Spring 2018
MWF 9 – 9:50 AM
Peterson Hall 108

BILD 3

Organismic and Evolutionary Biology

Professor: Dr. Kim Cooper
E-Mail: kcooper@ucsd.edu
Office: Natural Sciences Building Room 6117
Office Hour: Thursdays 1 PM

NOTE: 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. There are over 300 of you, so emails about course content will not be answered. Attend lectures, discussion sections, IA and professor office hours, 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

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 - identify concepts and highlight areas that seem unclear to you. 3) Download the Concepts and Vocab study guide after the lecture. 4) Go over your notes to answer the questions and define vocabulary. Work with others to discuss the study guide. Revisit material with the podcast, the textbook, and by searching online for related material. 5) Go to discussion sections with questions and attend professor/IA office hours. 6) Study together with others. Their knowledge will fill your gaps and vice versa, and studying with another person gives you the opportunity to teach which reinforces learning.

Grading: 100 Points: Midterm 1
100 Points: Midterm 2
200 Points: Final Exam
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 (2 pts per required discussion section)
463: Total graded points available
10 Points: Extra credit points available. Details announced after lecture 12.

The class is not graded on a curve, rather the average of the top 5% of the class will be normalized to 100%, and letter grade cutoffs will be made at 10% intervals after normalization, (e.g. 90-100%=A, 80-90%=B, etc.) Therefore helping your classmates doesn't hurt you, and everyone can get an A.

Cheating: **Don't do it**. I have zero tolerance for cheating and will do everything I can to maintain academic integrity in my classes. My intention 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. **Double clicker usage counts as cheating!** Cheating also includes looking at the quizzes or exams of neighbors, bringing any notes, or using electronic devices during quizzes or exams. 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, 11th edition (**NOT REQUIRED**). You will only be tested on information and concepts covered in lecture and in assigned readings for section. However, this material also appears in certain chapters of this book, annotated in the syllabus, and you may find it helpful to refer to the book for additional information. Credible resources for almost everything I discuss can also be found for free 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. 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. 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: IA-led discussion sections **are required**. You will receive points for *participating* in discussion section. 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 IA list below for information regarding times and locations of discussion sections. ****You are allowed to switch to a different section once during the quarter by emailing the professor, your IA, and the IA of the section you want to attend BEFORE either section meets.****

Exams: There are two midterms 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 material from the book that isn't in lecture**. All questions will be multiple choice and a Scantron sheet will be provided for both exams. The two midterms will contain material 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 IA 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.

TritonEd: 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.

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 11th Ed. Pages listed below
April		
2	1. Introduction and History of evolutionary thought, Part 1	466-475
4	2. History of evolutionary thought, Part 2	
6	3. Fossil transitions, vestigial structures, and homology	477-482,728-729, 736-737
9	4. Genotype/phenotype relationships and types of selection	484-487,495-496, 498-499
11	5. Probability and Hardy-Weinberg	487-491
13	6. Hardy-Weinberg and effects of selection and fitness	498-502
16	7. Microevolution, genetic drift, and gene flow	476, 491-495
18	8. Sexual selection and species concepts	497-508
20	9. Species concepts and speciation	509-514
23	10. Evolution and development	461-462. 542-545
25	**MIDTERM I in class time**	
27	11. Phylogenetic trees	551-562
30	12. Taxonomic groupings and History of life on Earth, Part 1	479, 523-540
May		
2	13. History of life on Earth, Part 2	
4	14. Organismal diversity I (bacteria, archaea, protists)	571-613
7	15. Organismal diversity II (plants and fungi)	616-669
9	16. Organismal diversity III (invertebrates and vertebrates)	671-732
11	17. Human evolution	746-752
14	18. Physical environment and biomes	1162-1184
16	19. Population ecology (density, dispersion, and sampling)	1188-1189
18	**MIDTERM II in class time**	
21	20. Population ecology (life histories)	1191-1193
23	21. Population ecology (growth models)	1194-1209
25	22. Community ecology (interspecies interactions)	1212-1219
28	23. Community ecology (trophic structures)	1220-1232
30	24. Ecosystem ecology (production efficiencies)	1236-1246
June		
1	25. Ecosystem ecology (nutrient cycles)	1246-1250
4	26. Conservation ecology	1258-1272
6	27. Global change	1272-1282
8	28. Catch up and/or review	
13	**COMPREHENSIVE FINAL, 8-11 am, Location TBD**	

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

Week #, Date	Activity	Discussion/Reading title/Quiz material
1, 4/2	None	No sections for week one
2, 4/9	Discussion	Get to know your class and discussion of lecture material
3, 4/16	Quiz	Lectures 1-6 and discussion of lecture material
4, 4/23	Reading	To be determined
5, 4/30	Quiz	Lectures 7-11 and discussion of lecture material
6, 5/7	Discussion	Discussion of lecture material
7, 5/14	Quiz	Lectures 12-17 and discussion of lecture material
8, 5/21	Discussion	Discussion of lecture material
9, 5/28	Reading	To be determined
10, 6/4	Quiz	Lectures 18-25 and discussion of lecture material

Name	Email@ucsd.edu	Section Date	Section Time	Section Location	Office Hour	Location
Jess Gambel	jgambel@ucsd.edu	Tues Tues	5-5:50 PM 6-6:50 PM	CENTR 217B CENTR 217B	Monday 10-11am	Muir 4155 (Saier Lab)
Joseph Ayoub	jgayoub@ucsd.edu	Tues Thurs	8-8:50 AM 8-8:50 AM	CENTR 217B CENTR 217B	Wednesday 5-6pm	Perks Coffee Shop
Ryan Moossighi	rmoossig@ucsd.edu	Tues	7-7:50 PM	CENTR 217B	Monday 5-6 pm	Perks Coffee Shop
Jessica Wong	jtw032@ucsd.edu	Tues	8-8:50 PM	CENTR 217B	Tuesday 11am-12pm	Patio outside Rogers/64 Degrees
Noelle Aguinaldo	naguinal@ucsd.edu	Fri	5-5:50 PM	CENTR 217B	Monday 12-1PM	Muir Woods Coffee
Susan Song	sys009@ucsd.edu	Fri	6-6:50 PM	CENTR 217B	Monday 2-3pm	Outside Galbraith Hall
Emma Nguyen	hqn015@ucsd.edu	Fri	4-4:50 PM	CENTR 217B	Wednesday 1-2pm	Outside MOM
Kirstin Pianalto	kpianalt@ucsd.edu	Mon	8-8:50 PM	CENTR 207	Wednesday 10- 11 am	Muir Woods Coffee
Kevin Chen	kdchen@ucsd.edu	Mon	7-7:50 PM	CENTR 207	Monday 3-4pm	Patio behind 64 North

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 27, 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 (AC) 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 (**AC, 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 IAs 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 IAs right away so we can resolve the problem for future lectures.