

BILD 3: Organismic and Evolutionary Biology

Scheduled lecture times (but see below for details on the remote version of the class):

A00: MWF 11-11:50 AM

D00: MWF 2:00-2:50 PM

PROFESSOR CONTACT INFORMATION

Dr. Sarah Stockwell (sarahs@ucsd.edu)

Office hours: Tuesdays 2-3 PM.

Recurring Zoom meeting for my office hours: 957 3802 6627 or use

<https://ucsd.zoom.us/j/95738026627>

HEAD INSTRUCTIONAL ASSISTANT CONTACT INFORMATION

A00 (11 AM lecture class): Alex Neu <aneu@ucsd.edu>

D00 (2 PM lecture class): Sarah Ardell <smardell@ucsd.edu>

Office hours: See “Discussion sections, IAs, and office hours” on the Canvas site.

NOTE: Please contact me only in case of an emergency. The best way to contact me is via email.

Please email your instructional assistant (IA) or the head IA (see above) for all other inquiries. In all emails, **please put “BILD 3” in the subject line** to indicate your email is about this course. Because there are so many students in this course, we cannot answer individual questions about course content and these emails will be deleted. To get your questions answered: Attend Zoom discussion sections, go to IA and professor office hours via Zoom, and post in the Discussions on Canvas.

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.

Please make sure that you check out this website for resources on how to learn remotely:

<https://digitallearning.ucsd.edu/learners/learning-remote.html>

COURSE WEBSITE

The class will be run from the Canvas site. You will need to check this several times a week.

canvas.ucsd.edu (click on BILD 3 link).

If you have not used Canvas before, refer to the student help guides and videos, which are located on the left-side menu’s help section (the question mark icon). Should you need any technical assistance with Canvas, please alert your instructor and send an email to servicedesk@ucsd.edu. In the header of the email, please write “Canvas”. Make sure to include your name, course title and section, as well as your contact information in the email body.

Instruction on how to access your account for logging on to UCSD’s Canvas sites can be found here:

<http://acms.ucsd.edu/students/accounts-and-passwords/index.html>

Concurrent enrollment (extension) students are not added automatically. More information for extension students can be found here: <https://extension.ucsd.edu/student-resources/>

COURSE DESCRIPTION

BILD 3 is an introduction to the biological fields of evolution and ecology. Evolution is the study of how populations of living organisms change over time. Ecology is the study of the relationships between living organisms and their environment. To best understand why there are so many different kinds of living things and their myriad of complex interactions, we will study evolution and evolutionary processes. We will also focus on organismal diversity and the importance of a general understanding of these topics within biology so as to be better stewards of the earth's biota. We will also discuss human impacts on global climates, species extinctions, environmental alterations, and the role of conservation.

REQUIRED MATERIALS

Computer or tablet and Internet connection

BILD 3, like most UCSD classes this quarter, will be taught entirely online. In order to participate in your UCSD classes this quarter, including BILD 3, you will need a computer or tablet and an Internet connection. You might be able to get by with a smart phone but it will make things substantially more difficult, and some things may not work via the phone, possibly including quizzes. Computer labs and libraries on campus may not be available. If you don't have a computer/tablet at home and are concerned about affording one, email vcsa@ucsd.edu to ask if they can help.

Access to Canvas (see previous page of the syllabus) and Zoom

You will need to set up your Zoom account. UCSD has purchased a Zoom site license for all students, staff, and faculty. You will need to install Zoom on whatever device you plan to use for the quarter. Go to <https://ucsd.zoom.us/> to get started.

Textbook

The textbook is Campbell Biology, 10th or 11th edition. Make sure you have Campbell Biology rather than Campbell Biology in Focus; they are substantially different books. The UCSD bookstore is accepting online orders and offering free delivery.

If you don't want to order the whole textbook, you can order the custom BILD 3 edition, which is a paperback or loose-leaf set of only the chapters we use in BILD 3, and it's cheaper. The custom BILD 3 edition is only available from the UCSD bookstore; choose "BILD 3 Custom Campbell Biology" from the choices in the book listings. If you find a used copy somewhere other than the UCSD bookstore, make sure it has a jellyfish on the cover. If it's a picture of red blood cells, it's an excerpt from a different textbook and you shouldn't buy it. ISBN for the excerpt: 9781323677223

I will assign readings from the textbook for most class days and some of the learning objectives for the class are covered only in the readings, so you need access to the book to succeed in the class.

The publisher of Campbell Biology offers various supplemental materials including a CD, a web site called Mastering Biology, and a book of exercises. These supplemental materials may be useful to you, but they are NOT required.

NOT an iClicker

Because BILD 3 will be entirely online this quarter, you do NOT need an iClicker.

GRADING

54 points: Completing learning objective answers (one per class day).

36 points: Spot-checks on learning objective answers.

50 points: Assignments.

26 points: Practice exam questions on Canvas (one per class day).

9 points: Answering Muddiest Point surveys on Fridays (weeks 1-9).

150 Points: Highest-scoring 5 of the 6 quizzes.

Total: 325 points.

There will be a small number of extra credit points available; details announced later.

To give everyone time to get up to speed with online learning, there will be no points for anything due during the first full week of class (through Oct. 9). I will post some of the assignments above for you to practice, but all points for those will be wiped out after the first full week and everyone will start fresh in week 2. That said, make sure you keep up with the lectures, readings, etc. from the beginning so you don't fall behind with the material.

GRADING

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 needed** to adjust the distribution of letter grades upward, grades **may** be based on a curve. The curve will only be used (if it is used) to move letter grade thresholds down, so it can only help your grade, not hurt it. Don't assume there will be a curve; in many quarters, the point distribution is high enough that there is no need to adjust the thresholds. The final course curve, if there is one, is based on the students that are enrolled in the course at the end of the quarter. 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.

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>). Please do not ask IAs to add you to their section; they do not have any control over this process.

Enrollment questions: Administrative, advising, or registration questions should be submitted via the Virtual Advising Center (vac.ucsd.edu).

HOW THE CLASS WILL WORK THIS QUARTER

Explanation of A00/D00 terminology: I am teaching BILD 3 twice this quarter, and this syllabus applies to both classes. As a result, you will see references to the A00 class and the D00 class. The A00 class lectures are officially scheduled for MWF 11 AM, and the D00 class lectures are officially scheduled for MWF 2 PM. The A00/D00 terms are confusing because this quarter, the Registrar also used discussion section numbers like A01 or E05 to designate individual discussion sections. How can you tell whether you're in the A00 class or the D00 class? If the discussion section that you registered for starts with A, B, or C, you're in the A00 class. If it starts with D, E, or F, you're in the D00 class. Note: Each class has

its own Canvas site, so when you interact with the class on Canvas you will only see material for your own course.

BILD 3 lectures are scheduled for Monday, Wednesday, and Friday at 11 AM (A00 class) or 2 PM (D00 class). We will not meet at those times. However, you will have tasks that you need to complete by the start of the scheduled class time. I will post a page on Canvas for each class day telling you what you need to do. The Canvas page for a typical day will include:

Reading

There is a reading assignment for most class days. I will post learning objectives for each reading to help you focus on the most important things you should be learning from the reading.

Lecture

I will post a video lecture for each class day. You will need to watch the lecture by the start of the next scheduled class period. For example, I will post a lecture for Friday, October 2; you will need to watch it by 11 AM (A00 class) or 2 PM (D00 class) on Monday, October 28 (the next class day). I will post learning objectives for each lecture as well.

My lectures often have active learning tasks in them. I strongly urge you to participate as actively as possible when you watch the lecture video. When there is a task, do it on your own at home (or collaborate with a classmate as you watch the lecture at the same time). The more actively you participate in learning the material, the better you will understand it.

Lecture slides

I will post the slides for each day's lecture to help you study. Be aware that they are, at best, outlines of the lecture, and essential material will be presented in lecture that does not appear on them or in the textbook. If you want to do well in the class, you will need to watch the lecture videos; the slides are not enough.

Lecture learning objectives

I will post the learning objectives that were covered in the lecture video. Note that there are learning objectives for the class that are not covered in lecture, or only partly covered in lecture (e.g., those based primarily on the reading). I will separately post a list of complete learning objectives for each topic.

Learning objective assignments

BILD 3 has a lot of material. To help you focus your studying on the main ideas, I have written **learning objectives** for each topic we cover. These are the key to the class and they are what I base the quizzes on. I will post a list of learning objectives for each topic as we go through the quarter.

This quarter, we will also use the learning objectives as a tool to help you keep up with the class. In an online class, it will be especially tempting to put off doing the reading, watching the lectures, etc. until you are so far behind you can't catch up. To help avoid this, you will need to turn in a **learning objective assignment** for every lecture day. These will be based on the learning objectives from the lecture. You will need to write a response to the learning objective **in your own words, based on your own understanding** and submit it via Canvas. Use the appropriate terms, but do not borrow language from the lecture, the reading, or other people's writing; violations will be

reported to the Academic Integrity Office and may result in sanctions (see Academic Integrity policy below).

Each learning objective assignment will be graded based on completion (2 points each). If you get the completion points for 75% of the required learning objective assignments during the quarter, you will get full credit for completing them all. Late learning objective assignments will not be accepted.

To encourage you to invest thoughtful effort into the learning objective assignments, the IAs will also be spot-checking at least 6 of your learning objective assignments on random days during the quarter. Spot-checked learning objective assignments will be graded for thoughtful effort on this scale:

- 0 points: not turned in, or answer is very minimal, or answer doesn't address the learning objective.
- 3 points: incomplete or partially wrong answer.
- 6 points: answer is a thoughtful effort to address the learning objective and mostly correct.

Answers will not be marked down for grammar/language errors unless they are severe enough that the grader can't understand what you meant.

A 0 on a spot-check will also turn the completion points for that learning objective assignment into a 0. (One consequence of this is that the completion points for that assignment will not count toward the 75% total.) IAs may spot-check more than 6 learning objective assignments for each student during the quarter, especially if they find that a student is consistently turning in irrelevant or very minimal answers to the assignments.

Practice exam questions

To help you prepare for the quizzes, I will post one practice exam question for each class day. These will be graded on completion (1 point each): you can answer the question multiple times until you get it right. Answer these questions using only your brain, no notes/book/etc., so you can check how well you understand/recall the material. **I strongly encourage you to monitor how well you do on these. If you find that you often get them wrong on the first try, change your study strategy.** I have posted tips for doing well in BILD 3 on the Canvas site; I urge you to read them and take the advice.

Muddiest point surveys

I want to know what topics you are struggling with so I can help. Each Friday in weeks 1-9, I will ask you to reflect on the material covered that week and decide what the "muddiest point" — the most confusing part — has been for you that week. I will ask you to share your muddiest point via a one-question survey which is worth 1 point for completing. I will review the class responses and post videos to clarify the most common muddiest points.

DISCUSSION SECTIONS (LIVE)

In addition to the asynchronous class tasks above, you will have a discussion section that meets **live** (synchronously) via Zoom. Your IA will host a Zoom meeting at the day and time of your discussion section, and you should join the meeting if possible. Attendance (via Zoom) at discussion sections is not required, but it is strongly encouraged — this is your main opportunity to discuss the class material, which will help your performance on assignments and quizzes. To accommodate students in different time zones and with different work/childcare/etc. schedules, you may "attend" a different discussion sections from the one you are registered for within your class (for example, A00 students

can attend other A00 discussion sections). Note: this policy may be change if it turns out everyone is piling up in a couple of discussion sections. Please attend the section you're registered for if you can.

Sections will meet beginning in the first full week of classes. You can find a link to your discussion section's Zoom meeting information on the "Discussion sections, IAs, and office hours" page on Canvas, and also on the Zoom LTI Pro area of the Canvas site.

Some discussion sections or class weeks will have assignments associated with them. The assignments are required even if you don't attend section that week. I will post information about those on Canvas as we go through the quarter. Note that material from these assignments is fair game for the quizzes.

OFFICE HOURS (LIVE)

The IAs and I will have office hours via Zoom. This is the best way to have a one-on-one conversation with me or with your IA. I will post links to everyone's office hour Zoom meetings on Canvas. You can go to the office hours of any IA, and of course you are always welcome in my office hours.

NOTE ON RECORDING

Some of the Zoom sessions will be recorded and made available to students asynchronously.

CANVAS DISCUSSION BOARDS

There are discussion boards on Canvas where you can post your questions and answer other students' questions. IAs will monitor this but I encourage you to help each other! Please be respectful and kind, and abide by UCSD's Principles of Community.

LATE ASSIGNMENTS POLICY

Late assignments will marked down 10% for each calendar day (or part of a day) that they are late.

QUIZZES

We will have 6 quizzes throughout the quarter. Each quiz will be 25 minutes long and will be **synchronous**, meaning that everyone takes it at the scheduled time. They will be scheduled as follows:

Quiz 1: Friday, October 16. 11 AM (A00 class) or 2 PM (D00 class).

Quiz 2: Friday, October 30. 11 AM (A00 class) or 2 PM (D00 class).

Quiz 3: Friday, November 13. 11 AM (A00 class) or 2 PM (D00 class).

Quiz 4: **Monday**, November 30. 11 AM (A00 class) or 2 PM (D00 class). **Please note that this quiz is on Monday because of the Thanksgiving holiday.**

Quiz 5: Friday, December 11. 11 AM (A00 class) or 2 PM (D00 class).

Quiz 6: Saturday, December 12. 5 PM (both classes).

The quizzes will only be available to take for a 25-minute window during the scheduled class time on that day, so make sure you are available then.

The 6th quiz will be **from 5-6 PM** during the scheduled final exam time for the class, so plan to be available then too.

If you have a conflict with one or more of the quizzes, email me (sarahs@ucsd.edu) IN ADVANCE to discuss arranging a makeup time.

During each quiz, I will host a live Zoom session where you can use the chat to ask questions if you are confused about the wording of any of the quiz questions, just as you could in an in-person exam. I recommend that you join the Zoom meeting before starting the quiz just in case a question or problem arises for you. You can find a link to this Zoom meeting in the Canvas page for each quiz. The meeting will start about 10 minutes before the quiz opens so you have time to join in advance.

Each quiz will be worth 30 points. I will drop your lowest quiz score, so the overall quiz score will be out of 150 points (your top-scoring 5 quizzes). This policy is intended to cover the occasional technical glitch or sick day: if your Internet connection fails or your laptop runs out of battery halfway through a quiz or you have food poisoning, you have my sympathy but you don't need to email me about it; that will just be your lowest-scoring quiz which will be dropped. For this reason, I strongly recommend that you study for and take all the quizzes so you have an insurance policy against something going wrong for one of them.

Each quiz will cover roughly the material from the preceding 2 weeks. Before each quiz, I will post a list of the learning objectives and weekly assignments that will be covered on that quiz. The quiz during finals week will cover material from throughout the quarter. That is the only cumulative quiz.

If you can't take ONE of the quizzes at the scheduled time: that's OK, that will be the score that gets dropped. If you know in advance that you absolutely cannot take 5 of the quizzes at the scheduled times, email me before the first quiz. During the quarter, if you become unable to take a quiz due to serious illness or other emergency AND you have already missed one quiz, email me before the quiz (the earlier the better) and we will discuss your options. If an emergency arises during the quarter that will make you miss more than one quiz, email me as soon as possible and we will discuss your options.

The quizzes will be taken on Canvas, using a similar format to the practice exam questions for each lecture. If you have had technical problems taking the practice exam questions, please resolve those by the time of the first quiz. The IT folks have suggested updating your web browser or using Chrome if you are having problems. If that fails, email servicedesk@ucsd.edu.

The quizzes in this class will be open-book and open-notes, but you must take the quizzes on your own. That is: you may consult the readings, lectures, your own notes, and other materials from the class this quarter, but you may not communicate in any way with anyone else about the quiz while it is open. Do not use Internet resources or other resources outside our class to answer quiz questions. Do not discuss or share information about the quiz with other students in the class for 48 hours after the quiz ends. Do not share information about the quiz outside the class at any time. You may use a calculator if needed. Please see the Academic Integrity policy in the syllabus.

Students suspected of academic integrity violations on quizzes will be invited to Zoom follow-up meetings where they will be asked to (in real time, on video) justify their answers. If the instructor isn't convinced during the meeting, or if the student refuses to participate, the violations will be reported to the Academic Integrity Office.

Studying note: Because the quizzes are timed, you should study for them just as much as you would if they were closed-book. You will probably have time to double-check a specialized term or two if your notes are organized, but that's about it. So make sure you understand all the material, including the concepts and how to apply them, before the quiz starts.

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>

ETIQUETTE FOR EMAILS AND IN THE ONLINE CLASSROOM

All emails to professors and IAs should be polite and respectful, include your **first and last name** in the body of the email, and have **BILD 3 in the subject line**. Do not rely on email as a sure and immediate form of communication with the instructor. I will do my best to answer emails within two business days. The most certain way to get your questions answered is to ask in the Canvas discussions, your discussion section, or office hours.

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

STUDENTS WITH SPECIAL CIRCUMSTANCES

UC San Diego (as an institution) and I (as a person 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 Student with Disability, <https://students.ucsd.edu/well-being/disability-services/index.html>
- UC San Diego CAPS (Counseling & Psychological Services), <https://wellness.ucsd.edu/CAPS/Pages/default.aspx>
- UC San Diego Undocumented Student Services, <https://uss.ucsd.edu/> Note: a list of campus resources can be found here: <https://students.ucsd.edu/sponsor/undoc/resources/index.html>
- Learning Strategies Center, <https://commons.ucsd.edu/academic-support/learning-strategies/index.html>

Students requesting accommodations and services due to a disability for this course need to provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD), prior to eligibility for requests. Receipt of AFAs in advance is necessary for appropriate planning for the provision of reasonable accommodations. OSD Academic Liaisons also need to receive current AFAs. For more information, contact the OSD at (858) 534.4382 (V); (858) 534-9709 (TTY); osd@ucsd.edu, or <http://osd.ucsd.edu>. **You will need to coordinate scheduling of quizzes with me. All of these arrangements should be made within the first two weeks of the quarter.**

BILD 3 TIPS FOR SUCCESS

Here is the best strategy for getting an A in this class:

1. Pay attention to the learning objectives (all of them, not just the ones from the learning objective assignments). I base quizzes on these.
2. Read “How to study for BILD 3,” posted in the “Learning Objectives” section of the Canvas site.
3. Do the reading assignments before watching each lecture.
4. Stay on schedule with the tasks posted for each lecture day on Canvas. Take notes while you do the reading and watch the lecture video, just as you would in a face-to-face class.
5. When you take notes, write down a summary and essential details of the lecture; don’t try to write down every word. The process of synthesizing and summarizing the lecture in your notes helps you learn the material.
6. Go over your notes within the next day or so and fill in details missed in lecture or topics you didn’t understand, using material presented in the book or online or in discussion section.
7. Study in groups! It’s more efficient and helps build your confidence. It’s a big class and a big university, and working online is even more isolating. You will do best if you build a network of peers to learn with and get support from. Quiz each other on the learning objectives and other class material to find out what you actually know vs. what you thought you knew until you had to explain it to a friend! I strongly recommend the facilitated Study Group for our BILD 3 class. See the “Course Information and Syllabus” section of the Canvas site for more information on our Study Group.
8. Reflect on how many of the Practice Exam Questions questions you get right, and how confident you are in your answers. If you are getting many of them wrong, change your study strategy.
9. Go to your discussion section each week to have questions answered, discuss topics in detail, and get extra help and guidance. Post questions on the class Canvas discussion boards.
10. Go to the professor and your IA’s office hours and ask questions. It’s not an imposition; we expect and want you to do it! The best students ask for help.

The amount of material presented in this course can seem overwhelming if you don’t keep up on a regular basis. Because the lectures build on each other, you must put a constant and steady amount of effort into the lectures. If you fall behind, the interaction between the different lectures will make it difficult for you to recover. If you keep pace, this course should be rewarding.

If you are having academic difficulty, OASIS (<http://oasis.ucsd.edu/>) can often help. They provide tutoring, as well as classes in study skills and time management.

This is a stressful time. If you are having personal difficulties, do not hesitate to seek help at Counseling and Psychological Services (CAPS): (<https://wellness.ucsd.edu/CAPS/Pages/default.aspx>), which is free to students. They can help you get over many types of hurdles.

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.

Educational research and BILD 3

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 this class: 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 Carolyn Kurle.

Schedule of lecture topics (subject to change at instructor discretion):

Week 0 (Oct. 2):

Introduction to the class

Week 1 (Oct. 5-9):

Introduction to the class

Introduction to evolutionary biology

Overview of natural selection

Week 2 (Oct. 12-16):

History of evolutionary thought

Evidence of evolution

Friday, October 16: Quiz 1

Week 3 (Oct. 19-23):

Evidence of evolution (continued)

The genetics of populations

Week 4 (Oct. 26-30):

The genetics of populations (continued)

Natural selection revisited

Phylogenetic trees

Friday, October 30: Quiz 2

Week 5 (Nov. 2-6):

Phylogenetic trees

Species and speciation

Week 6 (Nov. 9-13):

History of life on Earth

(Note: no class tasks or discussion sections on Wednesday Nov. 11 because of the Veterans' Day holiday.

Friday, Nov. 13: Quiz 3

Week 7 (Nov. 16-20)

History of life on Earth (continued)

Human evolution

Biodiversity

Week 8 (Nov. 23-27):

Biodiversity

(Note: no class tasks or discussion sections on Friday Nov. 27 because of the Thanksgiving holiday.

Monday, Nov. 30: Quiz 4. PLEASE NOTE: THIS QUIZ IS ON MONDAY, NOT FRIDAY.

Week 9 (Nov. 30-Dec. 4):

The physical environment and the biosphere
Population ecology

Week 10 (Dec. 7-11)

Community ecology
Ecosystem ecology
Climate change

Friday, Dec. 11: Quiz 5.

Saturday, Dec. 12: Quiz 6. This quiz will be cumulative (covering the whole quarter) and will be at 5 PM.

DISCUSSION SECTION SCHEDULE

Materials for discussion sections can be downloaded from the Canvas site.

Week	Activity
1 (starts 10/5)	Get to know your class and Zoom/remote learning Q&A
2 (starts 10/12)	Writing in Your Own Voice
3 (starts 10/19)	Genetic drift exercise
4 (starts 10/26)	Population genetics exercise (Hardy-Weinberg equilibrium)
5 (starts 11/2)	Phylogenetics exercise
6 (starts 11/9)	Biodiversity Show and Tell
7 (starts 11/16)	Review/Q&A
8 (starts 11/23)	No discussion sections this week
9 (starts 11/30)	Ecology reading discussion
10 (starts 12/7)	Climate change activity

For discussion section times, Zoom meeting information, IA contact information, and office hours, see the “Discussion sections, IAs, and office hours” page on the Canvas site.

Important Dates: Wait lists end: Oct. 15. Last day to drop without a “Withdrawal” (W) on transcript: October 30. Last day to drop with a W: November 13.

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.