

Environmental Restoration
Geography 287W – Spring 2008
9:30-10:45 T/TH
CLAS 445

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Office Hours: Tuesday 11-12 or by appointment, CLAS 425

Course Description

We are now at a critical time in human history regarding the management of our environment. As opportunities for conservation and preservation of “pristine” environments rapidly diminish, the need to restore “damaged” environments will continue to grow. The science of restoration is relatively young and still rapidly evolving. This course will introduce you to the history of environmental restoration, expose you to methodological and ethical issues related to restoration, and discuss key issues and debates that are currently shaping the future of environmental restoration and its role in managing our environment.

Required Readings:

Copies of required readings are on the course WebCT page whenever possible. In some instances, they will be handed out in class the week before they are due. There is one required textbook for this course: Saving Nature’s Legacy, by R.F. Noss and A.Y Cooperrider, Island Press, ISBN:1559632488.

Course Grading Structure

<u>Assignment</u>	<u>Points</u>
Discussion participation	50
Midterm exam	200
Term paper	400
Presentation	50
Final Exam	200
Total	900

Grading System

94-100	A	73-75.9	C
90-93.9	A-	70-72.9	C-
86-89.9	B+	66-69.9	D+
83-85.9	B	63-65.9	D
80-82.9	B-	60-62.9	D-
76-79.9	C+	Below 60	F

Writing Component

Students will individually write a research term paper (minimum of 15 pages in length) from a selection of topics related to the course material. The term-paper assignment will consist of several components spread over the second half of the semester. These include:

- A two-page topic proposal and outline
- A list of sources to be used as references
- A preliminary draft
- A second draft
- A final draft

Failure of the writing component of this course will constitute failure in the entire course.

** Course Readings and Assignment Schedule **

Tuesday January 22	Course Introduction
Thursday January 24	What is restoration? What is Nature? <ul style="list-style-type: none"> • P.M. Vitousek et al. 1997. Human domination of Earth's ecosystems
Tuesday January 29	History of restoration <ul style="list-style-type: none"> • P. Dobson, A. D. Bradshaw, A. J. Baker, Hopes for the Future: Restoration Ecology and Conservation Biology
Thursday January 31	Legal, ethical and economic considerations <ul style="list-style-type: none"> • Light and E.S. Higgs, The Politics of Ecological Restoration
Tuesday February 5	NO CLASS
Thursday February 7	Legal, ethical and economic considerations <ul style="list-style-type: none"> • K.D. Holl and R.B. Howarth, Paying for Restoration • J.T. Kirby, Gardening with J. Crew: The Political Economy of Restoration Ecology
Tuesday February 12	Ecological/physical principals and practices <ul style="list-style-type: none"> • Noss and Cooperrider, Chapter 1
Thursday February 14	Ecological/physical principals and practices continued <ul style="list-style-type: none"> • Noss and Cooperrider, Chapter 2
Tuesday February 19	NO CLASS
Thursday February 21	NO CLASS
Tuesday February 26	Ecological/physical principals and practices continued <ul style="list-style-type: none"> • J.G. Ehrenfeld and L.A. Toth, Restoration Ecology and the Ecosystem Perspective
Thursday February 28	Exam Review
Tuesday March 4	Exam 1
Thursday March 6	Soil <ul style="list-style-type: none"> • P. A. Matson,* W. J. Parton, A. G. Power, M. J. Swift, Agricultural Intensification and Ecosystem Properties
Tuesday March 11	Spring Break
Thursday March 13	Spring Break
Tuesday March 18	Grasslands and Prairies and Savannas <ul style="list-style-type: none"> • Noss and Cooperrider, Chapter 7

	<ul style="list-style-type: none"> • C. D'Antonio and L.A. Meyerson, Exotic Plant Species as Problems and Solutions in Ecological Restoration: A Synthesis
Thursday March 20	Grasslands and Prairies and Savannas <ul style="list-style-type: none"> • Knapp et al., The Keystone Role of Bison in North American Tallgrass Prairie
Tuesday March 25	Temperate Forests <ul style="list-style-type: none"> • Noble and R. Dirzo, Forests as Human-Dominated Ecosystems • Noss and Cooperrider, Chapter 6
Thursday March 27	Temperate Forests <ul style="list-style-type: none"> • Brown et al., Forest Regeneration and Fire: Principles in the Context of Place
Tuesday April 1	Rivers and watersheds <ul style="list-style-type: none"> • J.P. Cohn, Resurrecting the Dammed: A Look at the Colorado River Restoration • Noss and Cooperrider, Chapter 8
Thursday April 3	Rivers and watersheds <ul style="list-style-type: none"> • Hart, D. D. et al. Dam Removal: Challenges and Opportunities for Ecological Research and River Restoration • R.E. Sparks, Need for Ecosystem Management of Large Rivers and Their Floodplains
Tuesday April 8	Cadillac Desert
Thursday April 10	Cadillac Desert
Tuesday April 15	NO CLASS
Thursday April 17	NO CLASS
Tuesday April 22	Designing restoration plans <ul style="list-style-type: none"> • Egan, D., 2001. Setting Standards for Good Ecological Restoration • Noss and Cooperrider, Chapter 4 and 5
Thursday April 24	Presentations
Tuesday April 29	Presentations
Thursday May 1	Presentations Final Draft of Term Paper Due