

Landscape Ecology (Spring 2009)
GEO4930-07/GEO5934-05

Class meets: Thursday 2-4:30 pm, Bellamy 035
Office hour: Friday 1-3 pm or by appointment

Instructor

Dr. Tingting Zhao, Department of Geography, 304 Bellamy
(Tel: 850-645-8198; E-mail: tzhao@fsu.edu)

Credit Hours: 3

Course Objectives

This course is designed to introduce students to concepts, methods, and applications of landscape ecology. Students are expected to understand how landscape structure and spatial configuration affect ecological processes as well as interactive relationships between natural and human systems through 1) lectures, 2) reading and discussion of literature, 3) computer-based lab assignments, and/or 4) a term project.

Course Prerequisites

There are no formal prerequisites for this course. However, basic familiarity with geographic information system/science (GIS) is helpful. Students are expected to be comfortable with computers and the Windows operating system, since all labs are computer-based exercises.

Required Textbook

Turner, M., Gardner, R.H. and O'neill, R.V., 2003, *Landscape Ecology in Theory and Practice: Pattern and Process*. Springer.

Additional readings:

- Chapin, F.S. III, Matson, P.A., and Mooney, H.A. (2002). *Principles of Terrestrial Ecosystem Ecology*. Springer. pp 288-301.
- Fischer, J., and Lindenmayer, D.B. (2007). Landscape modification and habitat fragmentation: A synthesis. *Global Ecology and Biogeography* 16: 265-280.
- Liu, J. (2001). Integrating ecology with human demography, behavior, and socioeconomics: Needs and approaches. *Ecological Modelling* 140: 1-8.
- Nassauer, J.I., and Opdam, P. (2008). Design in science: Extending the landscape ecology paradigm. *Landscape Ecology* 23: 633-644.

Electronic Materials

Class announcements, part of lecture materials, additional readings will be posted on Blackboard course site LANDSCAPE ECOLOGY (GEO4930/5934, Sp09).

Term Project

Graduate students will be required to select a topic of landscape ecology, to read 2-3 peer reviewed journal articles, and to present your summary and critiques to the class. You are also required to submit a written report (6-page, double-space) by the end of this semester, summarizing concept, progress and future work of the topic you selected to present.

Undergraduate students are not required for this term project. However, you may choose to work on it (including presentation and written report) as the surrogate for lab assignments. If you decide to do so, clarify with the instructor before January 22.

Grading

Your grade will be determined based on combined performance of contribution to class discussion (i.e., participation), lab assignments, and/or term project.

Session	Participation	Lab assignments	Term Project	
			Presentation	Written report
Undergrad	40	60	n/a	n/a
Undergrad (project)	40	n/a	30	30
Grad	15	45	20	20

Course Policies

Attendance is required throughout the semester. Persistent informal talking and any reading or studying of other materials will not be tolerated. Delay in the submission of lab assignments decreases 10% of score per day. **No delay will be accepted for term project.** All changes to the course schedule made in class are the responsibility of the student. You are responsible for all missed class materials. Office appointments will be made only when there is a clear conflict with the student's course schedule.

Honor Code Statement

The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to "be honest and truthful and...[to] strive for personal and institutional integrity at Florida State University" (Academic Honor Policy, <http://www.fsu.edu/~dof/honorpolicy.htm>).

Americans with Disabilities Act

During the first week of class, students needing academic accommodations should: 1) register with and provide documentation to the Student Disability Resource Center; and 2) bring a letter to the instructor from the Student Disability Resource Center, indicating the

need for academic accommodations. For more information about services available to FSU students with disabilities, contact

Student Disability Resource Center

97 Woodward Avenue, South

108 Student Services Building

Florida State University

Tallahassee, FL 32306-4167

(850) 644-9566 (voice)

(850) 644-8504 (TDD)

sdrc@admin.fsu.edu

Syllabus Change Policy

This syllabus is subject to change with advance notice. The class schedule on our Blackboard course site gives the most up-to-date listing of our schedule.

Schedule
(subject to change)

Week	Date	Topic	Readings	Lab
1	Jan 8	Introduction	Ch 1	Software demo
2	Jan 15	Pattern-process interaction	Ch 4	Logistic regression
3	Jan 22	Scale	Ch 2	
4	Jan 29	Pattern metrics	Ch 5	Patch analysis
5	Feb 5	Habitat connectivity	Fischer, 2007	
6	Feb 12	Model & hypothesis test	Ch 3	Topic & readings of term project due
7	Feb 19	Neutral model	Ch 6	Neutral model
8	Feb 26	Disturbance	Ch 7	
9	Mar 5	Succession	Chapin, p288-301	Term project
10	<i>Spring break. No class. Have fun!</i>			
11	Mar 19	Human-environmental interactions	Liu, 2001	Term project
12	<i>AAG conference. No class. Travel safely!</i>			
13	Apr 2	Landscape sustainability	Nassauer, 2008	Term project
14	Apr 9	Presentation	Student's choice	n/a
15	Apr 16	Course summary & evaluation	n/a	n/a
16	Term paper due by 5 pm on Thursday, Apr 23. No delay will be accepted.			