

**Laboratory for Principles of Ecology (BIOL 370L)**  
**Summer I 20176; SCI2 119**  
**MTWH 11:30 AM to 1:20 PM**

**Instructor:** Dr. John Hutchens  
**Office:** SCI2 207C;      **Phone:** 349-2169  
**E-mail:** jjhutche@coastal.edu; I prefer e-mail over phone calls  
**Office Hours:** MTWH 1:30 – 2:00 PM  
**Course web site:** <http://ww2.coastal.edu/jjhutche/bio370L.htm>

**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.

**Course Description from CCU Catalog:** Applications of principles and techniques used in the study of ecology, both in the lab and in the field.

**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 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 earned for the assignment.*

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.”

**Point Distribution:**

Assignment	Points	Grade	%	Points
5 group lab reports (25 pts @)	125	A	90 - 100	219 - 245
2 individual reports (30 pts @)	60	B+	87 - 89	212 - 218
1 individual ‘field’ report	10	B	80 - 86	195 - 211
Lab final exam	50	C+	77 - 79	188 - 194
Total	245	C	70 - 76	171 - 187
		D+	67 - 69	163 - 170
		D	60 - 66	146 - 162
		F	0 - 59	0 - 145

**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 miss a lab due to a university excused absence (see <http://www.coastal.edu/policies/pdf/acad-125classattendance.pdf> for details), I will allow you to replicate the exercise or to do a substitute exercise at my discretion. If you miss one part of a two-part 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 web page above), 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 dirty.
- Bring a raincoat if necessary.
- 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 play outside and earn credit?



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

**Schedule** (subject to change at instructor's discretion)

Week	Date	Exercise
1	M, Jun 5	Introduction to ecology lab
1	T, Jun 6	Introduction to statistics and graphics
1	W, Jun 6	Analyzing variation I* (CCU)
1	Th, Jun 8	Analyzing variation II (CCU)
2	M, Jun 12	Natural history* (Waccamaw National Wildlife Refuge)
2	T, Jun 13	Life tables*†
2	W, Jun 14	Spatial distribution I* (Waccamaw National Wildlife Refuge)
2	Th, Jun 15	Mark-recapture I*† (Waties Island; Lecture 2 <sup>nd</sup> hour + lab)
3	M, Jun 19	Spatial distribution II
3	T, Jun 20	Gall formation on red bay I* (CCU)
3	W, Jun 21	Gall formation on red bay II
3	Th, Jun 22	Mark-recapture II* (Waties Island; Lecture 2 <sup>nd</sup> hour + lab)
3	F, Jun 23 <i>Last day to drop</i>	Mark-recapture background
4	M, Jun 26	Ecotones I*(Lewis Ocean Bay)
4	T, Jun 27	Ecotones II
4	W, Jun 28	Ecotones III
4	H, Jun 29	Soil microarthropods I* (CCU)
5	M, Jul 3	Soil microarthropods II
5	T, Jul 4	<i>Holiday</i>
5	W, Jul 5	Exam review; Soil microarthropods III
5	Th, Jul 6	<b>In-class Final exam</b>

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