

**Renewable Natural Resources 3108: CASE STUDIES IN HABITAT RESTORATION  
Syllabus, Fall 2010  
Louisiana State University**

*This is a Service-Learning and field-intensive course*

**Lecture:** 12:40 to 1:30; Mondays, Room 141 Renewable Natural Resources Building

**Laboratory:** 1:40-4:30, Mondays, 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

**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 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 to the Louisiana Department of Wildlife and Fisheries (LDWF) and to the Recreation and Park Commission of East Baton Rouge (BREC). Service to LDWF will consist of preparing a Habitat Restoration Monitoring Report that evaluates the effectiveness of an existing wetland habitat restoration project that would otherwise go unmonitored. Service to BREC will consist of preparing a Habitat Restoration Proposal, focused on neotropical migrant songbirds, for portions of BREC property that lack management.

**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 fall break (Oct 21-24) at the Pass A Loutre Wildlife Management Area monitoring the effectiveness of a restoration project that otherwise would not be monitored. 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.

**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	plan habitat restoration for BREC	group grade based on instructor and peer-evaluations (rubric to follow)
		review statistical analyses techniques as needed	monitor habitat restoration and/or analyze data for LDWF	group grade with instructor and peer-evaluations (rubric to follow)
		plan the plan and data analyses	present plans and data analyses to BREC and LDWFs	group grade with instructor and peer-evaluations (rubric to follow)
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 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	demonstrate good field notebook	maintain field note book	field note books graded by instructor (each field trip)
		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)

**Grading:**

Habitat Restoration Plan	
document .....	150
presentation .....	50
Habitat Restoration Monitoring Report	
document .....	150
presentation .....	50
Exams (n = 3) .....	150
Field Note Book Entries (n = 4).....	40
Essays and Memos	
Memos describing difference between expected and observed habitat (n = 4) .....	40
Memos listing questions for field hosts (n = 4) .....	40
Essay describing your learning about the role of government and individuals in sustaining wild habitat (n = 3) .....	330
total points .....	1000

**Grading Scale:**

A = 900 to 1000, B = 800 to 899, C = 700 to 799, D = 600 to 699, F = < 600

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

Date	Lecture	Laboratory
23 Aug	1. Course overview (material grading) 2. Introduction: restoration as experimental ecology 3. Service Learning: 4. Ecological review: niche, stress gradients, resource gradients, community structure	1. Ecological review: disturbance, succession, system dynamics 2. Restoration principles: (a) general, (b) prairie 3. Case Study: Cajun Prairie at Lacassine National Wildlife Refuge
30 Aug	1. <b>deliverable:</b> Memo listing questions for interview/conversation with field hosts 2. leave early for field trip	Day-long Field trip: Eunice and Duralde Prairies.
6 Sept	no class: Labor Day	no class: Labor Day
13 Sept	the Public Trust Doctrine and the North American Model of Wildlife Conservation	1. <b>deliverable:</b> memo describing differences between principles and practices at Drualde Prairie 2. <b>deliverable:</b> first (of 3) reflective essay on the roles and civic responsibility of government and private citizens to manage wildlife habitat 2. Field Trip to BREC's Burbank Soccer Complex (Greg Grandy) to plan how to improve habitat for neotropical migrants there
20 Sept	Exam 1. Ecology and Restoration Principles, Public Trust Agencies, Prairie Restoration	1. Case study: Floodplain forest restoration in the Mississippi River Alluvial Valley 2. Planning restoration of habitat for neotropical migrants at BRECs Burbank Soccer Complex
27 Sept	1. <b>deliverable:</b> Memo listing questions for interview/conversation with field hosts 2. leave early for field trip	Day-long Field trip: Atchafalaya Basin: floodplain restoration
4 Oct	Exam 2. (floodplain ecology; floodplain restoration)	1. <b>deliverable:</b> memo describing differences between principles and practices at Drualde Prairie 2. Restoration principles of estuarine habitat 3. Case study: Coastal marsh restoration at Big Branch National Wildlife Refuge
11 Oct	1. <b>deliverable:</b> Memo listing questions for interview/conversation with field hosts 2. leave early for field trip	Day-long field trip: Big Branch NWR: coastal wetland restoration (Daniel Breaux, USFWS)
18 Oct	1. Restoration principles of river deltas	1. Case study: Black mangrove restoration at Pass a Loutre WMA

		2. Planning project monitoring at Pass a Loure WMA
21 Oct to 24 Oct.	Fall break 1. <b>deliverable:</b> Memo listing questions for interview/conversation with field hosts 2. leave early for field trip	1. <b>deliverable:</b> 2nd (of 3) reflective essay on the roles and civic responsibility of government and private citizens to manage wildlife habitat.
25 Oct	large-scale collaborative restoration and management	1. <b>deliverable:</b> restoration plan document 2. no lab activity to make up for time spent at Pass a Loure WMA
1 Nov		<b>deliverable:</b> restoration monitoring report
8 Nov	Codes of ethics for professional biologists and their relevance	1. <b>deliverable:</b> revised restoration plan document formatted as directed by LDWF 2. no lab activity to make up for time spent at
15 Nov		1. <b>deliverable:</b> restoration plan presentation to BREC document formatted as directed by BREC 2, <b>deliverable:</b> revised monitoring report document
22 Nov		<b>deliverable:</b> monitoring report presentation to LDWF
29 Nov	review	1. <b>deliverable:</b> final (of 3) reflective essay on the roles and civic responsibility of government and private citizens to manage wildlife habitat 2. discussion of course

FINAL EXAM: Exam 3 (Comprehensive)

**Reflective Essays (n = 3; 90 points each):** Each of you will prepare a reflective essay (1500 to 2000 words excluding literature cited) in which you reflect on the roles and civic responsibility of government and private citizens to manage wildlife habitat. This essay is NOT a review of technical and political aspects of habitat restoration nor is it a summary of your restoration plan and monitoring report. 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 and the restoration plan that you prepared, 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://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