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**ECOLOGY LABORATORY (BIEB 121) SPRING 2011**  
**York Hall Room 1310 T/Th 12:30 - 6 PM**  
**TENTATIVE LAB SCHEDULE**

<b><u>WEEK</u></b>		<b><u>FIELD/LAB WORK</u></b>
1	T March 29 Th March 31	Introductions, safety, syllabus, travel waivers Equipment sign out, insect ID & preservation
2	T April 5 Th April 7	Bioblitz (Scripps Coastal Reserve) Writing a scientific paper
3	T April 12 Th April 14	Computer lab introduction, stats review Beach diversity (Scripps Coastal Reserve)
4	T April 19 Th April 21	Beach samples analysis Data analysis
5	T April 26 Th April 28	Pollination lab (Blue Sky Preserve) Data analysis
6	T May 3 Th May 5	Biomedical Library workshop SD natural history (Dawson Reserve)
7	T May 10 Th May 12	Yucca dispersion (Elliott Chaparral Reserve) Data analysis
8	T May 17 Th May 19	Habitat fragmentation (Ecological Park) Data analysis
9	T May 24 Th May 26	Optimal foraging (Torrey Pines State Park) Data analysis
10	T May 31 Th June 2	Work on collection Work on collection

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**ECOLOGY LABORATORY (BIEB 121) SPRING 2011**  
**York Hall Room 1310**  
**Lecture MWF 12-12:50 PM, Lab WF 1-5 PM**  
**TENTATIVE SCHEDULE**

<b><u>WEEK</u></b>		<b><u>FIELD/LAB WORK</u></b>
1	W March 30 F April 1	Introductions, safety, syllabus, travel waivers Equipment sign out, insect ID & preservation
2	W April 6 F April 8	Bioblitz (Scripps Coastal Reserve) Writing a scientific paper
3	W April 13 F April 15	Computer lab introduction, stats review Beach diversity (Scripps Coastal Reserve)
4	W April 20 F April 22	Beach samples analysis Data analysis
5	W April 27 F April 29	Pollination lab (Blue Sky Preserve) Data analysis
6	W May 4 F May 6	Biomedical Library workshop SD natural history (Dawson Reserve)
7	W May 11 F May 13	Yucca dispersion (Elliott Chaparral Reserve) Data analysis
8	W May 18 F May 20	Habitat fragmentation (Ecological Park) Data analysis
9	W May 25 F May 27	Optimal foraging (Torrey Pines State Park) Data analysis
10	W June 1 F June 3	Work on collection Work on collection

## **COURSE DESCRIPTION**

This is a course in experimental methods in field ecology. The focus will be on natural history, experimental methods, statistical analysis, and scientific communication (writing). Biometry is an essential prerequisite for this course. The emphasis will be on terrestrial ecology, particularly plant and insect ecology. For most of the quarter we will be in the field (outside) every week collecting data.

## **ROOM ACCESS (York 1310)**

Students can find the information on-line using the Account Lookup link at <http://acs.ucsd.edu>. Look for the list of rooms specific to the class and will find a password protected link for the door code. This link now provides an option to have the code e-mailed to a student's cell phone.

## **ROOM SAFETY**

Never, ever, ever prop open the door to York 1310 unless class is in session. ACS will instantly rescind all students' access codes if they see the door propped open. This is for security reasons - both your's and the computer's. No food or drink is allowed in any of the York labs - not even coffee.

## **LAB BOOK**

The lab book for this course is available at A.S. Soft Reserves (<http://softreserves.ucsd.edu/>), located in Student Center A, across from the Food Coop. Hours: M-TH 9 AM - 5 PM, Saturday April 2 & 9, 10 AM - 2 PM.

## **TESTS**

There will be no exams in this course. There will be NO final exam. The last meeting of the course will be Thursday June 2 (Henter) / Friday June 3 (Eckles).

## **SCHEDULE**

For most of the quarter we will be in the field in the beginning of the week collecting data, and in the lab at the end of the week analyzing data. The lab reports are usually due one week after the data analysis. There are exceptions, however - see the end of the syllabus for due dates. Many of the labs last the entire class period. It is not possible to enroll in another class that overlaps our scheduled lab time.

## **GROUPS**

You will be working in groups of 3 for the duration of the quarter. You will collect and analyze data and create graphs and tables as a group, but each individual must do their own writing for homework assignments and lab reports.

## **FIELD EXCURSIONS**

We will be spending much of our lab time in the field. We will often meet at off-campus locations. You are required to provide your own transportation. On the first page of the syllabus, the field sites are in parentheses. Early in the quarter we will walk or take a bus to our field sites, as indicated. *You will want a free UCSD Bus Zone sticker for your UCSD ID* (available from the campus parking office in the Gilman Parking Structure). Later in the quarter you will need to provide your own transportation to field sites.

Except for highly unlikely circumstances, we will go on our field excursions rain or shine.

During most of the field excursions (Torrey Pines State Reserve is the only exception) you will be able to collect insects for your insect collection. It is a good idea to bring collecting equipment - nets, vials with and without EtOH, aspirator, and kill jar. You may also want to bring a pocket knife, hand lens, binoculars, and field guides if you have them.

### **FIELD EXCURSION CLOTHING**

For the outdoor field work I suggest that you bring water and wear sunscreen and a hat. I insist that you wear closed-toe and closed-heel shoes (no sandals, no clogs, no ballet flats). Sneakers are a great option. You will be counted as absent if you show up on a field trip in sandals. (One exception is the beach lab - you can wear any footwear you want.) There may be spiny cacti, ticks, biting ants, poison oak, and rattlesnakes at all of our field sites. I will require long pants for the pollination lab, SD natural history lab, *Yucca* dispersion lab, and habitat fragmentation lab.

### **TRAVEL WAIVERS**

Please fill out a travel waiver and return to me today.

### **PHOTO PERMISSION**

Please fill out a photo permission form and return to me today.

### **WRITING**

Writing will be a large portion of your grade. Being a good writer is not a magical gift some people are given and others denied. Good writing takes practice and effort, just like learning to play the piano or hit a baseball. And scientific writing is a very specific genre with specific expectations, so practice can really make a difference. We will discuss each lab report, and I will try and give as many suggestions as possible, both individually and as a group. My grading expectations will get stricter as the quarter progresses as I expect you to incorporate my suggestions. I will not give credit for rewrites - better that you incorporate what you have learned into your next lab report. Labs will be graded both on specifics (did you address all the questions set for you?) and on the general qualities (did you convey the information in the clearest, most concise manner possible). Because of this, there will often be more than one right way to do things. Your overall ability to communicate, through words, statistics, and graphics, will count for a lot.

### **LAB REPORTS**

Labs are due at the beginning of class. I will deduct 10% per 24 hrs (or any part thereof) for late labs. The only exception is with a written documentation, such as a doctor's note. Please be sure to hand in your lab on the day it is due. I can not give full credit if you forget to turn in your lab.

### **PRINTING**

You will need to have an account to print in the lab. You can set up an account at the ACS web site (<http://sdacs.ucsd.edu/~icc/laser.php>).

## **ATTENDANCE**

Attendance at every class meeting is required. If you miss a lab you need documentation (doctor's note, etc.) as to the reason. Otherwise, you will lose 25 points per day for any absence. Also, you will miss 10 pts per lab for arriving late, 15 points per lab for field excursions. We work as a group - it is not fair to those who arrive on time to have to wait for latecomers. Some of the field excursions take the entire lab period, and some students will have class immediately after this lab. The late policy will be in effect immediately.

If you miss a lab it is your responsibility to get data from your group. You will receive 50 points for active participation throughout the quarter - for being a contributing member of your group. I suspect that every one of you will easily earn all of these points, but you can lose points for being here physically but not mentally (i.e. shopping on your lap top while your colleagues are analyzing data).

The Biology Department requires that all students attend the 1<sup>st</sup> meeting of any lab course, otherwise you will be dropped from the course.

## **WAITING LIST**

The wait list procedure for Biology Department lab courses is different than for lecture course. The wait list process is fully automated across campus. If a lab is full/closed and a student wishes to try and enroll, they must place their name on the WebReg (electronic) wait list. When a seat becomes available in a lab, the next eligible person will be automatically enrolled. If students are automatically enrolled, it is included on their Class List and they are notified by e-mail (to the UCSD email account). I have no ability to manually add students.

Any students that drop after the end of the second lab meeting will have a "W" on their transcript. The Biology Department has a strict, first on, first off policy regarding the waiting list. If you are on the waiting list and hope to add, you should participate in ALL course activities, exactly as if you were enrolled.

## **SUPPLIES YOU PROVIDE**

calculator, graph paper

## **SAFETY**

I take safety very seriously. I will have various rules regarding safety during our field trips. These safety rules must be obeyed. If I see anyone flagrantly breaking a safety rule I will give them a zero for attendance.

## **ACADEMIC INTEGRITY**

Students are expected to do their own work, as outlined in the UCSD Policy on Academic Integrity published in the UCSD General Catalog. Cheating will not be tolerated and all suspected cases will be handed over to the Academic Integrity Coordinator, which reports directly to the Dean of the student's college

## INSECT COLLECTION

You will put together an insect collection. This will be a largely independent project. To be successful, you should plan on spending time exploring different habitats throughout the quarter. To successfully complete the SD Natural History worksheet you should start to learn local plants.

## GRADING

Participation	= 50
Insect ID worksheet	= 25
Bioblitz	= 25
Stats worksheet	= 25
SD natural history worksheet	= 50
Beach lab (results only)	= 75
Yucca lab (results only)	= 75
Pollination (full lab report)	= 150
Habitat fragmentation (full lab report)	= 150
Optimal foraging (full lab report)	= 150
Insect collection	<u>= 300</u>
Total	= 1075 points

## DUE DATES (T/TH course)

<u>WEEK</u>	<u>DATE</u>	<u>DUE</u>
1	Th March 31	Insect ID worksheet (in class)
2	T April 5	Bioblitz (in class)
4	T April 19	Stats worksheet
5	T April 26	Beach lab (results only)
7	T May 10	Pollination (full lab report)
7	Th May 12	SD natural history worksheet
8	T May 17	Yucca lab (results only)
9	T May 24	Habitat fragmentation (full lab report)
10	T May 31	Optimal foraging (full lab report)
10	Fri June 3, 10 AM	Insect collection

## DUE DATES (Wed/Fri course)

<u>WEEK</u>	<u>DATE</u>	<u>DUE</u>
1	F April 1	Insect ID worksheet (in class)
2	W April 6	Bioblitz (in class)
4	W April 20	Stats worksheet
5	W April 27	Beach lab (results only)
7	W May 11	Pollination (full lab report)
7	F May 13	SD natural history worksheet
8	W May 18	Yucca lab (results only)
9	W May 25	Habitat fragmentation (full lab report)
10	W June 1	Optimal foraging (full lab report)
10	Fri June 3, 5 PM	Insect collection

## THE END OF THE QUARTER

On the last week of class you will be able to work on your collection. But please also do the following:

- a. Check in your equipment. Please don't forget your aspirator, insect nets, etc. in your car or at home. If anything is missing or broken, let us know so we can replace it for next year.
- b. Most equipment should go back in your cabinet
- c. Place all stuff that you have partially used up (insect labels, pins, clean vials, foam strips) on top of your lab bench - again so we can re-stock for next year.
- d. **Empty and uncap dirty vials and put in the sink. Take all tape off the vials!**
- e. Please do not leave any minuten pins in your protom boards - stick them to a piece of tape and place in the sharps waste container.
- f. Do not leave any extra containers - beakers, jars, vials - with dirt, organisms, unknown liquids on your lab bench. Throw away any unused insects.

I WILL DEDUCT PARTICIPATION POINT FOR FAILURE TO CLEAN UP.