

BILD 3: Organismic and Evolutionary Biology (Introduction to Ecology and Evolution) Spring 2020, Remote Instruction

Professor: Dr. Carolyn Kurlle (ckurle@ucsd.edu)

Class time via Zoom for question and answer sessions: T/Th 830-930 am (during our scheduled class time)
Office hours via Zoom (for one on one meetings): Tu 930-1030 am; All times are Pacific Time

Head Teaching Assistant: Iris Wang (ziw125@ucsd.edu)

Please contact your IA/TA via email (see list below), for general inquiries. On all emails, **please put BILD 3 in the subject line** to indicate your email is about this course. Because there are hundreds of students in this course, **we cannot answer individual questions about course content and these emails will be deleted.** Podcast the lectures, remotely attend discussion sections, IA, and professor office hours, use Piazza (see below), and confer with your fellow students to get answers to individual questions.

Please be judicious in contacting me. There are ~350 of you and, while I value all my students (really!), if everyone contacted me with trivialities, I would drown in emails. Thank you for understanding. That said, the best way to contact me is via email or come to my virtual office hours.

Please do NOT post my lectures, lecture notes, or exam questions on public websites like Course Hero or others. I've worked very hard on all my materials and don't want them public. **Thank you!**

Description: BILD 3 is an introduction to the fields within biology known as ecology and evolution. Ecology is the study of the relationships between living organisms and their environment. To best understand why there are so many kinds of living things and their myriad of complex interactions, we will study evolution and evolutionary processes. We will also focus on organismal diversity, conservation, and the importance of a general understanding of these topics within biology to be better stewards of the Earth's living things and habitats. We will discuss human impacts on global climate, species extinctions, and environmental alterations. Lastly, it's my goal to introduce you to topics I love so you might take a sharper interest in the natural world and have a greater tendency toward becoming a more conservation-minded citizen.

Websites: Lecture notes: canvas.ucsd.edu; Podcast: canvas.ucsd.edu; Twice Weekly class sessions: Zoom meetings with links on Canvas. Discussion Sections: Zoom meetings with links on Canvas under the tab marked Zoom LTI Pro; Piazza for questions for and interactions with other students and IAs: Sign up for Piazza here: piazza.com/university_of_california_san_diego/spring2020/bild3
Link to our Piazza course page: piazza.com/university_of_california_san_diego/spring2020/bild3/home.
Access code for our Piazza page is bild3.

Grading: 100 Points: Midterm 1
100 Points: Midterm 2 (non-cumulative)
200: Total graded points available
10 Extra credit points: see details below for extra credit requirements

Textbook: Campbell Biology or Campbell Biology in Focus (**NOT REQUIRED**). We will cover material from certain chapters in these books, but you are NOT required to buy either book. Feel free to use either book if you want clarification on a topic, but I will NOT test on material in either book. If you want further reading and don't want to buy this book, almost everything I discuss can be found for free in more detail online (just Google a topic). 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. Used copies may be available online or at the bookstore. You may also find copies at a website called UCSD.PostYourBook.com. Several copies of the texts are on reserve at Geisel Library. Older versions of Campbell Biology could also be helpful to you. I will use figures from and refer to chapter numbers from the 11th edition. Previous and subsequent editions are similar, but not identical, and could still be a good resource.

Zoom: All of our class times, office hours, and discussion sections will be held via Zoom. **The links to join are on our Canvas website and should be sent to you via emails. On Canvas, click on the Zoom LTI Pro tab.** For information on how to use Zoom, please go here: <https://blink.ucsd.edu/technology/file-sharing/zoom/index.html>

Piazza: We use Piazza for answering questions or discussions of issues related to BILD 3. The system is catered to getting you help fast and efficiently from classmates, the IAs, and sometimes myself. Rather than emailing questions to the teaching staff, post your questions on Piazza. **Our page is** piazza.com/university_of_california_san_diego/spring2020/bild3/home. Please sign up for and utilize this resource. **To sign up**, go here: piazza.com/university_of_california_san_diego/spring2020/bild3. **Use the access code bild3.** If you have problems or feedback for the developers, email team@piazza.com.

Lectures: As you know, we're all prohibited from being on campus. Therefore, **all pre-recorded lectures will be posted on Canvas under Media Gallery.** The easiest and fastest method by which to accomplish this is to utilize my lectures from Spring 2019. Therefore all the lectures will be from last year and will contain information not relevant to this quarter (information about quizzes which we won't have and stops for me addressing questions and pauses for iClicker interaction). Each will be posted on Canvas under My Media and I will post both lectures for each week at the start of the week. All material presented in lectures is fair game for the two midterm exams. Lecture notes are also posted on Canvas. I recommend taking notes onto the lecture notes while listening to/watching the podcasts. The camera in the classroom in 2019 wasn't working for the first five lectures, so you won't see me until lecture 6, but you will see the slides and hear my voice which is just fine.

I will likely also record and post updates as the quarter progresses so there will be some new content, but I envision this will be small, in person updates if I need to relay something to everyone.

What will happen during class time: I will hold Zoom meetings Tuesdays and Thursdays from 830-930 am during our scheduled class period. If there is a need for more, then I will expand these to include the entire 80 minutes allocated for lecture (8:00-9:20). These meetings will be for interaction with me and I will answer questions from lecture. No new material will be introduced. The Zoom meetings can all be accessed via our Canvas website under the heading Zoom LTI Pro and you should all receive invitations to these meetings via email from Canvas. **I will record these sessions so they can be available to students asynchronously. Please note that, legally, I'm required to inform you these sessions will be recorded, so if you are not comfortable with that, monitor your participation accordingly.**

Office hours: The IAs and I will hold office hours via Zoom which can all be accessed via our Canvas website under the heading Zoom LTI Pro. Office hour times for the IAs are listed below and mine are listed at the top of the syllabus. These Zoom meetings will utilize the waiting room feature in Zoom so you will have opportunities for private, one-on-one meetings with us.

Discussion sections: Practice Zoom Section meetings will meet the week of March 30 and be led by your IAs. Sections will be held via Zoom meetings during your discussion section times and your IAs will

cover material from lecture, answer questions, and/or discuss an assigned paper (see schedule below). The readings are posted on Canvas and **all information in readings is fair game for the exams**. See IA list below for information regarding who will lead your section. You should have already chosen and registered for a section when you enrolled in this course, but you can attend any of the Zoom sections meetings to accommodate whatever your schedule needs.

Exams: There are two midterms, each worth 100 points. Only material presented in lecture or in the readings required for Discussion Sections will be covered on the exams. **I will NOT test on any material from the book as it is NOT required.** All questions will be multiple choice and I am not yet sure how they will be run as they will all be conducted remotely. But I am fairly certain both exams will be open note/open book because there is really no way to make it otherwise. The midterms will contain material from the course up to the lecture preceding the exam. There is no final exam for this class. Exam scores will be available after grading is complete.

Extra credit: There are 10 points total available for extra credit. To earn these points, you must choose a topic of interest related to ecology, biological conservation, the environment, or evolution, research it further, and write a two-page, typed synopsis of your findings. You can turn this synopsis in to your IA by June 5 (the last day of spring quarter) via Canvas.

Grading: Your final letter grade will be based on your TOTAL number of points. **If everyone earns enough points that they fall at or above 90%, I have no problem giving everyone an A- or better.** However, that is unlikely (but I'd love to have you prove me wrong!). Therefore, if warranted, letter grades will be based on a curve. This means I will make sure that approximately the top 20% of students will receive A- or above grades (even if that means going below 90%); the next 30% of students will receive B- and above grades; the next 40% of students will receive C or D grades, and the final 10% will receive F grades. **And let me reiterate**, ALL students getting a 90% or higher will get at A- or better, regardless of whether it's 20% or 100% of you. In addition, if you receive an 80% to 89%, you will get at least a B- to B+. Finally, if you get 70% to 79%, you will get at least a C- to C+.

I do give plus and minus grades but only on the final course grades. The pluses and minuses do not make the curve easier, they only help to differentiate the scores within the ranges above.

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 (<https://www.biology.ucsd.edu/administration/sis/index.html>).

Cheating: Don't do it. Please. I don't know how the exams will be run yet, but I expect they will be all open note and you'll have access to your materials. I don't know how else to do it and I honestly don't mind doing that. So, I don't know how there will be cheating opportunities, but if there are things I have not yet considered, please follow the honor system and be upright and resist cheating. For the Academic Integrity policy at UCSD, see here: <http://senate.ucsd.edu/Operating-Procedures/Senate-Manual/Appendices/2>. I also am a member of the Academic Integrity Board and serve regularly on the Integrity Panels that hear cases of cheating. It's NOT pleasant for the students, so I highly recommend you don't cheat and save yourself the torture. Plus, you could get kicked out of UCSD. Yikes.

OSD students: If you need testing accommodation for this class, please work with the Office for Students with Disabilities (OSD). 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), or <http://disabilities.ucsd.edu/>. **All OSD arrangements should be made within the first two weeks of the quarter.**

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

How to excel in this class: Here is what I suggest you do to be a responsible student hoping to get an A in my BILD 3 class: 1) access the lecture notes from Canvas, 2) watch/listen to the podcasts of lecture and take notes while referencing the figures and other materials on the lecture notes, 3) don't try and write down every word, 4) 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 or by re-listening to the podcast or participating on Piazza, 5) rely on your own notes rather than attempting to rely solely on the posted lecture notes which won't be complete (writing your own notes forces you to summarize, organize, and restate concepts in your own words which is always better for understanding material), 6) if you need review on a topic, listen to the podcast again, 7) participate in the discussion sections via Zoom to have questions answered, discuss topics in detail, and get extra help and guidance, 8) be enthusiastic about learning the material, and 9) ask for clarification during the Zoom sessions I will run on T/TH from 8:30-9:30.

Problems? If you have serious medical or personal problems during the quarter, the university allows withdrawals. Contact the Biology Student Affairs Advising Services office at (858) 534-0557 or <https://biology.ucsd.edu/education/undergrad/advising/index.html>. If you're feeling in need of immediate mental health help, please contact Counseling and Psychological Services (CAPS) at <https://wellness.ucsd.edu/caps/Pages/default.aspx> or (858) 534.3755. Please seek help if you need it. There is no shame in seeking help, only strength. Plus, your friends, relatives, and others who love you will be grateful because they want you around and healthy.

Lecture Schedule

Date	Lecture Topic	Textbook Chapters Campbell Biology, Campbell, Biology in Focus (not required)
March 31	1. History of evolutionary thought, part 1 (Darwin, Wallace, and the people who influenced their ideas)	22, 19
April		
2	2. History of evolutionary thought, part 2	22, 19
7	3. Evidence of evolution	22, 19
9	4. Natural selection	23, 21
14	5. The genetics of populations	23, 21
16	6. Evolutionary processes and genetic variation	23, 21
21	7. Speciation	24, 22
23	8. History of life on Earth	26, 20
28	9. Phylogenetic trees	25, 23
30	10. Human evolution	Papers ¹
May		
5	MIDTERM 1 (conducted online via Canvas)	
7	11. Organismal diversity I (bacteria, archaea, protists, plants)	29-31, 26
12	12. Organismal diversity II (fungi, invertebrates, vertebrates)	32-34, 27
14	13. Physical environment, biomes, climate	52, 42
19	14. Population ecology	53-54, 40-41
21	15. Community ecology	55, 42
26	16. Ecosystem ecology, part 1	55, 42
28	17. Ecosystem ecology, part 2	56, 43
June		
2	18. Conservation biology	
4	MIDTERM 2 (conducted online via Canvas) There will be no final exam during finals week in this course	

¹A selection of **non-required** papers will be made available on this topic via our BILD 3 site on Canvas for your interest

IA list, emails, and discussion section and office hour times (all times are Pacific time)
All meetings will be held via Zoom; Links to all Zoom meetings are in Canvas
You can attend any of the Discussion Section Zoom times and any of the IA office hours

IA Name	IA Email	Discussion Day and Time		Office hour day and time	
Yoori Cho	yoc112@ucsd.edu	M	5-550 pm	Th	2-3 pm
Carolynne Vo	cmv002@ucsd.edu	M	6-650 pm	M	5-6 pm
Iris Wang	ziw125@ucsd.edu	M	7-750 pm	M	6-7 pm
Iris Wang	ziw125@ucsd.edu	M	8-850 pm	M	6-7 pm
Danelle Baronia	dbaronia@ucsd.edu	W	1-150 pm	T	1-2 pm
Daniella Fairbank	dfairban@ucsd.edu	W	2-250 pm	W	3-4 pm
Mieko Pretlow	mpretlow@ucsd.edu	W	3-350 pm	W	10-11 am
Shamim Khosrowjerdi	skhosrow@ucsd.edu	F	8-850 am	Tu	11 am – 12 pm
Katie Le	k4le@ucsd.edu	F	9-950 am	F	10-11 am
Chelsea Truong	cht095@ucsd.edu	F	1-150 am	M	2-3 pm

Discussion Section Schedule (articles can be downloaded from our Canvas website)

Week #, Date	Activity
1, 3/30	Zoom discussion sections and office hours to check in with students, introduce yourselves, and practice how everything is going to work
2, 4/6	Discussion of Pagel Nature article and lecture material as needed
3, 4/13	Discussion of lecture material
4, 4/20	Discuss Reznick & Ricklefs Nature article on micro- and macroevolution
5, 4/27	Discussion of lecture material and review for midterm 1
6, 5/4	Discussion of Paijmans et al. Nature article on fur seal bottlenecks and lecture material
7, 5/11	Discussion of lecture material
8, 5/18	Discuss Dirzo et al. paper on defaunation in the Anthropocene
9, 5/25	No discussion sections Monday due to holiday; no sections for anyone.
10, 6/1	Discussion of lecture material, review for midterm 2