
Winter 2015
TTH 6:30-7:50 PM
York Hall 2722

BILD 3

Organismic and Evolutionary Biology

Professor: Dr. Kim Cooper
E-Mail: kcooper@ucsd.edu
Office: Natural Sciences Building
Room 6117
Office Hour: Tuesday 10-11 AM

NOTE: Please contact me, by email, only in case of an emergency. On all emails, **please put BILD 3 in the subject line** to indicate your email is about this course or you may not receive a response. Emails about course content will not be answered. 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; Video Podcast: podcast.ucsd.edu; Questions for and interactions with other students and TAs:
https://piazza.com/ucsd/winter2015/bild3_wi15_cooper/home

Course Description: BILD 3 is an introduction to biology in the context of whole organisms, their evolution, ecology, and behavior. The planet is teeming with a vast diversity of life, and the goal of this course is for you to understand the nature of that diversity, the evolutionary origin of species, mechanisms for the continuing diversification of life, and the ecological relationships between living organisms and their environment. We will also discuss human impacts on global climates, species extinctions, environmental alterations, and the role of conservation in protecting species diversity.

How to excel in this class: 1) print out the lecture notes from Ted and bring them to class, 2) go to lecture and take additional notes on the printouts, 3) don't try and write down every word, try to identify concepts and highlight areas that seem unclear to you, 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) rewrite your notes to summarize, organize, and restate concepts in your own words to demonstrate your understanding of the 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 – explaining to another person your understanding of the material can help to solidify that understanding, and 9) **ask questions during lecture!**

Grading: 100 Points: Midterm 1
200 Points: Final (cumulative)
25 Points: Clicker participation in lecture (see below)
20 Points: Quizzes (Four 5 pt quizzes given in discussion sections)
18 Points: Contribution to Discussion Sections (3 pts per required discussion section)
363: Total graded points available
10 Points: Extra credit points available. Details announced after lecture 12.

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 will give everyone an A. Since that is unlikely, I will implement a curve to ensure 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. 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.

Cheating: Don't do it. You will likely get caught, you will hopefully feel guilty, and it will set you on a hard road of continuing to try to live up to achievements you haven't earned. I have zero tolerance for cheating and will do everything in my power to maintain academic integrity in my classes. This is not to be mean or to try to ruin anyone's academic career. It is to value the hard work of you and your classmates and to make sure success is merited and not devalued by those who haven't earned it. Those caught cheating will be 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>.

Textbook: Campbell Biology, 9th edition or Campbell Biology in Focus (**NOT REQUIRED**). You will only be tested on information and concepts that I cover in lecture and in assigned readings for section. However, this material also appears in certain chapters of these books, and you may find it helpful to refer to the book for additional information, but the book is not essential to succeed in this class. Credible resources for almost everything I discuss can be found for free in more detail online. The publisher of Campbell Biology also offers 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 are available online or at the bookstore, and 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.

Lectures: All material presented in lectures is fair game for the exams. You will be responsible for the material whether you choose to attend or not. Lecture notes will be posted on ted.ucsd.edu by 10 pm the night before each lecture, but they are, at best, outlines. 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.

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 January 12. 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 will be posted on TED and **all material in readings is 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 on**

February 10th 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. **Electronic devices are not allowed.** Anyone found looking at a computer, phone, or smart device will receive no points for the exam.

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.

iclicker 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

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. Our page is https://piazza.com/ucsd/winter2015/bild3_wi15_cooper/home

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.

Concepts and Vocabulary: Each lecture will be accompanied by a set of concepts and vocabulary words to help you to identify what is most important and to master the material for the course. These will be posted within 24 hours of lecture in the “Concepts/Study Guides” folder on ted.

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>.

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>).

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, 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).

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
January		
6	1. History of evolutionary thought, part 1	22, 19
8	2. History of evolutionary thought, part 2	22, 19
13	3. Evidence of evolution	22, 19
15	4. Natural selection	23, 21
20	5. The genetics of populations	23, 21
22	6. Evolutionary processes and genetic variation	23, 21
27	7. Speciation	24, 22
29	8. Phylogenetic trees	26, 20
February		
3	9. History of life on Earth	25, 23
5	10. Human evolution	Papers ¹
10	MIDTERM (same time and location as lecture)	
12	11. Evolution and Development	27-28, 24-25
17	12. Organismal diversity I (bacteria, archaea, protists, plants)	29-31, 26
19	13. Organismal diversity II (fungi, invertebrates, vertebrates)	32-34, 27
24	14. Physical environment, biomes, climate	52, 42
26	15. Population ecology	53-54, 40-41
March		
3	16. Community ecology	55, 42
5	17. Ecosystem ecology, part 1	55, 42
10	18. Ecosystem ecology, part 2	56, 43
12	19. Conservation and applied conservation in ecology	56, 43
17	COMPREHENSIVE FINAL, 7-10 pm	

¹A 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, 1/5	None	No sections for week zero
1, 1/12	Discussion	Get to know your class and discussion of lecture material
2, 1/19	Discussion	MLK holiday, no attendance points, Monday students go to any section
3, 1/26	Quiz	Quiz Lectures 1-4; HW bean activity
4, 2/2	Quiz	Lectures 4-8; trees activity
5, 2/9	Reading	Pagel 2009 Nature article on natural selection 150 years later
6, 2/16	Discussion	Pres Day, no attendance points, Monday students go to any section
7, 2/23	Quiz	Lectures 9-12
8, 3/2	Reading	Hoag 2014 Nature article on invasive lionfish
9, 3/9	Quiz	Lectures 13-17 and discussion of lecture material

TA list, section time and location, and office hour time and location

TA	TA email	Section day and time		Section place	Office hour time and place	
Paul Lee	pal020@ucsd.edu	Fri	12-12:50 PM	CENTR 207	Fri 11-11:50 AM	Hi Thai Lounge
Gregory Demirjian	gdemirji@ucsd.edu	Tue	1-1:50 PM	CENTR 205	Thurs 12:30-1:30 PM	HSS 1145
Joanna Bustamante	jlustam@ucsd.edu	Mon	6-6:50 PM	HSS 2154	Mon 7-8 PM	Hi Thai Lounge
Monique Lu	mal071@ucsd.edu	Wed	6-6:50 PM	CENTR 207	Wed 5-6 PM	Muir Woods
Brandon Guell	bguell@ucsd.edu	Wed	5-5:50 PM	CENTR 205	Wed 4-5 PM	Muir Woods
Keianne Yamada	kdyamada@ucsd.edu	Tues	11-11:50 AM	CENTR 205	Tues 12 - 1 PM	Muir Woods
Angeline Ngo	abngo@ucsd.edu	Fri	4-4:50 PM	CENTR 203	Tues 11-12 AM	Café Roma
Johanna Lindgren	jlindgre@ucsd.edu	Mon	4-4:50 PM	HSS 2154	Mon 3-4 PM	Muir Woods
Francesca Sakamoto	fsakamot@ucsd.edu	Mon	5-5:50 PM	HSS 2154	Mon 4-5 PM	Muir Woods
Summer Stevens	s6steven@ucsd.edu	Mon	9-9:50 AM	CENTR 207	Mon 10-10:50 AM	Perks
Navdeep Chahal	nchahal@ucsd.edu	Mon	8-8:50 AM	CENTR 207	Mon 9-10 AM	Hi Thai Lounge
Mekala Neelakantan	mneelaka@ucsd.edu	Fri	5-5:50 PM	HSS 2154	Tues 4-5 PM	Mandeville Coffee Cart

CLICKER INSTRUCTIONS

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).

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.**

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 January 26, then it will be too late and you will receive zero clicker points.

Register your clicker using the link on our TED page. At the bottom of the menu list on the left side of the page 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 at iclicker. **Do not do this.**

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 power button. Set it to the frequency in our room (**CA**) 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 your 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 me 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)
- Make sure your remote is on the correct frequency (**CA, 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.