

Conservation Ecology (BIOL 584)
Spring 2020
SCI2 204, MWF 1:00 - 1:50 PM

Delivery of instruction has moved to about 50% online.

Instructor: Dr. John Hutchens

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Office Hours: MWF 11:00 AM – 1:00 PM, by appointment, or just stop by

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

Required text: Groom, M.J. et al. 2006. *Principles of Conservation Biology*. 3rd Edition, Sinauer Associates, Inc. Several additional readings will be made available via the course webpage during the semester.

Course Description from CCU Catalog: This course will provide students with a comprehensive framework of conservation ecology. Students that successfully complete this course will learn the techniques used to study biodiversity and become familiar with the framework used to address problems in conservation biology.

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 species depend. Conservation ecology bridges ecology and humans. Consequently, we will examine a wide range of topics including ethics, economics, laws, genetics, evolution, and the ecology of populations, communities and landscapes. 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).
3. Demonstrate an understanding of how conservation ecologists do research.

Graduate student-specific Learning Outcomes

4. Evaluate primary literature in conservation ecology.
5. Apply conservation ecology topics to their own research interests that also requires additional readings
OR*
6. Apply a current conservation ecology method (PVA) to a species of conservation concern that also requires additional readings.

Grading and Assessment: Your grade for the lecture portion of this class is based on three lecture exams, a cumulative final exam, a graduate project, a scientific paper review, and class participation. Exams will consist of multiple-choice questions, short-answer questions, and identification of terms. 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. Late papers will be penalized by 10%.

*For CMWS/CMSS students, the graduate project will consist of a research paper describing some conservation aspect of your graduate thesis work. If you have not started your thesis work or are doing the internship option you can consider the MAT project below. The paper will be based on at least 15 peer-reviewed scientific papers, which are cited using the style in *Conservation Biology*. Papers are typically about 8 pages long, double-spaced using 12-pt font. For MAT/non-thesis students, the graduate project will consist of a Population Viability Assessment (PVA) project. The PVA project will entail developing a PVA model of a species of concern and writing a paper summarizing your findings. Detailed PVA instructions will be handed out. **You need to email me with what you plan to do for your project (including a 1-paragraph summary for the thesis students or a listing of the PVA species and paper describing the baseline PVA) by 21 February 2020.**

Point Distribution:

Assignment	Points
Exam 1	100
Exam 2	100
Exam 3	100
Final Exam	100
Review	40
Participation	30
Grad project	70
Total	540

Overall grading scale:

Grade	%	Points
A	90 – 100	484 – 540
B+	87 – 89	467 – 483
B	80 – 86	430 – 466
C+	77 – 79	413 – 429
C	70 – 76	376 – 412
D+	67 – 69	359 – 375
D	60 – 66	322 – 358
F	0 – 59	≤ 321

Cheating on exams and plagiarism on writing assignments will not be tolerated, and a grade of F will be given for the assignment. Cell phones must be put away during exams.

CCU Student Honor Pledge: “Coastal Carolina University is an academic community that expects the highest standards of honesty, integrity and personal responsibility. As members of this community, we are accountable for our actions and are committed to creating an atmosphere of mutual respect and trust. On my honor, I pledge:

- That I will take responsibility for my personal behavior; and
- That I will actively oppose every instance of academic dishonesty as defined in the Code of Student Conduct.

From this day forward, my signature on any University document, including tests, papers, and other work submitted for a grade is a confirmation of this honor pledge.”

Attendance: Attending lecture is not mandatory, but it is the key to doing well in this class. Attendance is mandatory for exams—make-up exams are only given for university-excused absences (see <http://www.coastal.edu/policies/policyDetails.html?x=120> for details). If you miss an exam you must contact me as soon as possible (within 24 hours) about the *possibility* of making up an exam. If you know you are going to be absent for an exam, you must contact me *as soon as possible before the exam* in order to schedule a make-up.

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 and put them away.

Tips for success:

- This is an upper-level course. You are expected to learn a lot. For many of you, this means you need to work hard and study effectively. I recommend studying the material in this class EVERY day—work with the material, do not just skim it. Annotating your notes and testing yourself can be very helpful.
- I provide the lecture PowerPoint slides, but you still need to take good notes 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 do not rely solely on the slides.
- 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. Reading in **bold** has associated graded review.

Week	Dates	Topic	Readings
1	Jan 13 – 17	Introduction and background	1
2	Jan 20: <i>MLK Day</i> ; Jan 22 & 24	Conservation ethics	4; Dunn (2012); Leopold
3	Jan 27 – 31	Ethics (cont.); Environmental law	pp. 104 – 108; pp. 568 – 570; pp. 674 – 676
4	Feb 3 – Feb 7 Exam 1-Feb 5	Environmental law	pp. 104 – 108; pp. 568 – 570; pp. 674 – 676
5	Feb 10 – 14	Extinction	3; pp. 39 – 41; pp. 352 – 355; Thomas et al. (2004)
6	Feb 17 – 21; Grad paper topic - Feb 21	Biodiversity	2; pp. 197 – 200
7	Feb 24 – 28	Biodiversity (cont.)	Myers et al. (2000)
8	Mar 2 – 6 Exam 2-Mar 4	Conserving genetic diversity	11
	<i>Mar 9 – 13</i>	<i>Spring Break</i>	
9	Mar 16 – 20	<i>Extended Spring Break</i>	
10	Mar 23 – 27 <i>Mar 25: Last day to W</i>	Conserving populations	12 through p. 444; pp. 306 – 314
11	Mar 30 - Apr 3	Conserving habitats and landscapes	6 & 7
12	Apr 6 & 8 <i>Apr 10: Holiday</i>	Conserving habitats and landscapes	6 & 7
13	Apr 13 – 17 Exam 3-Apr 15	Conserving aquatic systems	pp. 180 – 183; pp. 194 – 196; pp. 260 – 262; pp. 264 265; Moyle & Marchetti (2006)
14	Apr 20 – 24; Grad paper – Apr 24	Conserving aquatic systems & Conservation economics	5 through p. 160; pp. 269 & 272; Hardin (1998)
15	Apr 27 & 29; <i>Apr 30: Study day</i>	Conservation economics	5 through p. 160; pp. 269 & 272; Hardin (1998)
	May 1, Fri 1:30 PM	Final Exam	