

### **BILD 3: Organismic and Evolutionary Biology**

**TTH 8:00 - 9:20AM, Peterson 108 and 110**

**NOTE: I will be live in 108 and on a giant screen in 110. Weird I know. We'll make it work.**

#### **Professor contact information**

Dr. Carolyn Kurlle ([ckurle@ucsd.edu](mailto:ckurle@ucsd.edu))

Muir Biology Building, Room 4218

Office hour: Tuesday 10-11AM

#### **Head teaching assistant contact information**

Ronnie Steinitz ([rsteinit@ucsd.edu](mailto:rsteinit@ucsd.edu))

Muir Biology Building, Room 4145

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

**Please contact Ronnie Steinitz, the head TA, via email, for all other 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. Attend lectures, discussion sections, TA and professor office hours, use Piazza (see below), and talk to your fellow students to get answers to individual questions. Or ask during lecture!

**Websites:** Lecture notes: [ted.ucsd.edu](http://ted.ucsd.edu); Video Podcast: [podcast.ucsd.edu](http://podcast.ucsd.edu); Questions for and interactions with other students and TAs: <https://piazza.com/ucsd/fall2014/bild3/home>

**Description:** BILD 3 is an introduction to the fields within biology known as ecology, evolution, and behavior. 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.

**Grading:** 100 Points: Midterm 1

200 Points: Final (cumulative)

25 Points: Clicker participation in lecture (see below)

20 Points: Quizzes (4, 5 pt quizzes given in discussion sections)

16 Points: Participation and Attitude (2 pts per required discussion section)

361: Total graded points available

10 Points: Extra credit points available. Details announced after lecture 12.

**Textbook:** Campbell Biology, 9th edition 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](http://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 9th edition. Previous editions are similar, but not identical, and could still be a good resource.

**iclicker:** See the last pages of the syllabus for more details on clickers.

We will be using clickers in class. This is a response system that allows you to answer questions I pose in class. You will be graded on your in-class participation. To receive credit, you need to register your iclicker remote using the link on our TED course menu. iclickers will be used during every lecture. Older versions of the iclicker can be used as long as the remote ID can be read and the remote can be registered on TED. You cannot share an iclicker remote with another student enrolled in this class (but you can share with someone who is not in our class).

**Any students found to be clicking in for classmates who are not in lecture, or if someone else is clicking for you when you are not in lecture, will get an automatic zero for ALL clicker points. This is considered cheating and will be reported to the Academic Integrity Office.**

**Piazza:** We will be using 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 TAs, and sometimes myself. Rather than emailing questions to the teaching staff, post your questions on Piazza. If you have problems or feedback for the developers, email [team@piazza.com](mailto:team@piazza.com). Our page is <https://piazza.com/ucsd/fall2014/bild3/home>.

**Lectures:** All material presented in lectures is fair game for the exams. You are adults and it is your choice to attend 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 [Ted.ucsd.edu](http://Ted.ucsd.edu) before each lecture, but they 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 [Podcast.ucsd.edu](http://Podcast.ucsd.edu).

**Discussion sections:** TA-led discussion sections **are required** and you must sign up for and attend a discussion section. You will receive points for participating in discussion section. Sections will meet beginning the week of October 6. Sections will review the week's subject matter and/or discuss an assigned paper or you'll receive a short quiz (see schedule below). The two readings are posted on TED and **all material in readings are fair game for the exams**. See TritonLink and the TA list below for information regarding times and locations of discussion sections. You can enroll in sections at <https://sections.ucsd.edu> and here's the overview of how to do it: <http://sections.ucsd.edu/overview.shtml>

**Exams:** There is one midterm worth 100 points and a final exam worth 200 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 a Scantron sheet will be provided for both exams. The midterm will be given in class and contain material for that section of the course up to the lecture preceding the exam. The final exam will be cumulative. Exam scores will be available after grading is complete as will your individual Scantron sheets, but the exams will not be returned. Questions concerning exams will be addressed in Discussion Sections or in TA and/or Professor office hours. **We will check photo ID at each exam, so please bring a photo ID** and some #2 pencils.

**There are no re-grades or make-up exams.** If you miss an exam, then you will be required to provide official documentation of an unavoidable emergency (serious illness, etc.). Without such documentation, you will receive no points for that exam. If you miss the midterm AND have valid documentation, the proportion of your grade that is based on your final exam will be increased to cover the missed midterm. If you miss the final exam AND have valid documentation, you will receive an incomplete for the course and be re-tested in the next quarter.

**Ted:** Lecture notes in PDF form will be available on Ted (<https://ted.ucsd.edu>) by 10 pm the day preceding each lecture. They can be found in the BILD 3 Lectures File. If you are registered for the course (or if you are on the wait list), then you should have access to the course web site now.

Instruction on how to access Ted can be found here: <http://acms.ucsd.edu/students/index.html>. Concurrent enrollment (extension) students are not added automatically. Extension students can bring proof of enrollment to the ACMS Help Desk (Applied Physics and Math bldg. 1313, M-F, 8:00-4:30) to obtain Ted access. More information for extension students can be found here: <http://extension.ucsd.edu/student/index.cfm>.

**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. 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 grades; the next 30% of students will receive B grades; the next 40% of students will receive C or D grades, and the final 10% will receive F grades.

Thus, if you earn the median score (half of your classmates have higher scores and half have lower scores) your score will fall at (or near) the C cutoff. Students earning less than 50% can expect to receive F grades. The final course curve is determined based on the students that are enrolled in the course at the end of the quarter. 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. Please note that the university will not allow me to change a letter grade after they are turned in except in cases of demonstrable 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/undergrad/advising-services.html>).

**Extra Credit, Self-guided field trip to the Scripps Coastal Reserve:** This optional assignment is worth ten points. I will provide more information regarding this assignment after lecture 12.

**Cheating: Don't do it.** You are a responsible adult and I expect you to behave that way. The prospect of doing poorly on an exam can incite anxiety and lure you into irresponsible behavior, but resist the urge to cheat! It hurts everyone's morale, is simply a bad way to behave, and my students are clearly better than that. In the unlikely event that you succumb to temptation and decide to cheat, you will be caught and handed over to the Academic Integrity Coordinator, which reports directly to the Dean of the student's college. For the Academic Integrity policy at UCSD, see here: <http://senate.ucsd.edu/Operating-Procedures/Senate-Manual/Appendices/2>.

By the way, a student cheated in a previous class and the Academic Integrity process was **AWFUL** for the students involved, the TA, and myself. I hated it and never want to do it again. But I will go through the process if you cheat, so I highly recommend that you don't cheat and save us all the torture of dealing with the **super scary** cheating review board at the Academic Integrity Office.

**Please do NOT post my lectures 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.

**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); [osd@ucsd.edu](mailto:osd@ucsd.edu), or <http://osd.ucsd.edu>. **You will need to coordinate scheduling of exams with me. All of these 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 ([vac.ucsd.edu](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) print out the lecture notes from Ted and bring them to class, 2) go to 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, 5) rely on your own notes rather than attempting to rely solely on the posted slides 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 miss lecture, listen to the podcast with the printed notes as if you were in class, 7) if you need review on a topic, listen to the podcast multiple times, 8) go to the discussion sections to have questions answered, discuss topics in detail, and get extra help and guidance, and 9) ask for clarification during lecture. **I repeat, feel free to ask questions during lecture!**

**Problems?** If you have serious medical or personal problems during the quarter, the university does allow medical withdrawals. Contact the Biology Student Affairs Advising Services office at 858-534-0557 or go to their website (<http://biology.ucsd.edu/undergrad/advising-services.html>).

## Lecture Schedule

Date	Lecture Topic	Textbook Chapters Campbell 9th ed., Campbell, Biology in Focus
October		
2	1. History of evolutionary thought (Darwin, Wallace, and the people who influenced their ideas)	22, 19
7	2. History of evolutionary thought, part 2	22, 19
9	3. Evidence of evolution	22, 19
14	4. Natural selection	23, 21
16	5. The genetics of populations	23, 21
21	6. Evolutionary processes and genetic variation	23, 21
23	7. Speciation	24, 22
28	8. History of life on Earth	26, 20
30	9. Phylogenetic trees	25, 23
November		
4	10. Human evolution	Papers <sup>1</sup>
6	<b>MIDTERM (same time and location as lecture)</b>	
11	Veteran's Day; no class	27-28, 24-25
13	11. Organismal diversity I (bacteria, archaea, protists, plants)	29-31, 26
18	12. Organismal diversity II (fungi, invertebrates, vertebrates)	32-34, 27
20	13. Physical environment, biomes, climate	52, 42
25	14. Population ecology	53-54, 40-41
27	Thanksgiving	54, 41
December		
2	15. Community ecology	55, 42
4	16. Ecosystem ecology, part 1	55, 42
9	17. Ecosystem ecology, part 2	56, 43
11	18. Conservation and applied conservation in ecology: Research in the Kurlle lab	56, 43
16	<b>COMPREHENSIVE FINAL, 8-11 am</b>	

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

## Discussion Section Schedule (both required articles can be downloaded from our Ted website)

Week #, Date	Activity	Discussion/Reading title/Quiz material
0, 9/29	None	No sections for week zero
1, 10/6	Discussion	Get to know your class and discussion of lecture material
2, 10/13	Quiz	Lectures 1-3 and discussion of lecture material
3, 10/20	Reading	Page 2009 Nature article on natural selection 150 years later
4, 10/27	Quiz	Lectures 4-7 and discussion of lecture material
5, 11/3	Discussion	Discussion of lecture material
6, 11/10	None	Sections not required due to holiday; go to any section if you want; no points
7, 11/17	Quiz	Lectures 8-11 and discussion of lecture material
8, 11/24	None	Sections not required due to holiday; go to any section if you want; no points
9, 12/1	Reading	Hoag 2014 Nature article on invasive lionfish
10, 12/8	Quiz	Lectures 12-16 and discussion of lecture material

**TA list, discussion time and location, and office hour time and location**

TA	TA email	Discussion day and time		Discussion place	Office hour time and place	
Mona Lisa Jabari	mjabari@ucsd.edu	M	9-9:50a	Center 203	F, 12-1p	Galbraith Hall
Zheng (Fiona) Liu	zh1026@ucsd.edu	M	10-10:50a	Center 203	W, 2-3p	Hi Thai
Paul Lee	pal020@ucsd.edu	M	11-11:50a	Center 203	W, 11a-12p	Muir Woods (MOM)
Victor Shih	vbshih@ucsd.edu	M	12-12:50p	Center 203	Thu, 3:30-4:30p	Tapioca-Express (PC)
Jeremy Schrader	jeschrad@ucsd.edu	M	1-1:50a	Center 207	M, 4-5p	Muir Woods (MOM)
Gregory Demirjian	gdemirji@ucsd.edu	M	2-2:50a	Center 205	W, 2-3p	HSS 1145
Ronnie Steinitz	rsteinit@ucsd.edu	Tu	5-5:50p	HSS 2321	Tue, 10:30-11:30a	Muir Biology Bldg 4145 (Kurle Lab)
Joanna Bustamante	jlbustam@ucsd.edu	Tu	5-5:50p	Center 217B	M, 11a-12p	Hi Thai
Abdull Massri	amassri@ucsd.edu	Tu	6-6:50p	HSS 2150	W, 2-3p	Hi Thai
Armenuhi Avanesyan	aavanesy@ucsd.edu	Tu	6-6:50p	Center 217B	W, 10:30-11:30a	Mandeville Coffee Cart
Haley Oosterhouse	hoosterh@ucsd.edu	Tu	6-6:50p	HSS 2321	M, 2:30-3:30p	Muir Woods (MOM)
Juri Lee	Jhl106@ucsd.edu	W	1-1:50p	HSS 2150	W, 2-3p	Café Roma
Ting Chow	t5chow@ucsd.edu	W	3-3:50p	Center 207	W, 2-3p	Mandeville Coffee Cart
Dionne Mejia	dimejia@ucsd.edu	W	4-4:50p	Center 207	W, 2-3pm	Muir Woods (MOM)
Monique Lu	mal071@ucsd.edu	W	4-4:50p	HSS 1315	W, 3-4p	Muir Woods (MOM)
Cindy Punta	cpunta@ucsd.edu	W	4-4:50p	Center 203	W, 3-4p	Muir Woods (MOM)
Brandon Guell	bguell@ucsd.edu	W	5-5:50p	Mande-B104	Tue, 12-1	Muir Woods (MOM)
Safwanul Haque	Sahaque@ucsd.edu	W	6-6:50p	Mande-B104	W, 1-2p	Muir Quad, in front of Pines
Aladdin Khalaf	askhalaf@ucsd.edu	Th	5-5:50p	Center 217B	F, 9-10a	Muir Woods (MOM)
Jennifer Kingston	jmkingst@ucsd.edu	Th	6-6:50p	Center 205	Tue, 11a-12p	Muir Woods (MOM)
Jarod Schroeder	jlschroe@ucsd.edu	Th	6-6:50p	Center 217B	Thu, 12-1p	BioMed. Lib, by Rm 225
Caitlin Riley	cdriley@ucsd.edu	Th	7-7:50p	Center 205	M, 11a-12p	Muir Woods (MOM)
Marcus Bobar	mbobar@ucsd.edu	Th	7-7:50p	Center 217B	Thu, 9:30-10:30	Biology TA office, HSS 1145A
Tyler Wishard	twishard@ucsd.edu	Th	8-8:50p	Center 217B	Thu, 5-6 pm	Tables in front of Roma Cafe
Ryan Tsu	rtsu@ucsd.edu	Th	8-8:50p	Center 205	Thu, 10-11a	Santorini Grill, PC

## CLICKER INSTRUCTIONS

It is your responsibility to have your clicker with you at lecture and to make sure it is working properly. **There will be no make-up opportunities for clicker questions, for any reason, nor can you get clicker credit for handing in questions on paper, etc.**

### Clicker Grading

You will be graded on your in-class participation using iclickers, NOT on having the correct response, as often I will use these questions to identify confusing topics or poll students.

If you answer

> 70% of clicker questions	you will receive	25 points
> 60% of clicker questions		20 points
> 40% of clicker questions		15 points
> 20% of clicker questions		10 points

### Recommendations

- Bring extra batteries (clickers require 2 AAA batteries)
- Put your name on your clicker
- Cover the ID number on the back with a piece of clear tape to prevent it from rubbing off

### Register your clicker

**You must register your iclicker through TED to receive credit for responses during class.**

**If you have not registered your clicker by October 23, then it will be too late and you will receive zero clicker points.**

Register your clicker using the link on our TED page. On the left side of the screen, there is a list with Syllabus, Papers for Discussion, etc. At the bottom of that list is Clicker Registration. Click on that and follow the instructions. If you have used an iclicker for a previous class, and registered it through TED, you do not need to register it again.

**NOTE:** The instructions that come with your remote ask you to register your iclicker at [www.iclicker.com](http://www.iclicker.com). While you are welcome to do this, it is not necessary.

You will not see your clicker points on TED until you have registered your clicker. To ensure your clicker is working properly, please register **RIGHT AWAY**. Every student in this course must have their own iclicker to receive clicker points.

### Using your clicker

Turn your clicker on with the bottom button. Set it to the frequency in our room (AD) I will ask questions, and you will respond by pushing buttons A – E. Please wait until I start the voting before you respond. There will be a timer on the screen when the voting has begun. When your answer has been received, you will see a checkmark at the top of the screen. While the timer is going, you can change your answer as many times as you want. Just press a different button. You get credit for answering the question, regardless if your answer is correct or incorrect. Like all

technologies, clickers sometimes malfunction. This is why I give full clicker credit if you answer 70% of the questions or more. **I do not adjust scores in other ways, so don't ask.**

### **Lost clickers**

If you lose your clicker mid-quarter and use a different clicker, you need to change your registration online AND you need to email Ronnie Steinitz the following (before the next lecture): a) your PID b) your clicker ID.

### **Clicker Troubleshooting**

Some clickers are not functional or some days you may not want to come to lecture, **that is why you receive full credit for only answering 70% of the questions.** It is your responsibility to use this grace period to learn how to use your clicker and make sure that your clicker is working as I do not adjust scores for malfunctioning clickers.

**To be clear, if your clicker is not working, I will NOT award points retroactively, so you MUST figure out why it's not working immediately. No exceptions.**

If you have problems, go through the troubleshooting guide below.

If you are not getting the points you deserve:

- Be sure you have registered. This means through TED (NOT at [www.iclicker.com](http://www.iclicker.com))
- Make sure your remote is on the correct frequency (**AD, for this class**)
- Make sure you wait until I start the question before you answer - you should see the timer going.
- Make sure you answer before time has run out. No answer is accepted after the time has ended
- Every student in this class needs their own clicker – if you are sharing with another student one of you will not get any points.
- Are your batteries still good?

If you have done everything correctly, but your clicker is still not working, please see one of the TAs for assistance. They will help you trouble shoot your clicker and check it. If your clicker is malfunctioning, the bookstore will exchange it. We cannot do anything to check your clicker over email, nor can we check it before or after class. **It is your responsibility to make sure you are getting the points you deserve.** If there is a problem, you need to solve it or see one of the TAs right away so we can resolve the problem for future lectures.