

**ECOLOGY LABORATORY (BIEB 121) Fall 2018**

York Hall Room 1310 M/F 10 a.m.- 2:50 p.m.

Instructor:Shannon Butler, PhD., [s3butler@ucsd.edu](mailto:s3butler@ucsd.edu), she/her

Office: Galbraith 354

Graduate Student Instructional Assistants:Amy Geffre, PhD student, [ageffre@ucsd.edu](mailto:ageffre@ucsd.edu), she/herHannah Strobel, PhD student, [hstrobel@ucsd.edu](mailto:hstrobel@ucsd.edu), she/her**COURSE DESCRIPTION**

This is a course in experimental methods in field ecology. The focus will be on natural history, experimental methods, statistical analysis, reading scientific literature, and scientific communication. Statistics is an essential prerequisite for this course. The emphasis will be on terrestrial ecology, particularly and animal ecology, but with forays into intertidal ecology and ecosystem ecology. For much of the quarter we will be in the field (outside) collecting data, but also in the classroom to conduct analyses and work on writing/communication skills.

	<b>Activities</b>	<b>Location</b>
28-Sep	Mark-Recapture bean activity, How to use Binoculars	York 1310, outdoors on campus
1-Oct	Predation & Fragmentation, Reading scientific papers	York 1310, outdoors on campus
5-Oct	Predation & Fragmentation, Reading scientific papers	York 1310, outdoors on campus
8-Oct	Dike Rock/La Jolla BioBlitz	York 1310, Dike Rock, other TBD
12-Oct	Bird species argument activity, Classify organisms	York 1310
15-Oct	Light lab set up	York 1310, outdoors on campus
19-Oct	light lab data analysis	York 1310
22-Oct	Beach Grooming	La Jolla Shores beach
26-Oct	Decomposition set up	York 1310, outdoors on campus
29-Oct	Writing Scientific arguments	York 1310
2-Nov	Introduction Barnacles, take down Decomposition	York 1310
5-Nov	Barnacles data collection	Scripts Pier
9-Nov	Data analysis for decomposition lab	York 1310
12-Nov	VETERANS DAY- NO CLASS	-
16-Nov	Data Analysis Barnacles, Foraging rate practice	York 1310
19-Nov	Bird foraging lab	La Jolla shores beach, Black's Beach
23-Nov	THANKSGIVING BREAK	-
26-Nov	Tijuana River Estuary Tour	Tijuana River Estuary
30-Nov	Bird foraging data analysis	York 1310
3-Dec	Self-chosen Inquiry, Blog post work time	York 1310
7-Dec		York 1310

### **LAB SAFETY (York 1310)**

Enrolled and waitlisted students MUST successfully complete the Biology Lab Safety Training and Assessment before the first lab session: <https://dbportal3.ucsd.edu:3443/safety-training/>. No food or drink is allowed in any of the York labs; you can keep food and drinks in your backpack, placed in the shelves near the door. Please never prop open the door to York 1310 unless class is in session. This is for security reasons – both your safety and to prevent theft of lab equipment or computers.

### **CLEANING UP AT THE END OF THE DAY**

Other courses are using York 1310 this quarter, and ecology lab activities are sometimes fairly dirty, because we bring in materials from the field. At the end of each class period you should wipe down the lab bench with a wet paper towel. This is worth part of your grade.

### **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>). You will be required to have hard copies of instructions in the field and turn in hard copies or all lab reports.

Data must be collected on paper! Then you can back it up electronically. This is a good habit to practice as it is easier to discover mistyped/missing data in the future.

### **ASSIGNMENTS**

The labs for the quarter will be posted on TritonED. Please plan to print the instructions for each lab, along with any sheets required to record data in the field. Most of the assignments will be turned in online.

### **TEXTBOOK**

There is no official textbook, but I'll have a copy of a basic Ecology book that you're welcome to borrow.

### **TESTS**

There will be NO final exam or tests in this course, and the lab does not meet during final exam week.

### **GROUP WORK**

You will often work in groups to collect data. You may analyze data and create graphs and tables as a group, but each individual must do their own writing for brief write ups and lab reports. Working in a group is great way to practice productive professional relationships. You should treat your fellow students in the same way that you would want to be treated in a future job. Treat everyone with respect, and ask questions rather than make assumptions about shared views or experience. Put your best effort into group work, including making an effort to listen to everyone's perspectives and ideas. By entering into the class you have agreed to abide by UCSD's Principles of Community: <https://ucsd.edu/about/principles.html>

### **FIELD EXCURSIONS**

We will be spending much of our lab time in the field. You are required to provide your own transportation. Sometimes we will meet in the lab and walk to a field site on campus. We will sometimes meet at off-campus locations, as described in the lab handout for each day. Make sure you have arranged transportation with your lab group in advance of these days. Except for highly unlikely circumstances, we will go on our field excursions rain or shine. Any exceptions will be emailed via your UCSD email account and posted on TritonED – please check if in doubt.

### **FIELD EXCURSION CLOTHING**

For the outdoor field work you must bring water, wear closed-toe and closed-heel shoes (no sandals, clogs or ballet flats). You might also 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. Long pants are required anytime we are in the lab or outside anywhere except the beach.

## **FIELD SAFETY**

We take your safety in the field very seriously. There may be spiny cacti, ticks, biting ants, poison oak, and rattlesnakes at our field sites. Please follow all safety instructions in the lab and in the field, failure to do so will result in loss of participation points.

## **SUPPLIES YOU PROVIDE**

Thumb drive to save data and assignments, pens or pencils, all printed materials (including data collection sheets and labs posted on TritonED). It's helpful if one person per group brings a laptop on days when we are in lab (not field days).

## **TRAVEL WAIVERS**

Please fill out a travel waiver return during the first lab period.

## **ATTENDANCE**

Attendance at every class meeting is required. Please be on time. While we may end early, some of the labs last the entire class period. It is not possible to enroll in another class or activity that overlaps our scheduled lab time. However, you should not come to lab if you are ill with a contagious disease, and we understand that situations sometimes arise that require you to miss class. If you are ill or have an unavoidable situation/emergency, please get in touch with Dr. Butler by email. In this case your final grade will be calculated without those points (so for instance, out of a possible 975 points instead of 1000 points). Please understand that I will ask you to supply some kind of documentation (e.g. doctor's note, email from a Community Center staff member, etc.). You will have to arrange to make up the write up with Dr. Butler on an individual basis.

## **TIME MANAGEMENT**

A 4-credit class is equivalent to 12 hours per week of effort. We have 10 hours scheduled in York Hall each week, but the activities sometimes will not require all 10 hours. The remaining time is scheduled so that you have access to the computer programs you need to analyze your data and prepare your lab write ups or lab reports, and you should be able to complete all activities in this time. You are welcome to work elsewhere, but recognize if you leave early you will need to schedule alternate times in your week to complete your work, or risk falling behind. The faculty and IAs will be present for all scheduled exercises and during initial stages of data analysis. After we discuss our findings as a group the faculty and IAs will leave you to work independently on completion of your lab write ups or lab reports. You should make sure you fully understand the data and assignments by the end of this group discussion each week.

## **DROP POLICY / WAIT LIST**

The Division of Biological Sciences requires that all students attend the 1<sup>st</sup> meeting of any lab course, otherwise you will be dropped from the course. 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 Division of Biology 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. Additional details: <http://biology.ucsd.edu/go/ug-labs>.

## **WRITING**

Writing will be a large portion of your grade. Scientific writing is a genre with specific expectations, and practice is the only way to improve. We will discuss the findings of each activity in class so you're clear on the required content for your lab reports and write-ups, and we will give suggestions to improve your writing clarity in the grading process. Grading expectations will get stricter as the quarter progresses as we expect you to incorporate this feedback. Labs will be graded both on specifics (did you address all the hypotheses?) and on the general qualities (did you convey the information in the clearest, most concise manner possible?). The Teaching + Learning Commons has both tutoring by appointment and walk-in help available to help you improve your writing, as part of the Writing + Critical Expression Hub (<http://commons.ucsd.edu/students/writing/index.html#For-Undergraduate-Student-Write>). You can also schedule an appointment with Dr. Butler if you find writing difficult.

## GRADING

Participation & Attendance	20%
Group work X peer evals*	40%
Individual work	30%
CleaningUp & Citizenship	10%
	100%
*Peer evals will be done 3-4x /quarter	
we will multiply your score by % on evals	

## ACCOMODATIONS FOR STUDENTS WITH DISABILITIES

Students requesting accommodations for this course due to a disability must provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD) which is located in University Center 202 behind Center Hall. Students are required to present their AFA letters to Faculty (please make arrangements to contact me privately) and to the OSD Liaison in the department in advance so that accommodations may be arranged. Contact the OSD for further information: 858.534.4382 (phone) [osd@ucsd.edu](mailto:osd@ucsd.edu)(email) <http://disabilities.ucsd.edu>(website)

## ACADEMIC INTEGRITY

Students are expected to do their own work. Cheating will not be tolerated and all suspected cases will be handed over to the Academic Integrity Coordinator. *Any student caught cheating will fail the course.* Submitting any material written by someone else (copied from a lab member, or from any on-line source) is a violation of academic integrity. For information on academic integrity at UCSD: <https://students.ucsd.edu/academics/academic-integrity/index.html>

## RESOURCES FOR STUDENT SUPPORT

A college education teaches you to identify solutions to tough problems. These are skills that future employers will value. University students often encounter non-academic issues as well, and UC San Diego has invested in a variety of resources to help students. It's your job to use these resources to ensure your success, here's a partial list that may be useful to you:

**Basic Needs** refers to the most essential resources required to thrive as a student, which includes access to nutritious food, stable housing, and financial wellness resources. **The Hub** is a new UC San Diego space that offers students the opportunity to engage in and link to Basic Needs resources. This includes the Triton Food Pantry. <https://basicneeds.ucsd.edu/>

The **Campus Community Centers** at UC San Diego build community among our diverse population of students, faculty and staff members. Each provides a forum to increase awareness of social issues, encourage dialogue, build community, improve retention, increase outreach and yield, and foster academic success. For a list of the many campus community centers, as well as other resources to support students, go to: <https://diversity.ucsd.edu/centers/index.html>

**Counseling and Psychological Services (CAPS)** provides free, confidential, psychological counseling and crisis services for registered UCSD students. CAPS also provides a variety of groups, workshops, and drop-in forums. For more information, please visit our Counseling Services page. <https://caps.ucsd.edu/>

**CARE at the Sexual Assault Resource Center** is the UC San Diego confidential advocacy and education office for sexual violence and gender-based violence (dating violence, domestic violence, stalking). CARE provides free and confidential services for students, staff and faculty impacted by sexual assault, relationship violence and stalking.

The **Undocumented Student Services Center** is committed to serving our undocumented students and their families through holistic services. We also advocate for generating a sense of community for all students that are undocumented or come from mixed immigration-status families. <https://students.ucsd.edu/sponsor/undoc/>

The **Student Veterans Resource Center (SVRC)** is committed to ensuring that military affiliated students successfully make the transition from the military environment to campus life, and are assisted in their progress toward completing their academic degree. In collaboration with other University partners, the SVRC seeks to identify and mitigate the barriers to academic success that are specific to the military affiliated student community.

<https://students.ucsd.edu/sponsor/veterans/index.html>