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**ECOLOGY LABORATORY (BIEB 121) FALL 2013**  
**York Hall Room 1310 T/Th 12:30 PM - 6:00 PM**  
**TENTATIVE LAB SCHEDULE**

<u>WEEK</u>		<u>FIELD/LAB WORK</u>
0	Th Sept 26	Syllabus, safety, assessment, UCSD natural history
1	T Oct 1 Th Oct 3	Equipment sign out, Bioblitz (SCR, meet in lab) Insect ID and preservation
2	T Oct 8 Th Oct 10	Computer lab introduction, statistics review Writing a scientific paper
3	T Oct 15 Th Oct 17	San Diego Biodiversity Project (SCR, meet in lab) Spider ID with Jim Berian
4	T Oct 22 Th Oct 24	Photo-microscopy, spider data analysis Photo-microscopy, spider database entry
5	T Oct 29 Th Oct 31	Biomedical Library workshop (BML) Kendall Frost Marsh ( <b>meet in Pacific Beach</b> )
6	T Nov 5 Th Nov 7	Kendall Frost species ID Kendall Frost data analysis
7	T Nov 12 Th Nov 14	Urban Ecology Pitfall trap analysis
8	T Nov 19 (low tide) Th Nov 21	Beach Ecology (SCR beach, meet in lab) ID beach samples
9	T Nov 26 Th Nov 28	Beach data analysis <b>NO CLASS</b> , Thanksgiving
10	T Dec 3 Th Dec 5	Biodiversity & phylogeny Work on insect collection, assessment

## **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. About one third of our class days will be spent in the field (outside) collecting data. Much of our work will be original research - generating information that is new to science.

## **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.

## **ROOM SAFETY**

Never, ever, ever prop open the door to York 1310 unless class is in session. ACMS will 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 (week 0 - 2 only) 10 AM - 2 PM.

## **TESTS**

There will be NO final exam in this course. The last meeting will be Thursday December 5, 2013.

## **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 collection. 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**

On the first page of the syllabus, the field sites are in parentheses. Note that on October 31 we will meet at the Kendall Frost Marsh in Pacific Beach. You are required to provide your own transportation. The other field trips will be a walk or bus ride from campus. *You will want a free UCSD Bus Zone sticker for your UCSD ID* (available from the campus parking office in the Gilman Parking Structure).

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 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. *The Kendall Frost lab will be quite muddy - bring rubber boots if you have them.*

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.

### **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 you 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. There is a campus-wide writing center ([writingcenter.ucsd.edu](http://writingcenter.ucsd.edu)) available for students who would like extra help with their writing.

### **LAB REPORTS**

Labs are due at the beginning of class. I will deduct 5% 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 ACMS 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 20 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 1<sup>st</sup> meeting of any lab course, otherwise you will be dropped from the course.

## **OUTSIDE OF CLASS**

In addition to normal homework expectations, there are several activities that you will need to do outside of class. You will need to spend time in the field collecting insects. You will also need to collect data for the urban ecology lab. You will need to set out and pick up pitfall traps at sunset the evening of Tuesday November 12 and sunrise and sunset on Wednesday November 13.

## **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 student 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**

flash drive for saving & moving data, Soft Reserves lab book, field-appropriate (old) clothing

## **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 (<http://students.ucsd.edu/academics/academic-integrity/policy.html>). 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, both in class *and outside of class*. Note - collecting will get harder as the weather gets colder. Plan to collect as much as possible as early as possible in the quarter.

## DUE DATES

<u>WEEK</u>	<u>DATE</u>	<u>DUE</u>	<u>POINTS</u>
1	Th Oct 3	Insect collection worksheet (in class)	50
2	T Oct 8	Statistics worksheet (in class)	50
2	Th Oct 10	Scientific writing worksheet	50
3	Th Oct 17	Did you know...?	25
4	T Oct 22	Career worksheet	25
4	Th Oct 24	Database entry	50
5	T Oct 29	BML worksheet	25
6	T Nov 5	Spider scientific paper	150
7	T Nov 12	KF scientific paper	150
8	T Nov 19	Urban ecology scientific paper	150
10	T Dec 3	Sandy beach scientific paper	150
10	T Dec 3	Phylogeny worksheet (in-class)	50
10	Oct 3/Dec 5	Assessment (in class)	10
10	F Dec 6, 12 noon	Insect collection	300
		Participation	50
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TOTAL			1285

## THE END OF THE QUARTER

- 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.
- Most equipment should go back in your cabinet
- 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.
- Empty and uncap dirty vials and put in the sink. Take all tape off the vials!**
- Please do not leave any minuten pins in your protom boards - if they can not be re-used stick them to a piece of tape and place in the sharps waste container.
- Do not leave any extra containers - beakers, jars, vials - with dirt, organisms, unknown liquids on your lab bench. Dispose of chemicals properly. Throw away any unused insects.

I WILL DEDUCT PARTICIPATION POINT FOR FAILURE TO CLEAN UP.