

Conservation Ecology (BIOL 584)
Summer I 2009
SCX5, MTWTh 10:30 AM - 1:10 PM

Instructor: Dr. John Hutchens

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Office hours: Before class, by appt, or just stop by

Course web page: <http://ww2.coastal.edu/jjhutche/bio484.htm>

Prerequisite: Principles of Ecology (BIOL 370) or its equivalent

Required text: Van Dyke, F. 2008. *Conservation Biology: Foundations, Concepts, Applications*. 2nd Edition, Springer. Several additional readings will be handed out during the semester.

Objectives: My objective is to provide you with an understanding of the principles of conservation ecology. Conservation ecology focuses on the preservation of biodiversity at all levels, as well as the ecosystems on which the species depend. Conservation ecology is unique in that it bridges ecology and humans. Consequently, we will examine a wide range of topics including ethics, economics, laws, genetics, evolution, ecosystem management, and landscape ecology. Studying these topics will allow you to understand and appreciate how conservation ecologists see the world, what kinds of questions they ask, and the 'urgency' of their task.

Student Learning Outcomes: Students who successfully complete this course will be able to:

1. Demonstrate an understanding of biodiversity at several ecological levels (i.e., individual, population, community, ecosystem, landscape).
2. Demonstrate an understanding of other fields as they relate to biodiversity (i.e., ethics, economics, law, management).
3. Demonstrate an understanding of how conservation ecologists do research.

Grading and Assessment: Your grade for Conservation Ecology is determined by your performance in lecture only. Your grade is based on four lecture exams, a case study, three homework assignments, and class participation. Exams will consist of short answer questions. Exams will cover material from lecture notes, the textbook, and other required readings and include both factual and analytical types of questions. Analytical questions will require you to apply your knowledge as well as interpret data. The case study will consist of a research paper focused on an endangered species. You will base your paper on at least 10 peer-reviewed scientific papers. Besides interacting in class, class participation will require you to participate during the final portions of several classes in an ecological experiment being conducted at Wall Pond.

Cheating on exams and plagiarism on the writing assignment will not be tolerated, and a grade of F will be given for the assignment.

Attendance: Attending lecture is not mandatory, but it is expected and the key to doing well in this class. I expect you to be active participants during class, so speak up! Attendance is mandatory for exams—make-up exams are only given for university-excused absences (see the CCU 2008/2009 Catalog, pp. 47 for details).

Learning disabilities: Students with learning disabilities should see me at the beginning of the semester so special arrangements can be made, if necessary, for your success in this course.

Reminder: Turn OFF your cell phones before class!

Point Distribution:

Assignment	Points
Exam 1	100
Exam 2	100
Exam 3	100
Final Exam	100
Case Study	100
Homework	150
Participation	50
Total	700

Grading scale:

Grade	%	Points
A	90-100	627-700
B+	87-89	606-626
B	80-86	557-605
C+	77-79	536-556
C	70-76	487-535
D+	67-69	466-486
D	60-66	417-465
F	0-59	≤416

Tips for success:

- This is an upper-level course. You are expected to learn a lot. For most of you, this means you need to work hard and study effectively. I recommend studying the material in this class EVERY day—work with material, do not just skim it.
- I provide lecture OUTLINES. They do NOT have all the material you need to know for the exams, but instead provide the titles and bulleted text on my slides. Outlines provide a framework to work from and reduce some of the frantic writing in class. You still need to take good notes as I fill in the outlines, including paying particular attention to figures from the book and terms and examples not in the book. Studies show that writing notes helps you learn—these outlines provide a compromise between nothing and everything that should help you learn the material.
- Exams are based primarily on lecture material. However, I frequently use examples from the book and outside readings. Focus on lecture notes and read the sections in the book that we talk about in class. Reading the book is very helpful and reinforces the lecture.
- Just because something seems clear in lecture, it does not mean that you know the topic or term well enough to do well on an exam where you may need to apply this topic to a novel situation. Also, exam points will come from short-answer questions where you have to provide the answer instead of choosing from a list of options. While this type of question requires more from you, it also allows you to earn partial credit.
- Details matter. I expect you to learn the details of definitions, concepts, and experiments. For example, wouldn't you like to be confident that your doctor actually knows the details well enough to diagnose your illness and prescribe the correct medication?
- Ask questions when something does not make sense or if you have a relevant point to make. I like questions. Come by my office and ask more questions.

Schedule: This schedule is tentative and subject to change.

Week	Day	Dates	Topic	Readings
1	Mon	Jun 15	Introduction and background	1.1, 1.3, 1.6, 1.7; Diamond 1995
	Tue	Jun 16 Begin 11:45 AM	Conservation ethics	2.1.3, 2.2.1, 2.2.2.1, 2.2.2.2, 2.3.2. - 2.3.5, 2.6; Leopold; Woodhams 2009
	Wed	Jun 17	Environmental law	3.2.2 - 3.2.4, 3.3.2.3, 3.6; Rohlf 1991
	Thu	Jun 18	Biodiversity Homework 1 due	4.1 – 4.5, 4.8
2	Mon	Jun 22	Exam 1; Biodiversity	Myers et al. 2000
	Tue	Jun 23 Begin 11:45 AM	Extinction	Thomas et al. 2004; Darwin
	Wed	Jun 24	Conserving genetic diversity	6.1 – 6.3, 6.4.1, 6.4.2, 6.8, 6.9
	Thu	Jun 25	Conserving populations Homework 2 due	8.1, 8.2, 8.3.1, 8.3.2, 8.4.1, 8.4.2, 8.5.2, 8.5.4, 8.6
3	Mon	Jun 29	Exam 2; Conserving populations	Moyle & Marchetti 2006
	Tue	Jun 30	Conserving habitats and landscapes	10.1.1, 10.3.3.1, 10.4.1, 10.4.3, 10.5, 10.8; Tewksbury et al. 2002
	Wed	Jul 1	Conserving aquatic systems Homework 3 due	11.1, 11.2.2, 11.4.1, 11.4.2, 11.5.1, 11.6
	Thu	Jul 2	NO CLASS—4 th of July holiday	
4	Mon	Jul 6	Exam 3; Ecosystem management	12.1, 12.2.1, 12.3.1, 12.5.1, 12.7
	Tue	Jul 7	Restoration ecology	Dobson et al. 1997; Hawken 2009
	Wed	Jul 8	Conservation economics	13.1.1, 13.2.1, 13.2.4.1, 13.3.2, 13.3.3, 13.5; Hardin 1998
	Thu	Jul 9	Future directions	
	Fri	Jul 10	Final Exam	