BILD 3: Organismic and Evolutionary Biology (Introduction to Ecology and Evolution)
Spring 2022, York 2622, Clicker frequency: AB

Professor: Dr. Carolyn Kurle (ckurle@ucsd.edu)
Class time: T/Th 930-10:50 am,
Office hours via Zoom: Tuesdays, 1:30-2:30 pm, Zoom https://ucsd.zoom.us/j/96970021250

Head Teaching Assistant: Stephanie Nehasil (snehasil@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. Watch the lectures, attend discussion sections, and the TA/IA and professor office hours, use Piazza (see below), and confer with your fellow students to get answers to individual questions.

Please do NOT post my lectures, lecture notes, or exam questions on public websites like Course Hero or others. I've worked 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; Discussion sections: Zoom meetings (see below for links); Piazza for questions for and interactions with other students and IAs:
Sign up for Piazza here: piazza.com/university_of_california_san_diego/spring2022/bild3.
Link to our Piazza course page: https://piazza.com/class/l12ongp5gj3752.

Grading: 100 Points: Midterm 1
100 Points: Midterm 2 (non-cumulative)
40 Points: Quizzes (4, 10 pt quizzes given on Canvas)
20 Points: Final
27 Points: Participation and Attitude in Discussion Section (3 pts per discussion section)
267: Total graded points available
10 Extra credit points: see details below for extra credit requirements
4 Extra credit points for completing the pre- and post-BILD 3 biology survey (see Canvas)

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.

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 myself. Rather than emailing questions to the teaching staff, post your questions on Piazza.
Sign up for Piazza here: piazza.com/university_of_california_san_diego/spring2022/bild3.
Link to our Piazza course page: https://piazza.com/class/l12ongp5gj3752.
Please sign up for and utilize this resource.

Text me during class (858.859.8083): I use an app called Textfree during lecture. You can anonymously text me questions during lecture and I will pause throughout to check these and answer them. If you're shy, this is a way to ask questions without feeling self-conscious. **NOTE: Raising your hand and asking a question is also completely welcome!**

Lectures: All material presented in lectures is fair game for the exams. You are adults and it is your choice to attend or watch the podcast of lecture, but you will be responsible for the material whether you choose to attend or not. Do not expect to skip lectures and still do well in the course. Lecture notes will be posted on Canvas before each lecture, but these notes are, at best, outlines, and essential material will be presented in class that does not appear on web-posted notes or in the textbook. Lectures will also be posted as a video podcast within 24 hours after each class time and can be accessed at http://podcast.ucsd.edu.

Office hours: The IAs and I will hold office hours via Zoom. Office hour times for the TA/IAs and Zoom codes are listed below and mine are listed at the top of the syllabus.

Discussion sections: We won't start Discussion Sections until week 2. 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 the readings is fair game for the exams**. See TA/IA list below for information regarding who will lead your section.

Exams: There are two midterms, each worth 100 points, and a final worth 20 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 will be run through Canvas. 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.

Quizzes: There will be a quiz every 2 weeks via Canvas (four quizzes total; see below). These 15-minute quizzes will cover the previous two weeks of lecture and reading material assigned during those two weeks. The format will be short answers and multiple choice. Quizzes will be open on Canvas from midnight on Sunday to midnight Saturday, and you can take the quiz at any time during the week. Once you open the quiz, you'll have 15 minutes to complete the questions, so pay attention to time as you work.

Week #, Date	Quiz Schedule
3, 4/11	Quiz on lectures from weeks 1, 2, plus Pagel paper
5, 4/25	Quiz on lectures from weeks 3, 4, plus Reznick & Ricklefs paper
7, 5/9	Quiz on lectures from weeks 5, 6, plus O'Brien paper
9, 5/23	Quiz on lectures from weeks 7, 8, plus Kurle and Dirzo papers

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, double-spaced typed synopsis of your findings. **You can turn this synopsis in to your IA by June 3 (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 their website (https://biology.ucsd.edu/education/undergrad/course/waitlist.html).

Cheating: Don't do it. Please. The exams will be 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. The Academic Integrity policy at UCSD is here: http://senate.ucsd.edu/Operating-Procedures/Senate-Manual/Appendices/2. I 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) come to class or watch 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, UCSD 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

NOTE: the lectures will fall behind this schedule but catch up at the end. Thus, the dates are not exact, but approximate.

Date	**Lecture Topic**	**Textbook Chapters Campbell Biology, Campbell, Biology in Focus (not required)**
March		
29	1. History of evolutionary thought, part 1 (Darwin, Wallace, and the people who influenced their ideas)	22, 19
31	2. History of evolutionary thought, part 2	22, 19
April		
5	3. Evidence of evolution	22, 19
7	4. Natural selection	23, 21
12	5. The genetics of populations	23, 21
14	6. Evolutionary processes and genetic variation	23, 21
19	7. Speciation	24, 22
21	8. History of life on Earth	26, 20
26	9. Phylogenetic trees	25, 23
28	10. Human evolution	
May		
3	**MIDTERM 1 (conducted online via Canvas)**	
5	11. Organismal diversity I (bacteria, archaea, protists, plants)	29-31, 26
10	12. Organismal diversity II (fungi, invertebrates, vertebrates)	32-34, 27
12	13. Physical environment, biomes, climate	52, 42
17	14. Population ecology	53-54, 40-41
19	15. Community ecology	55, 42
24	16. Ecosystem ecology, part 1	55, 42
26	17. Ecosystem ecology, part 2	56, 43
31	18. Conservation biology	
June		
2	**MIDTERM 2 (conducted online via Canvas)**	
Finals week	**FINAL (conducted online via Canvas)**	

TA/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 TA/IA office hours

TA/IA Name	TA/IA Email	Discussion Day and Time		Office hour day and time		Zoom number for office hour	Zoom number for discussion section
Stephanie Nehasil	snehasil@ucsd.edu	M	3-350 pm	W	230-330	959 1442 9053	968 5996 7749
Stephanie Nehasil	snehasil@ucsd.edu	M	4-450 pm	W	230-330	959 1442 9053	980 1507 5034
Daezsa Pasion	dpasion@ucsd.edu	Th	7-750 pm	M	3-4 pm	6587695556 (passcode: e588jF)	6587695556 (passcode: e588jF)
Elena Lozano	eilozano@ucsd.edu	F	10-1050 am	M	5-6 pm	91611299637	91611299637
Isabella Jacques	ijacques@ucsd.edu	F	2-250 pm	F	330-430	2299409475	2299409475
Mark Kim	m4kim@ucsd.edu	F	5-550 pm	F	2-3 pm	954 8203 1825	954 8203 1825

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

Week #, Date	Activity
1, 3/28	No Discussion Sections
2, 4/4	Discuss Pagel article on Natural Selection
3, 4/11	Discussion of lecture material
4, 4/18	Discuss Reznick & Ricklefs article on micro- and macroevolution
5, 4/25	Discussion of lecture material, review for midterm 1
6, 5/2	Discuss O'Brien et al. article on lack of minorities in EEB
7, 5/9	Discuss Kurle et al. article on recovery of Rat/Hawadax Island
8, 5/16	Discuss Dirzo et al. paper on defaunation in the Anthropocene
9, 5/23	Discussion of lecture material, review for midterm 2
10, 5/30	No discussion sections Monday due to holiday; no sections for anyone.