

BIEB 121: Ecology Laboratory, Winter 2021

Instructor: Dr. Sarah Stockwell (she/her/hers), sarahs@ucsd.edu

Graduate instructional assistants (IAs):

Danelle Baronia (she/her/hers), dbaronia@ucsd.edu

Adrian Castillo (he/him/his), adc040@ucsd.edu

Office hours:

Dr. Stockwell: Fridays 1:30-2:30 PM, Zoom Meeting ID: 949 3058 5292

or use this link: <https://ucsd.zoom.us/j/94930585292>

Danelle: Thursdays 6-7 PM, Zoom meeting ID: 913 7929 6360

Or use this link: <https://ucsd.zoom.us/j/91379296360>

Adrian: Mondays 12:30-1:30 PM, Zoom meeting ID: 950 0486 7342

Or use this link: <https://ucsd.zoom.us/j/95004867342>

Course overview: 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. Even though we are online, you will still go out in the field (outside) to collect data. We will also work in groups in Zoom to conduct analyses and work on writing/communication skills.

This syllabus is subject to change, particularly because of campus efforts to contain COVID-19. Any schedule changes will be posted on the Canvas site. Make sure to frequently check the Canvas site to keep updated.

Class meetings: We will meet **synchronously* in Zoom 1-4 PM Tues/Thurs, through the 10th week.** We will not meet during finals week. Some lab days will be asynchronous; see the schedule for details. *Part or all of our zoom sessions may be recorded and posted on Canvas (accessible to our class only). Office hours will not be recorded.*

Here are the details of the Zoom classroom:

Topic: Ecology Lab Class Session

Time: TTh 1 PM – 4 PM

<https://ucsd.zoom.us/j/93539752300?pwd=ZHhkK3pYc3I1RnVhVUwxRzduUmsvdz09>

Meeting ID: 935 3975 2300

Passcode: sagebrush

Please do not post the passcode anywhere or share it outside our class. This is one way you can help ensure a safe learning community for everyone.

* This course is designed to be primarily synchronous group work. If you are in a time zone where this meeting time is very inconvenient, or have child care issues, we can discuss how to accommodate you working asynchronously or in a modified way. However, it is much easier for you to work in a group synchronously, and much easier for use to help you and give you feedback if you are able to

participate synchronously. You will need special permission to work asynchronously. Please contact me ASAP by email to work asynchronously.

Unless you have arranged with me to work asynchronously, you are expected to attend all the class Zoom sessions and show up on time. Much of the work in this class is done in groups, and your group will suffer if you are not there. If you cannot attend a class session for reasons that are unforeseeable or out of your control, email me (ahead of time, if at all possible) and we will discuss ways to accommodate you if possible. Unexcused absences or repeated lateness will affect your grade.

Communication: The class will be run from the Canvas site. It is your responsibility to check the Canvas site, including announcements, for important information. The best way to contact us outside class meetings is via email. **Please put “Ecology Lab” in the subject line** to indicate your email is about this course. The IAs and I cannot answer questions about course content via email, but we are very happy to discuss your questions during class sessions or in office hours. I am also happy to meet with you in a break out room during class. Please email me beforehand or private message me in Zoom let me know if you need to discuss anything separately in a break out room.

Nature of this course: This course is a field based course. We are modifying it to be online, but we also want you to go out into the field on your own. We appreciate your patience as we adapt this course. There will be opportunities for you to go outside wherever you live.

Class work and assignments: Lectures will be pre-recorded and available on Canvas. Please watch the lecture, read through the assignment for the week, and do any preparation reading before class meetings. We'll be using the class time for group exercises, and you'll want to make sure you're prepared ahead of time so those exercises can be completed efficiently. All assignments will be posted on Canvas and turned in online.

Schedule: The class schedule is posted on Canvas in the Class Information and Resources module. **Refer to it often; it contains important information about activities and due dates.** The schedule is tentative. Any changes will be announced in advance on Canvas and points adjusted. Details on all assignments will be given in class/Canvas.

Technology:

Essentials: You need a computer/tablet and the ability to access Canvas and the Internet to complete this course. Computer labs and libraries on campus may not be available due to the pandemic. If you don't have a computer/tablet at home and are concerned about affording one, go to

<https://vcsa.ucsd.edu/news/covid-19>

and click “Access to Computers, Discounted Software, and Internet” for information about borrowing a laptop. Questions about this program can be addressed to vcsa@ucsd.edu.

VPN: You will need to connect to the VPN to access scientific journals:

<https://library.ucsd.edu/computing-and-technology/connect-from-off-campus/>

Please do this during week 1 in case you run into problems. Use the option for **VPN Anyconnect**.

Software: We will be using Zoom, Microsoft Excel, and word processing software such as Microsoft Word. If you use Apple’s Numbers, that should work but you will have to adapt the instructions

somewhat. There are apps for Zoom, Canvas, and Google Drive, which will be useful if you want to multitask with your phone/tablet.

We will use the free **SEEK by iNaturalist** app to identify organisms in the field for your Natural History assignment. You will need to install this on your phone; more information on that in the first week. We will also be using R and RStudio, which are free statistical/data processing software. We will show you how to install and use them.

Download R here: <https://rstudio.com/products/rstudio/download/>

Resources on how to learn remotely: <https://digitallearning.ucsd.edu/learners/learning-remote.html>

Additional support for students, including technology training, is available at <https://keeplearning.ucsd.edu>

Expectations:

- Monitor the class Canvas site daily (M-F) for assignments and announcements.
- Watch the pre-recorded lectures, take notes, and take the open-notes lecture quizzes before coming to class. Complete other pre-class activities posted on Canvas before coming to class.
- Come to the synchronous class Zoom sessions unless you have made a previous arrangement with me. Participate fully in group work.
- Complete the assignments for the class. For most class days, there will be some sort of deliverable due by the end of class or by the next class period. Most class work and write-ups are done in groups. In addition, you will have two long-term individual projects.
- Communicate promptly and honestly with me if circumstances arise that prevent you from fulfilling the expectations of the class.

Group work

You will often work in groups. 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 listening 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>

Note that your group members' evaluation of your contribution will be part of your grade.

Writing

Scientific writing is a genre with specific expectations, and practice is the only way to improve. We will discuss the findings of each activity so you're clear on the required content for your lab 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. Lab write-ups 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 Writing + Critical Expression Hub has tutoring to help you improve your writing, as part of the (<http://commons.ucsd.edu/students/writing/index.html#For-Undergraduate-Student-Write>).

Grading:

You can receive up to 459 points in this class (subject to slight adjustments). The number of points that you receive will be divided by the maximum number of points possible to calculate your grade as a percentage. If I need to adjust some of the assignments, the denominator will be adjusted accordingly. **The schedule above has a detailed breakdown of points.** This is a skill-based class so there are no exams. The class will not meet during finals week.

Your final letter grade will be based on your total number of points. If you get over 90% of the points you will receive an A, over 80% you will receive at least a B, etc. If I need to curve grades based on the score distribution at the end of the quarter, the curve would only be used to move letter grade thresholds down, so it could only help your grade, not hurt it. However, I do not expect to need to curve grades in this class so you should not assume there will be a curve. For those taking the class pass/no pass (P/NP), the minimum final grade to receive a grade of P is a C-. Please note that the University will not allow us to change a letter grade after it has been turned in except in cases of clerical error.

Because this is a lab class, if you have excessive unexcused absences, you will not be allowed to make up assignments and your grade may be lowered, up to 5% per absence, in addition to the points that you missed.

Late assignments and regrades

Late assignments will be marked down 10% for each calendar day (or part of a day) that they are late. Exceptions will be considered if there was an unavoidable delay (email Dr. Stockwell).

Any regrade request should be submitted to the professor in writing within one week of your receiving the graded material.

Academic integrity

Academic Integrity is expected of everyone at UC San Diego. This means that you must be honest, fair, responsible, respectful, and trustworthy in all of your actions. Lying, cheating or any other forms of dishonesty will not be tolerated because they undermine learning and the University's ability to certify students' knowledge and abilities. Thus, any attempt to get, or help another get, a grade by cheating, lying or dishonesty will be reported to the Academic Integrity Office and will result in sanctions. Sanctions can include an F in this class and suspension or dismissal from the University. So, think carefully before you act by asking yourself: a) is what I'm about to do or submit for credit an honest, fair, respectful, responsible & trustworthy representation of my knowledge and abilities at this time and, b) would my instructor approve of my action? You are ultimately the only person responsible for your behavior. So, if you are unsure, don't ask a friend — ask your instructor, instructional assistant, or the Academic Integrity Office. You can learn more about academic integrity at academicintegrity.ucsd.edu. (Source: Academic Integrity Office, 2018)

Students are expected to do their own work, as outlined in the UCSD Policy on Academic Integrity. Academic misconduct is broadly defined as any prohibited and dishonest means to receive course credit, a higher grade, or avoid a lower grade. Academic misconduct misrepresents your knowledge and abilities, which undermines the instructor's ability to determine how well you're doing in the course. Please do not risk your future by cheating.

To uphold academic integrity, students shall:

- Complete and submit academic work that is their own and that is an honest and fair representation of their knowledge and abilities at the time of submission.
- Know and follow the standards of the class and the institution.

Thus, no student shall engage in an activity that undermines academic integrity or facilitates academic integrity violations by others. This includes, but is not limited to, the following behaviors:

- No student shall procure, provide, or accept any material that contains questions or answers to any examination or assignment unless the student's possession of the material has been authorized by the instructor.
- No student shall complete, in part or in total, any academic work (e.g., examination, assignment, paper) or obtain academic credit (e.g., attendance, participation) for another person.
- No student shall allow any academic work or academic credit to be completed or obtained, in part or in whole, for themselves by another person.
- No student shall plagiarize or copy the work of others and submit it as their own work.
- No student shall employ aids in undertaking course work or in completing any exam or assignment that are not authorized by the instructor.
- No student shall alter graded class assignments or examinations and then resubmit them for regrading without the instructor's permission.
- No student shall submit substantially the same material more than once without prior authorization from the instructor, such as a paper that was written and submitted in another class.

(Source: UCSD Policy on Integrity of Scholarship, <http://senate.ucsd.edu/Operating-Procedures/Senate-Manual/Appendices/2>).

If you do not understand these expectations and authorizations, please speak with the Instructor as soon as possible. Please read the official UCSD policy at <https://academicintegrity.ucsd.edu/process/policy.html>

Please do NOT post my lectures or class materials on public websites like Course Hero or others. I work hard on my materials and do not appreciate them being made public for anyone to see or download.

Accommodations 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 (email) <http://disabilities.ucsd.edu> (website) Do this within the first week of class. You can choose to use your accommodation or not, but you need to decide this up front so that I can accommodate your needs.

UCSD resources for student support

UC San Diego (as an institution) and I (as a human being and as the instructor of this course) are committed to full inclusion in education for all people. Services and reasonable accommodations are

available to students with temporary and permanent disabilities, to students with DACA or undocumented status, to students facing mental health issues, other personal situations, and to students with other kinds of learning needs. Please feel free to let me know if there are circumstances affecting your ability to participate in class. Some resources that might be of use include:

- **Office for Students with Disability:** <https://students.ucsd.edu/well-being/disability-services/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 their Counseling Services page. <https://caps.ucsd.edu/>
- **UC San Diego Undocumented Student Services:** Undocumented Student Services Center is committed to serving our undocumented students and their families through holistic services. They also advocate for generating a sense of community for all students that are undocumented or come from mixed immigration-status families. <https://uss.ucsd.edu/>
- **Teaching + Learning Commons:** The Teaching + Learning Commons offers tutoring, consultations, and workshops on learning strategies as well as assistance with writing in the Writing + Critical Expression Hub. <http://commons.ucsd.edu>.
- **Learning Strategies Center:** <https://commons.ucsd.edu/academic-support/learning-strategies/index.html>
- **OASIS** can provide tutoring as well as classes in study skills and time management. <http://oasis.ucsd.edu>
- **SPACES:** Book lending service for students <https://booklending.ucsd.edu/>
- **The Hub** (<https://basicneeds.ucsd.edu/triton-food-pantry/index.html>) will point you to resources to meet your basic needs (nutritious food, stable housing, etc.).
- **Triton Food Pantry:** The University of California believes that all students should have access to nutritious food. <https://basicneeds.ucsd.edu/triton-food-pantry/index.html>
- **Community Centers:** 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>
- **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. <https://students.ucsd.edu/sponsor/sarc/>
- **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>

Problems? If you have serious medical or personal problems during the quarter, the university allows medical withdrawals. Contact the Biology Student Affairs Advising Services office at 858-534-0557 or go to their website.

Enrollment:

Enrolled and waitlisted students MUST attend the first lab session.

Additional details: <http://biology.ucsd.edu/go/ug-labs>

Wait list: If you are on the wait list for this class you will be automatically added if space becomes available. If you have any concerns, please contact the Biology Student Affairs Advising Services office at 858-534-0557 or go to their website (<http://biology.ucsd.edu/education/undergrad/advising/index.html>).

Add/drop deadlines are different for lab courses than lecture courses. Students who drop a Biology lab class after the end of the second class meeting will be assigned a “W”.

Additional details: <http://biology.ucsd.edu/go/ug-labs>.

Dropping the class: If you decide to drop or withdraw after the second week please send Dr. Stockwell an email to let her know, otherwise she worries if you disappear!

Educational research and this class

I do research on how students learn biology and on what kinds of curriculum does the best job of teaching biology. Part of my research is in how I teach: I try different approaches to teaching this material and see what works best. If I find something that works particularly well, I publish it for other Biology faculty to use in their classes.

One way that I measure whether a particular assignment or activity was effective is to look at your work in this class. But it is your choice whether you consent to my using your work in my research. If you do participate in the study, that would mean that your work in this class gets added to a set of data that I can analyze after the class ends. Your name and other personally identifiable information would be removed from the work before I analyze it. Your work would be anonymous for the data analysis. Also, I do the data analysis after the class ends and all grades have been turned in. As a result, none of this analysis could affect your grade in any way.

Please read the consent form for this research, which is appended to the end of the syllabus. It is also posted in the Course Information part of the class Canvas site.

If you consent to being part of this research, you don't need to do anything.

If you do NOT consent to being part of this research, you can opt out of the study. In that case, please follow the directions at the end of the consent form to opt out. There are no penalties for opting out of the study, and it will not affect your grade in any way. The opt-out information is sent to a third party who keeps it safe until after classes end and I've submitted the grades, and then they de-identify the data and remove anyone's work who has opted out.

If you have questions or concerns, please email me: sarahs@ucsd.edu.

Portions of this syllabus adapted from Shannon Butler and Elsa Cleland.

Consent to Participate in Educational Research

University of California, San Diego

Consent to Act as a Research Subject

Investigating the Impact of Pedagogical Choices on University Student Learning and Engagement

Who is conducting the study, why you have been asked to participate, how you were selected, and what is the approximate number of participants in the study?

Gabriele Wienhausen, Director of the Teaching and Learning Commons, together with her education research colleagues is conducting a research study to find out more about how pedagogical choices affect student learning and experience in the classroom. You have been asked to participate in this study because you are a student in a class that is being studied or used as a control. There will be approximately 500,000 participants in this study.

Why is this study being done?

The purpose of this study is to create knowledge that has the potential to improve the learning and educational experience of students at UC San Diego and beyond.

What will happen to you in this study and which procedures are standard of care and which are experimental?

If you agree to be in this study, the following will happen:

- Your data from this class including grades, homework and exam submissions, and survey responses will be included in the analysis to determine the effectiveness of the pedagogical techniques used in this course compared to other similar courses.

How much time will each study procedure take, what is your total time commitment, and how long will the study last?

Your participation involves only agreeing to let us use your data in our analysis. It will require no time on your part above the time you put into this course without agreeing to the study.

What risks are associated with this study?

Participation in this study may involve some added risks or discomforts. These include the following:

1. A potential for the loss of confidentiality. We will not share your personally identifying data with people outside our research team. Data will only be kept in anonymized form for research purposes. Course data will not be used for this research study until after final grades have been posted and will be rendered confidential by removing any identifiers before analysis. Your instructor will not know whether or not you are participating in this study until after final grades have been posted. Data from students who opt out of the study will be removed prior to data analysis. Research records will be kept confidential to the extent allowed by law. Research records may be reviewed by the UCSD Institutional Review Board.

Since this is an investigational study, there may be some unknown risks that are currently unforeseeable. You will be informed of any significant new findings.

What are the alternatives to participating in this study?

The alternatives to participation in this study are not to participate. If you choose to opt-out of participating in this research study, we will exclude your data from analysis. Whether you participate will have no impact on your experience or grade in the associated class as the professor will not know who is or is not participating in the study until after final grades are assigned.

What benefits can be reasonably expected?

There is no direct benefit to you for participating in the study. The investigator, however, may learn more about how to improve student learning, and society may benefit from this knowledge.

Can you choose to not participate or withdraw from the study without penalty or loss of benefits?

Participation in research is entirely voluntary. You may refuse to participate or withdraw or refuse to answer specific questions in an interview or on a questionnaire at any time without penalty or loss of benefits to which you are entitled. If you decide that you no longer wish to continue in this study before the end of the quarter, simply respond to the online opt-out form here:

<https://goo.gl/forms/JSBRjEmkES6W6xYc2>. If you decide to opt out after the quarter has ended, you must contact Laurel Nelson (laureln@ucsd.edu) and give the quarter and the course from which you would like your data withdrawn.

You will be told if any important new information is found during the course of this study that may affect your wanting to continue.

Can you be withdrawn from the study without your consent?

The PI may remove you from the study without your consent if the PI feels it is in your best interest or the best interest of the study. You may also be withdrawn from the study if you do not follow the instructions given you by the study personnel.

Will you be compensated for participating in this study?

You will not be compensated for participating in this study.

Are there any costs associated with participating in this study?

There will be no cost to you for participating in this study.

Who can you call if you have questions?

Gabriele Wienhausen and/or her colleague has explained this study to you and answered your questions. If you have other questions or research-related problems, you may reach Gabriele Wienhausen at gwienhausen@ucsd.edu or (858) 534-3958.

You may call the Human Research Protections Program Office at 858-246-HRPP (858-246-4777) to inquire about your rights as a research subject or to report research-related problems.

Your Consent

If you consent to participate in this study and are at least 18 years old, no action is needed. If you DO NOT consent to participate in this study, or you choose to opt-out at any time during the quarter, please submit this form online at <https://goo.gl/forms/JSBRjEmkES6W6xYc2>. Your instructor will not have access to the list of students who opted out until after grades are posted. Note that you must separately opt-out of the study for each course involved in this study.