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ECOLOGY LABORATORY (BIEB 121) FALL 2011
York Hall Room 1310 W/F 8:00 AM - 1:30 PM
TENTATIVE LAB SCHEDULE

<u>WEEK</u>		<u>FIELD/LAB WORK</u>
0	F Sept 23	Syllabus, safety, travel waivers, insect ID
1	W Sept 28 F Sept 30	Equipment sign out, Bioblitz (SCR, meet in lab) Insect preservation, Bioblitz data
2	W Oct 5 F Oct 7	ID quiz, Writing a scientific paper I Computer lab introduction, stats review
3	W Oct 12 F Oct 14	Writing a scientific paper II Biomedical Library workshop (BML 10 AM)
4	W Oct 19 F Oct 21	Habitat fragmentation (UCSD Eco. Park, meet in lab) Habitat fragmentation data analysis
5	W Oct 26 F Oct 28	Yucca dispersion (Elliott Chaparral Reserve) Yucca data analysis
6	W Nov 2 F Nov 4	Optimal foraging (Torrey Pines State Park) Optimal foraging data analysis
7	W Nov 9 F Nov 11	Beach diversity (SCR, meet in lab) NO CLASS, Veteran's Day
8	W Nov 16 F Nov 18	ID beach samples Beach data analysis
9	W Nov 23 F Nov 25	Field trip (Dawson Los Manos Reserve) NO CLASS, Thanksgiving
10	W Nov 30 F Dec 2	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 much 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.

The room is available for you to use outside of class. There will be another class using the lab T/Th 9-11 AM, however.

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 safety 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 - 6 PM, Fri 9 AM - 5 PM, Saturday Sept 24, Oct 1 & 8, 10 AM - 2 PM.

TESTS

There will be NO final exam in this course. The last meeting will be Friday December 2.

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 2-3 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. When we meet in the lab, we will walk or take the bus to the field site. *You will want a free UCSD Bus Zone sticker for your UCSD ID (available from the campus parking*

office in the Gilman Parking Structure). If we do not meet in the lab, you will need to provide your own transportation to the field site.

Except for highly unlikely circumstances, we will go on our field excursions rain or shine. Any exceptions will be posted on TED - please check if in doubt. If there is nothing posted, we will be going out.

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

Suggestions: For the outdoor field work I suggest that you bring water and wear sunscreen and a hat. You may get muddy, dusty, sweaty, rained on, etc. on our field trips, so pick your clothes and shoes accordingly.

Requirements: 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 habitat fragmentation, *Yucca* dispersion lab, and optimal foraging 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 5% per 12 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

Be sure to sign in on the sign-in sheet. Attendance at every class meeting is required. If you miss a lab you need written documentation (doctor's note, etc.) as to the reason. Otherwise, you will lose 25 points per day for any absence. Also, you will miss 5 pts per lab for arriving late (one late arrival free), 10 points per lab for field excursions (no late arrivals free). We work as a group - it is not fair to those who arrive on time to have to wait for latecomers. Some of our field sites are behind locked gates - we have to wait for you if you are to participate. Some of the field excursions take the entire lab period, and 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 1st meeting of any lab course, otherwise you will be dropped from the course.

DROP POLICY / WAIT LIST

The Division of Biology's policies are detailed on this website:

<http://biology.ucsd.edu/undergrad/Waitlist.html>. The drop policy for lab courses is different than for lecture courses. Any students that drops after the end of the second lab meeting will have a "W" on their transcript. The Biology Department has an automated, first on, first off policy regarding the wait list. If you are on the wait list and hope to add, you should participate in ALL course activities, exactly as if you were enrolled.

SUPPLIES YOU PROVIDE

Calculator, lab book

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

CURE (Classroom Undergraduate Research Experience) SURVEY

Ecology Lab is participating in a project to assess the effectiveness of different science teaching methods. This project is run by education researchers at Grinnell College. **PARTICIPATION IS COMPLETELY VOLUNTARY.** If you would like to participate please go to the website: <http://www.grinnell.edu/academic/psychology/faculty/dl/surecure> and complete the pre-course survey before October 1. Please complete the post-course survey between December 2 and December 9 (finals week). I will receive a report on the overall results, but I will never know who participated and who didn't. You can participate anonymously or not, but the data will be more useful if you identify yourself because the researchers will be able to compare pre and post - course results. There are several different surveys on the website - we are doing the CURE survey. Again, **PARTICIPATION IS VOLUNTARY.**

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.

GRADING

Participation	= 50
Insect ID worksheet	= 25
Bioblitz data	= 25
Stats worksheet	= 50
Habitat fragmentation lab	= 150
Yucca lab	= 150
Optimal foraging lab	= 150
Beach lab	= 150
Insect collection	<u>= 300</u>
Total	= 1050 points

DUE DATES

<u>WEEK</u>	<u>DATE</u>	<u>DUE</u>
1	F Sept 30	Bioblitz (in class)
2	W Oct 5	Insect ID worksheet (in class)
3	W Oct 12	Stats worksheet
5	F Oct 28	Habitat fragmentation
6	F Nov 4	Yucca dispersion
8	W Nov 16	Optimal foraging
10	W Nov 30	Beach diversity
10	F Dec 2, 1 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.