	Wetland Soils	Sept. 28-Sept. 30
6	Wetland Biogeochemistry	Oct. 5-Oct. 7
7	Wetland Vegetation and Succession	Oct. 14
	Mid-term Exam	Oct.19
8	Tidal Marshes	Oct. 21
9	Mangrove Swamps	Oct. 26
10	Freshwater Marshes	Oct. 28
11	Freshwater Swamps and Riparian Ecosystems	Nov. 2
12	Peatlands	Nov. 4-Nov. 9
13	Wetland Classification	Nov. 16
14	Human Impacts and Management of Wetlands	Nov. 18
15	Wetland Laws and Protection	Nov. 23
16	Wetland Ecosystem Services	Nov. 30
17	Wetlands and Climate Change	Dec. 2
18	Wetland Creation and Restoration	Dec. 9
	Final Exam	Dec. 14, 2:45-4:45

Laboratory Schedule

Note: the details and sequence of these topics may change slightly during the course of the semester.

Field attire: When we are going to the field, please come prepared with appropriate footwear and clothing. Be prepared to get muddy and wet!

Date	Topic
Aug 25	No class
Sept 1	No class
Sept 8	Introduction to field procedures
Sept 15	Field - wetland geomorphology & hydrology
Sept 23-25	Fieldtrip to Grand Bay, MS
Sept 29	Lab - processing samples; wetland biogeochemistry
Oct 6	Field – wetland plant identification, plant adaptations and communities
Oct 13	No class – fall break
Oct 20	Lab – data analyses
Oct 27	Cypress Creek report due (50 pts)

Oct 30-31	Fieldtrip to NGRREC and Indiana Dunes (times TBA)
Nov 3	Field – wetland succession
Nov 10	Field – wetland delineation and quantification
Nov 17	Field – wetland delineation and quantification
Nov 24	Field – quantifying wetland foods for wildlife
Dec 1	Field – floodplain wetlands
Dec 8	Class Symposium Wetland Delineation Report due (50 pts)



Syllabus Attachment Fall 2015

<http://pvcaa.siu.edu/>

IMPORTANT DATES * Semester Class
 Begins.....08/24/2015

Last day to add a class (without instructor permission):.....08/30/2015

Last day to withdraw completely and receive a 100% refund:.....09/06/2015

Last day to drop a course using SalukiNet:.....11/01/2015 Last day to file diploma application (for name to appear in Commencement program):
09/18/2015

Final examinations:.....12/14–12/18/2015 Note: For outreach, internet, and short course drop/add dates, visit Registrar’s Academic webpage <http://registrar.siu.edu/> **FALL**

SEMESTER HOLIDAYS Labor Day Holiday 09/07/2015 Fall Break 10/10-10/11/2015 ~~Wed~~ Day
 Holiday 11/11/2015 Thanksgiving ~~Wed~~ Day

WITHDRAWAL POLICY ~
 Undergraduate only Students who officially register for a session may not withdraw merely by the stop- ping of attendance. An official withdrawal form needs to be initiated by the student and processed by the University. For the proper procedures to follow when dropping courses and when withdrawing from the University, please visit [http:// registrar.siu.edu/pdf/ugradcatalog1314.pdf](http://registrar.siu.edu/pdf/ugradcatalog1314.pdf) **INCOMPLETE POLICY~** Undergraduate only An INC is assigned when, for reasons beyond their control, students engaged in passing work are unable to complete all class assignments. An INC must be changed to a completed grade within one semester following the term in which the course was taken, or graduation, whichever occurs first. Should the student fail to complete the course within the time period designated, that is, by no later than the end of the se- mester following the term in which the course was taken, or

graduation, whichever occurs first, the incomplete will be converted to a grade of F and the grade will be computed in the student's grade point average. For more information please visit:

<http://registrar.siu.edu/grades/incomplete.html> REPEAT POLICY An undergraduate student may, for the purpose of raising a grade, enroll in a course for credit no more than two times (two total enrollments) unless otherwise noted in the course description. For students receiving a letter grade of A,B,C,D, or F, the course repetition must occur at Southern Illinois University Carbondale. Only the most recent (last) grade will be calculated in the overall GPA and count toward hours earned. See full policy

at <http://registrar.siu.edu/pdf/ugradcatalog1314.pdf> GRADUATE POLICIES Graduate policies often vary from Undergraduate policies. To view the applicable policies for graduate students, please visit <http://gradschool.siu.edu/about-us/grad-catalog/index.html> DISABILITY POLICY Disability Support Services provides the required academic and programmatic support services to students with permanent and temporary disabilities. DSS provides centralized coordination and referral services. To utilize DSS services, students must come to the DSS to open cases. The process involves interviews, reviews of student-supplied documentation, and completion of Disability Accommodation Agreements.

<http://disabilityservices.siu.edu/> PLAGIARISM CODE

http://pvcaa.siu.edu/_common/documents/Plagiarism/Guide%20to%20Preventing%20Plagiarism.pdf MORRIS LIBRARY HOURS <http://www.lib.siu.edu/about>

SAFETY AWARENESS FACTS AND EDUCATION

Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources here: <http://safe.siu.edu>

SALUKI CARES

The purpose of Saluki Cares is to develop, facilitate and coordinate a university-wide program of care and support for students in any type of distress—physical, emotional, financial, or personal. By working closely with faculty, staff, students and their families, SIU will continue to display a culture of care and demonstrate to our students and their families that they are an important part of the community. For Information on Saluki Cares: (618) 453-5714, or siucares@siu.edu, <http://salukicare.siu.edu/index.html>

EMERGENCY PROCEDURES

Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. We ask that you become familiar with the SIU Emergency Response Plan and Building Emergency Response Team (BERT) programs. Please reference the Building Emergency Response Protocols for Syllabus attachments on the following pages. It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency.

INCLUSIVE EXCELLENCE

SIU contains people from all walks of life, from many different cultures and sub-cultures,

and representing all strata of society, nationalities, ethnicities, lifestyles, and affiliations. Learning from and working with people who differ is an important part of education as well an essential preparation for any career. For more information please visit:

<http://www.inclusiveexcellence.siu.edu/>

LEARNING AND SUPPORT SERVICES

Help is within reach. Learning support services offers free tutoring on campus and math labs. To find more information please visit the Center for Learning and Support Services website: Tutoring : <http://tutoring.siu.edu/>

Math Labs http://tutoring.siu.edu/math_tutoring/index.html WRITING CENTER The Writing Center offers free tutoring services to all SIU students and faculty. To find a Center or Schedule an appointment please visit <http://write.siu.edu/> AFFIRMATIVE ACTION & EQUAL OPPORTUNITY Our office's main focus is to ensure that the university complies with federal and state equity policies and handles reporting and investigating of discrimination cases. For more information visit: <http://diversity.siu.edu/#>

Additional Resources Available:

SALUKINET: <https://salukinet.siu.edu/cp/home/displaylogin> ADVISEMENT: <http://advisement.siu.edu/> SIU ONLINE: <http://online.siu.edu/>
