

Laboratory for Principles of Ecology (BIOL 370L)

Fall 2009; SCX5

Section 1: Monday 2:30 PM - 5:20 PM

Section 2: Tuesday 11:30 AM – 2:20 PM

Section 3: Tuesday 2:30 PM – 5:20 PM

Instructor: Dr. John Hutchens

Phone: 349-2169

Office hours: Monday: 9 AM – 2:30 PM; Tuesday: 9 AM – 11:30 AM

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Course web site: <http://ww2.coastal.edu/jjhutche/bio370L.htm>. (Note: CaSe MaTtErS).

Required text: None. There will be handouts to be downloaded from the website. *You are responsible* for printing and bringing to class a copy of the lab handout. The only things you are allowed to print in SCX5 are your GROUP lab reports.

Objectives: My objective for this lab is to provide you with hands-on experience ‘doing’ ecology. You will learn how ecologists ask and answer questions. You will also learn several practical ecological (and scientific) skills: collecting data in the field, using appropriate statistical and graphical tools and software, and writing clear and concise scientific reports. By learning these skills, you will be on-track to becoming a professional scientist.

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

1. Conduct basic ecological studies in the field using standard methods.
2. Perform ecological-related calculations by hand and using Microsoft Excel.
3. Identify and perform appropriate statistical and graphical analyses for various experimental designs used in ecology.
4. Understand and communicate scientific and statistical results related to ecological experiments.
5. Prepare appropriate graphs related to ecological experiments using a style suitable for publication.
6. Write scientific reports about experiments conducted in class using a style suitable for publication.
7. Work successfully in small groups to conduct ecological studies and report the results.

Grading: Your grade for BIOL 370L is independent of your grade for BIOL 370. Your grade for this class is based on a final exam separated into take-home and in-class portions, and several writing assignments. Writing assignments consist primarily of lab reports written as part of a group or individually. Cheating and plagiarism will not be tolerated; a grade of F will be given for the assignment. CCU Statement of Community Expectations: *“Coastal Carolina University is an academic community that expects the highest standards of honesty, integrity and personal responsibility. Members of this community are accountable for their actions and reporting the inappropriate action of others and are committed to creating an atmosphere of mutual respect and trust.”*

Point Distribution:

Assignment	Points	Grade	%	Points
5 group lab reports (25 pts @)	125	A	90 - 100	233 – 260
2 individual reports (30 pts @)	60	B+	87 - 89	225 – 232
1 individual ‘field’ report	10	B	80 - 86	207 – 224
Take-home final exam	15	C+	77 - 79	199 – 206
In-class final exam	50	C	70 - 76	181 – 198
Total	260	D+	67 - 69	173 – 180
		D	60 - 66	155 – 172
		F	0 - 59	<155

Learning disabilities: Students with documented 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.

Attendance: Attending lab exercises is mandatory. If you do not attend a lab, you will receive no credit for the lab report associated with that exercise. If you miss a lab due to a university-excused absence (see the CCU 2008/2009 Catalog, pp. 47 for details), I will allow you to replicate the exercise or to do a substitute exercise at my discretion. If you miss one week of a two-week lab, you will lose 10% of the points for that lab. Attendance is also mandatory for the lab exam—make-up exams are only given for university-excused absences. As per university policy (see the CCU 2008/2009 Catalog, p. 47), if you miss more than 25% of labs (more than four exercises) with unexcused absences, you will receive an F for the course.

Field work: Most of our exercises involve gathering data in the great outdoors. We will go RAIN or SHINE. Come prepared!!! Some hints:

- Wear appropriate shoes and clothing for getting wet and
- Expect high heat and bright sun
- Expect to be potentially bit or stung (bring repellent and allergy kits)
- Beware of poisonous snakes
- Beware of poisonous plants
- Have a positive attitude—remember, how many other classes get to go to the beach and earn credit?



“Wait a minute! ... McCallister, you fool!
This isn't what I said to bring!”

Schedule: This schedule is tentative and subject to change.

Week	Date	Exercise
1	Aug 24 & 25	Introduction to statistics and graphics
2	Aug 31 & Sep 1	Analyzing variation* (CCU)
3	Sep 7 & 8	No class—Labor Day on Mon Sep 7
4	Sep 14 & 15	Natural history (Waccamaw National Wildlife Refuge)*
5	Sep 21 & 22	Life tables*†
6	Sep 28 & 29	Beach seining (Waites Island)*
7	Oct 5 & 6	Spatial distribution* (Quail Creek forest)
8	Oct 12 & 13	Gall formation on red bay* (CCU)
9	Oct 19 & 20	Ecotones (Lewis Ocean Bay)*
10	Oct 26 & 27 Oct 27-Last day to drop	Mark recapture, Part I (Waites Island)*
11	Nov 2 & 3	Mark recapture, Part II (Waites Island)*†
12	Nov 9 & 10	Soil microarthropods, Part I*
13	Nov 16 & 17	Soil microarthropods, Part II; E-mail take-home final exam
14	Nov 23 & 24	No class—Thanksgiving Break
15	Nov 30 & Dec 1	In-class final exam; Take-home final exam due

*denotes outdoor exercises; †denotes 30-point individual lab reports