

RNR 7017 Restoration and Management of Wetland Functions

Syllabus Fall 2009

Room: RNR 225

Mon & Wed: 12:40-1:30

Friday: 12:40-6:30

Instructors:

Sammy King

124 School of Renewable Natural Resources

sking16@lsu.edu; 578-7564

and

Andy Nyman

342 School of Renewable Natural Resources

jnyman@lsu.edu 578-4220

Recommended (not required) Textbook: Mitsch, W. J., and J. G. Gosselink. 2000. *Wetlands*, 3rd Edition. John Wiley and Sons, Inc. New York.

Course Description and Objectives:

This course is designed to instill in students concepts of wetlands ecology and management as well as to demonstrate the application of those concepts. The specific objectives are for students to gain knowledge in:

- (1) The major biotic and abiotic factors that create and structure wetlands;
- (2) Identification of wetland plants and animals that are indicative of a variety of wetland types;
- (3) Ecology and management of wetland-dependent wildlife;
- (4) State, national, and international issues affecting wetlands.

Class Materials:

Class readings for selected topics will be provided on a website. Students are required to have hip boots (or plan on getting wet; it could be cold near the end of the semester), raingear, and a waterproof field notebook. It is recommended that students have the Mitsch and Gosselink **Wetlands** textbook and a copy of Thayers' *Birds of North America* CD, but not required. Binoculars are highly recommended but not required. Money (and/or bring your own food) for food will be required on some field trips.

Class Format:

This class will combine lecture with field excursions into wetlands around Louisiana and Texas. Field trips will be designed to meet specific course objectives; we will meet with biologists and refuge managers of various state, federal, and private entities and discuss wetland-related issues in the field and in "classroom" (i.e., it will be away from school and "lectures" may be in the van, workshop, or elsewhere) settings. We will meet most lab days, but not all. Time will also be given off during the week to make up for the extended field trip to Texas.

Lectures will be conducted on a variety of topics. Students will be assigned readings prior to class and/or field trips. Students will be expected to read materials prior to lecture or the field trip (please see below). We will also provide a list of plants and birds that need to be known. This list will be updated throughout the semester and may include adding some plants/birds and dropping others.

Grading:

Student grades will be based on lecture exams (60%), field notebook/quizzes (30%) and class participation (10%). The field notebook/quizzes will consist of plant and bird identification (in lab or field) and follow up field trip quizzes. For follow up field trip quizzes, we will conduct open field notebook quizzes on topics covered on the previous field trips. Students are encouraged to discuss their notes with other students to make sure their notes are accurate. Two exams plus a final will be given during the semester. Exams will be comprehensive and may include fill in the blanks and multiple choice, but will definitely contain essay questions. These exams will include materials covered in the lecture and/or lab. Class participation is based upon attendance, participation in lecture and field activities, and attitude. All field trips that are not designated as “optional” are mandatory.

Grading Scale: The grading scale is as follows:

90-100%	A
80-89%	B
70-79%	C
60-69%	D
Below 60%	F

Mon	Wed	Friday
24 Aug Course Overview	26 Aug (SK) Introduction Read: Chapter 1	28 Aug (SK) Waterbird/Plant ID
31 Aug (SK) Wetland Hydrology 1 and Geomorphology	2 Sept (AN) Wetland Hydrology 2 and Geomorphology	4 Sept. Hydrology Paper Discussion Papers TBA
7 Sept. Labor Day Holiday	9 Sept. (AN; SK out) Wetland Biogeochemistry/Wetland Soils 1 Read: Chapter 6	11 Sept. (AN; SK out) Wetland Biogeochemistry/Wetland Soils 2 Read: Chapter 6, Thullen et al., Coveney et al.
14 Sept (SK) Adaptations of Wetland Plants/Wetland Plant Dynamics Read: van der Valk 1981; Chapter 7	16 Sept (SK) Adaptations of Wetland Plants; Wetland Plant Dynamics Read: van der Valk 1981; Chapter 7	18 Sept (SK out) Prior to trip, read Strader and Stenson Field Trip: Sherburne
21 Sept. (AN; SK out) Aquatic Invertebrates and Plant Decomposition By Sung-Ryong Kang	23 Sept. (AN) Freshwater Marshes Read: Chapter 12 and Dahl	25 Sept (AN) Freshwater Marshes Discussion; Coastal Marshes: Read: Chapter 9; Chabreck and Nyman, and Coleman
28 Sept. Exam 1	30 Sept. (AN) Coastal Marshes Read: Chapter 10; Chabreck and Nyman, Nyman	1 Oct (Thurs)-2 Oct. (Fri) Field Trip: LUMCON Depart Thus morn. return Fri evening
5 Oct. (SK) Waterbird Ecology and Management Read: Weller and Spatcher; Laubhan et al.; Fredrickson and Reid	7 Oct. (SK) Waterbird Reading Discussion	9 Oct. Laguna Madre Reading Discussion. ID Review
12 Oct. off	14 Oct. Field Trip: Coastal Texas Depart in late afternoon	16 Oct Field Trip: Coastal Texas
19 Oct. Field Trip: Coastal Texas	21 Oct (SK; AN out) Coastal Texas Debriefing	23 Oct. (SK; AN out) off (optional: SWS chapter meeting in Denton, TX)
26 Oct (SK) Bottomland Hardwoods 1 Read: Chapter 15; Hupp 2000	28 (SK) Bottomland Hardwoods 2, Read: Chapter 15	30 Oct (SK) Field Trip: 3 Rivers WMA/Old River Control Structure

Monday	Wednesday	Friday
2 Nov (SK; AN out) off	4 Nov (SK; AN out) Climate Change and Wetlands Reading Discussion 1	Nov 6 Climate Change and Wetlands Reading Discussion 2
9 Nov (SK) Agricultural Wetlands	11 Nov (AN) Principles of Restoration Ecology Read: Guidelines for developing and managing ecological restoration projects	13 Nov Selected Wetland Restoration Readings Mississippi River Valley or TBA
16 Nov (AN) Selected Wetland Restoration Readings Coastal Louisiana: Flynn, Boyer	18 Nov Exam II (AN out)	20 Nov off
23 Nov off	25 Nov THANKSGIVING off	27 Nov THANKSGIVING off
30 Nov (AN) Bird ID Review (if desired)	2 Dec (AN) Bird ID Exam	4 Dec Field Trip: leave Thurs evening return Fri evening: Rockefeller Refuge/Lacassine NWR/Ricefields
Final Exam Mon 7 Dec, 7:30 am – 9:30 am, Room 225 RNR		