

**Renewable Natural Resources 3108: CASE STUDIES IN HABITAT
RESTORATION
Syllabus, Spring 2014
Louisiana State University**

This is a Service-Learning and field-intensive course

Lecture: 12:30 to 1:20; Thursdays, Room 141 Renewable Natural Resources Building

Laboratory: 1:30-4:20, Thursdays, departs from Room 141, Renewable Natural Resources Building. Field notebooks are required for all field trips.

Instructor: John Andrew Nyman, Ph.D., School of Renewable Natural Resources, LSU office: 328 Renewable Natural Resources, phone: 578-4220; email: jnyman@lsu.edu

Prerequisites: RNR 2101

Credit: 2 credit hours; 1 hr. lecture, 2 hrs. lab. Students should also enroll in 1 hour of credit in my section of RNR 4061 (Problems in Natural Resource Management) to account for the additional work that this class requires.

Summary: Through case studies, students will evaluate the effectiveness of various restoration efforts and will compare restoration principles to restoration practices. Students will examine the rights of individuals to sustainable wildlife populations and the responsibility of professional biologists to provide sustainable wildlife populations. The class will begin with a review of the Public Trust Doctrine and an introduction to general restoration principles. Case studies will begin with lectures summarizing the natural history of a particular habitat type and conclude with an examination of planning and monitoring documents (when available) associated with a particular restoration project in that habitat type. The laboratory will be used to visit some of the restoration projects studied in class and discuss the project with the designer/manager.

Service-Learning: Service-Learning is a credit-bearing, education experience in which students participate in an organized service activity that meets identified community needs and then reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation for the discipline, and an enhanced sense of civic responsibility. In RNR 3108, students will provide service directly to Restore the Earth Foundation Inc. and to the Louisiana Department of Wildlife and Fisheries (LDWF); these activities indirectly serve the public, who own the habitat and the wildlife that it supports. Service consists of preparing a Habitat Restoration Monitoring Report that evaluates the effectiveness of an existing wetland habitat restoration project that would otherwise go unmonitored.

Field-intensive: This is a field intensive class. For field trips, we need to leave campus at 12:40 and may not return until after the scheduled end of class (4:30 pm); we therefore will not delay departure for tardy people. You cannot earn an A if you miss a field trip. We also

will spend spring break at the Pass A Loure Wildlife Management Area monitoring the effectiveness of a restoration project that otherwise would not be monitored and assisting with an un-funded research project regarding vegetation damage by hogs. This is a required field trip; if you cannot make the field trip, then you cannot earn an A. If you cannot make the field trip, then you should drop this class.

Grading:

CWPPRA Project Presentation	5
Habitat Restoration Monitoring Report	15
Your contribution to the Habitat Restoration Monitoring Report as assessed by your classmates	5
Essays and Memos	
Memos describing difference between expected and observed restoration	15
Memos listing questions for field hosts	10
Memo quantifying contributions of your classmates to the Habitat Restoration Monitoring Report	5
Reflective Essay describing your learning about the role of government and individuals in sustaining wild habitat (n = 3)	45
 total points	 100

Grading Scale:

Grades of “A,” “B,” and “C” are assigned for satisfactory work. A grade of “A” indicates distinguished mastery of the course material; a grade of “B” good mastery; a grade of “C” acceptable mastery. A grade of “D” indicates minimally acceptable achievement for university credit but does not allow that credit to be applied toward the B.S.in Forestry or B.S. with a major in Natural Resource Ecology and Management. A grade of “F” is failing. A 10-point scale is used (A = 100-90, B = 89-80, etc.).

Learning Objectives, Student Assignments, and Learning Assessments:

Categories of Learning Objectives	Specific Learning Objectives	Classroom Strategies	Student Assignments	Assessing Learning
Course-Specific Academic Learning	ecological principles: disturbance, succession, and limiting factors	discuss reading assignments, lecture on main points	read, discuss	exam
	natural history of natural habitats in the region	discuss reading assignments, lecture on main points	read, discuss; compare habitats	exam
	Principles of Habitat Restoration	discuss reading assignments, lecture on main points	read, discuss; compare principles to practices	exam
Learning How to Learn	how to apply knowledge of ecological principles and institutional relationships to planning and managing habitat restoration efforts	discuss case studies of habitat restoration projects	monitor habitat restoration and/or analyze data for LDWF	group grade based on instructor and peer-evaluations (rubric to follow)
		review statistical analyses techniques as needed	prepare monitoring report and data analyses for USFWS and LDWFs	group grade with instructor and peer-evaluations (rubric to follow)
		plan the plan and data analyses		
Community Learning	Public Trust Doctrine: the role of governmental organizations, non-governmental organizations and the general public in the restoration of renewable natural resources	discuss case studies of habitat restoration projects	prepare questions for conversation with field hosts reflect on the roles and civic responsibility of government and private citizens to manage wildlife habitat.	questions submitted prior to field trip, graded by instructor three submissions (initial, mid-term, and final) graded by instructor; the final version will be peer-available
Inter- and Intra-Personal Learning	appreciation of wild places	reading assignments about field trip sites required before trip	reflect on differences between expected and observed habitat; peer available	submissions graded by instructor (each field trip)

**RNR 3108 Case Studies in Habitat Restoration
TENTATIVE SCHEDULE**

Date	Lecture	Laboratory
16 Jan	1. Course overview 2. Introduction: restoration as experimental ecology 3. Service Learning:	1. Overview of coastal wetland restoration 2. Assign CWPPRA project presentation 3. Development of information for presentation
23 Jan	1. Student presentations on CWPPRA projects	1. the Public Trust Doctrine and the North American Model of Wildlife Conservation 2. Restoration principles:
30 Jan		Case study: Coastal marsh restoration at Big Branch National Wildlife Refuge
6 Feb	deliverable: Memo listing questions for interview/conversation with Daniel Breaux.	Afternoon -long field trip: Big Branch NWR: coastal wetland restoration (Daniel Breaux, USFWS).
13 Feb	deliverable: memo describing differences between principles and practices at Big Branch NWR.	2. Ecological review: niche, stress gradients, resource gradients, community structure, disturbance, succession, system dynamics
20 Feb	deliverable: first draft (1 of 3) reflective essay on the your thinking about the roles and civic responsibility of government and private citizens to manage wildlife habitat	
27 Feb	Desired forest stand conditions in bottomland hardwood forests	Case Study: wetland mitigation banking
6 Mar	deliverable: Memo listing questions for interview/conversation with Dr. Delany.	Afternoon-long Field trip: Bayou Conway Mitigation Bank. Dr. Delany, Delta Land Services LLC
13 Mar	Deliverable: memo describing differences between principles and practices at Conway Mitigation Bank NO CLASS to make up for time spent in field	NO LAB to make up for time spent in field
20 Mar	deliverable: Second draft (of 3) of reflective essay on the roles and civic responsibility of government and private citizens to manage wildlife habitat	Case study: Prairie Restoration

27 Mar.	1. deliverable: Memo listing questions for interview/conversation with Dr. Allen	Afternoon-long Field trip: Eunice and Duralde Prairies. Dr. Charles Allen, Cajun Prairie Habitat Preservation Society Case Study: Cajun Prairie at Eunice and at Lacassine National Wildlife Refuge
3 Apr	Deliverable: memo describing differences between principles and practices at Eunice Prairie and Conway Prairie Restoration sites	
10 Apr	Guest Speaker on Management and Restoration activities in the Louisiana Department of Wildlife and Fisheries: Todd Baker, LDWF	1. Case study: sediment diversions at Pass A Loutre WMA 2. Case study: Black mangrove restoration at Pass A Loutre WMA
14 to 18 Apr	6am Monday: Leave LSU for Pass A Loutre WMA to monitor existing restoration projects and build hog exclosures. Return to Baton Rouge 5pm Friday	
24 Apr	1. deliverable: memo describing differences between principles and practices at Pass A Loutre WMA	Development of outline of Report on Service-Learning at PAL deliverable: final (of 3) reflective essay on the roles and civic responsibility of government and private citizens to manage wildlife habitat
1 May	deliverable: Draft of Report on Service-Learning at PAL	deliverable: Mock presentation of Report on Service-Learning at PAL t to LDWF

FINAL EXAM: Exam 3 (Comprehensive) Thurs, 8 May, 10am – noon

1. deliverable: final Service-Learning at PAL Report to LDWF

2. deliverable: Service-Learning at PAL Report presentation to LDWF

Reflective Essays (n = 3; 90 points each): This essay is NOT a review of technical and political aspects of habitat restoration nor is it a summary of your field trips and monitoring report. Each of you will prepare a reflective essay (1500 to 2000 words excluding literature cited) in which you reflect on (1) the roles and civic responsibility of government and private citizens to manage wildlife habitat, and (2) how the service that you provided advanced your understanding of the course content, broadened your appreciation of the discipline, and/or enhanced your sense of civic responsibility. Instead, this essay will reflect an intellectual exercise whereby you review what you've learned about the relationships between private citizens and professional biologists, and then draw conclusions about the experience's significance in relation to your future as an informed citizen in general and your career in particular. This reflection involves technical information, policy, an understanding of the cases that we studied, including the wetland restoration project that you monitored, but also depends upon you thoroughly considering and understanding the significance of these things rather than merely identifying them. These essays are due; i.e., uploaded into the appropriate Moodle Database, at the beginning, middle, and end of the semester (see schedule for due dates). What are the ideas, concepts, and beliefs that shaped and reshaped your thinking at the beginning and throughout this class? This essay also will reflect precision, clarity, conciseness, and correctness of technical writing. For general information on preparing a reflective essay, see these websites:

<http://www.essaywritinghelp.com/reflective.htm>

http://www2.smumn.edu/deptpages/tcwritingcenter/writing/reflect_essay.php

<http://www-old.lib.sfu.ca/slc/resources/writing/writing-reflective.pdf>

essay grade	essay characteristics
A	Critical thinking evident (thinking about thinking, thinking about challenges encountered and tradeoffs required during restoration) Example based (example of your learning; how you learned, why important to you) Topic sentences and one topic per paragraph Conclusions supported by essay Cited according to RNR 4107 standards Logical flow Precise words
B	As above, but with minor citation errors
C	Merely a summary of publications and assignments, but accurately described and cited
D	Major inaccuracy; improper literature cited
F	Major inaccuracy; no literature cited