

Sustainable Landscape Ecology
Course ENV*K207, Course Number 11582
Meeting Day and Time: Tuesday and Thursday 2:30 – 3:45 am, Room D128
Course Instructor: Meredith Metcalf (Office: Room C202)
Email: meredithmetcalf@yahoo.com or mmetcalf@trcc.comnet.edu
Office Hours: Tuesday and Thursday 1:00 pm – 2:00 pm or by appointment

Required Text:

Chiras, D. and Reganold, J. (2010) Natural Resource Conservation, 10th Edition: Management for a Sustainable Future. Benjamin Cummings; New York.

Most of the background information for this course you can get from the **required** textbook above. In addition, there will also be discussion threads based on supplementary articles that I provide and we will continually refer to Web sites.

Course Description:

This course will cover the basic concepts, principles, and methods of landscape ecology, as well as its important applications in nature conservation, resource management, and landscape planning and design. Through reading and discussion students will explore the ecological relationships of biotic communities in heterogeneous environments and the importance of the landscapes to ecosystem diversity and function in wetlands, forests and rangelands. Students will learn about the relationships of landscape ecology to plant ecology, animal ecology, population ecology, aquatic ecology, landscape architecture and geography. Students will specifically address sustainability, BMPs and conservation issues at the landscape scale.

Landscape ecology is the interaction between spatial pattern and ecological process, that is, the causes and impacts of landscape change at varying scales, from centimeters to hundreds of kilometers. It utilizes the novel perspectives offered by aerial photography and satellite imagery. Landscape ecology combines the spatial approach of the landscape architect with the functional approach of the ecologist. This course takes the science from the natural landscape into the rapidly changing urbanizing landscape. The concepts and interactions are the same, but the focus is at those scales associated with urban issues.

Landscape ecology emphasizes broad spatial scales and the ecological effects of the spatial patterning of ecosystems. (Monica Turner, Univ. of Wisconsin - Madison. 1989) Landscape ecology offers new theory, concepts, and methods which reveal why spatial patterns are important to understanding the dynamics and interactions between ecosystems.

Learning Objectives:

Most important goals of this course are to be able to:

- Introduce landscape ecology evolution as a field of science and practice

- Explain concepts, theories, and methods important for understanding spatial relationships of interacting ecological communities
- Understand scientific principles that explicitly address spatial configuration and the importance for ecological processes
- Describe analytical approaches used to characterize and assess land use and land management patterns, processes, and dynamics
- Relate landscape ecology to rural and urban landscape architecture
- Identify and use background material and knowledge to analyze and report on landscape and ecology applications to rural and urban issues.

Tentative Schedule

The meaning of “tentative”, as used here, means that the schedule outlined below is under terms that are uncertain or not final. In other words, required reading, essays, quizzes/exams, and dates **may** change. However, all changes and variations of the schedule will be discussed in class; thus, class attendance is essential for students and excuses for missed assignments or quizzes/exams will not be accepted.

Week/Date	Topics	Quiz/Exam	Reading Required	What's Due?
Week 1 and Week 2 January 20 th , 25 th , and 27 th	Introductions Natural Resource Conservation and Management: past, Present, and Future		Chapter 1	Jan. 27 th – Questions: 3, 4, 5, and 11
Week 3 February 1 st and 3 rd	Economics, Ethics, and Critical Thinking		Chapter 2	February 3 rd – Questions: 5, 10, and 12
Week 4 February 8 th and 10 th	Review of Chapter 3: Lessons from Ecology Review of Chapter 4: The Human Population Challenge		Chapter 3 and Chapter 4	February 10 th – Chapter 3 Questions: 19, 23, 27 Chapter 4 Questions: 14 and 15
Week 5 February 15 th and 17 th	World Hunger		Chapter 5	February 17 th – Questions: 1, 10, and 13
Week 6 February 22 nd and 24 th	The Nature of Soils Soil Conservation and Sustainable Agriculture	Quiz 1	Chapter 6 and Chapter 7	February 24 th -- Chapter 6 Questions: 1, 10, and 13 Chapter 7 Questions: 4, 12, and 18
Week 7 March 1 st and 3 rd and 5 th	Integrated Pest Management March 5 th – Attend CT NOFA Winter Conference on March 5 th at Manchester Community College		Chapter 8	March 3 rd – Questions: 14, 15, 17, and 18
Week 8 March 8 th and 10 th	Aquatic Environments March 10 th – NO CLASS		Chapter 9	March 8 th or 10 th – Questions: 6, 14, and 21
SPRING BREAK March 15 th and 17 th	--SPRING BREAK-- NO CLASS			
Week 9	Managing Water Resources Sustainably		Chapter 10, 11,	March 24 th –

March 22 nd and 24 th	Water Pollution Fisheries Conservation		and 12	Chapter 10 Questions: 4 and 5 Chapter 11 Questions: 17 and 24
Week 10 March 29 th and 31 st	Rangeland Management	Quiz 2	Chapter 13	March 31 st – Questions: 1, 3, and 17
Week 11 April 5 th and 7 th	Forest Management		Chapter 14	April 7 th – Questions: 2 and 16
Week 12 April 12 th and 14 th	Plant and Animal Extinction		Chapter 15	April 14 th – Questions: 2, 12, and 16
Week 13 April 19 th and 21 st	Wildlife Management		Chapter 16	April 21 st – Questions: 10 and 13
Week 14 April 26 th and 28 th	Sustainable Waste Management	Quiz 3	Chapter 17	April 28 th – Questions: 1 and 2
Week 15 May 3 rd and 5 th	Student Presentations Distribute Final: chapter material – probable cumulative, possibly questions on topics discussed in class, and videos	Presentations		
Week 16 May 10 th and 12 th		FINAL EXAM DUE		

Grading

45% Quizzes (each quiz is worth 15% of your final grade) – Quizzes will be given *APPROXIMATELY* on the dates specified above. The exact date and content of each quiz will be stated in class the week prior to the scheduled quiz. **There will be no make-up of quizzes without prior approval. In other words, if the instructor is not informed of an expected absence for a quiz/exam 24 hours BEFORE the scheduled quiz/exam, the student will receive a zero. The missed quiz/exam MUST be completed within 1 week of the scheduled quiz/exam and taken during the instructor’s office hours specified above.**

15% Final Exam – A **cumulative** final exam will be given at the end of the semester. Date and time to be announced.

15% Assignments – Each student is required to provide at least **TWO** pages (double spaced, 12 font) to answer **ALL** the questions specified in the tentative schedule above from the “Critical Thinking and Discussion Questions” at the end of the chapter in the required text. All assignments are due the following week after it has been assigned. Late assignments will **NOT** be accepted.

15% Presentations – Additional reading and a final presentation for each student is mandatory for a passing grade. All students are expected to be in class to give their individual presentation **AND** see presentations of fellow classmates. Presentations will be discussed within the first weeks of the course such that students are able to adequately

research and investigate the topic they have chosen and present the project to the class in a timely manner.

10% Attendance and Participation – Regular attendance and class participation is expected of each student.

Grade Scale: There will be no grading on the normal distribution curve.

A	100.00 – 93.50
A-	93.49 – 90.00
B+	89.99 – 87.50
B	87.49 – 84.50
B-	84.49 – 79.50
C+	79.49 – 77.50
C	77.49 – 73.50
C-	72.49 – 69.50
D+	69.49 – 63.50
D	63.49 – 59.50
F	59.49 – 00.00

Extra Credit May Be Offered: The number of extra credit points is at the instructor's discretion and what the student will do to obtain the extra credit must also be discussed in advance. Example of extra credit may be the student conducting a class discussion on a current environmental issue observed in the news.

Course Policies

Field Work or Conference Attendance: Some field work and/or conference attendance is required – Dates are to be determined. Mandatory field trips will count as an assignment.

Electronic Devices (cell phones, MP3 players, etc.): These devices must be turned off when entering the room to maintain a respectful class atmosphere. You will be asked to leave if you disregard this requirement.

Late/Missed Work: All assignments are due on the date specified in class. **After this time the assignment will not be accepted and the student will receive a zero. As previously stated, a missed quiz/exam WITHOUT 24 hour notice will result in a zero. Missed quizzes/exams MUST be completed within 1 week from the scheduled quiz/exam and taken during the instructor's office hours specified above.**

Add/Drop: The last day to add/drop and obtain partial tuition refund for this course is February 2nd, 2011.

Withdrawal: The last day to withdrawal from this course is May 9th, 2011.

Incomplete: An incomplete must be finished within 60 days of the last day of the Spring 2011 Semester.

Academic Conduct: It is expected that each student will turn in only his or her own work. Violations of the Student Code are taken seriously. This includes copying or sharing answering on tests or individual assignments, plagiarism, or having someone other than yourself do your work. Depending on the act, a student could receive an F grade on the test/assignment, an F grade for the course, or could be suspended or expelled.

For Your Knowledge, cheating and plagiarism are defined below:

Cheating is defined as the giving of assistance to another or the receiving of assistance from another person, another examination paper, other written material, or any source not explicitly permitted by the instructor, is cheating. Thus, you may not look at another's paper or answers; you may not show your paper or answers to another or leave your paper or answers around for others to look at; and, you may not verbally read or reveal your answers to another. It is also cheating to have access, without the instructor's approval, to examination, quiz, or test questions prior to the administration of the examination, quiz, or test.

Plagiarism is the submission or presentation of ideas or work in any form that are not one's own without appropriate acknowledgement of the source(s). Even with the acknowledgement, close paraphrasing can constitute plagiarism. You may quote the work of others if properly referenced.

Special Needs: Please inform me as soon as possible if you require any accommodations in addition to those provided here.