

BILD 3: Organismic and Evolutionary Biology

A00: MWF 4:00-4:50 PM, Warren Lecture Hall 2001

B00: TTh 8:00-9:20 AM, Warren Lecture Hall 2001

PROFESSOR CONTACT INFORMATION

Dr. Sarah Stockwell (sarahs@ucsd.edu)

Office: Muir Biology Building, Room 1212

Office hours: Wednesdays 1:15-2:15 PM, 1208 Muir Biology Building

HEAD TEACHING ASSISTANTS CONTACT INFORMATION

Lindsay DeRight Goldasich (lright@ucsd.edu). Muir Biology Building, Room 1268.

Marika Schulhof (mschulho@ucsd.edu). Muir Biology Building, Room 1145.

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

Please email your TA/IA or one of the head TAs (Lindsay DeRight Goldasich or Marika Schulhof) for all other inquiries. In all emails, **please put BILD 3 in the subject line** to indicate your email is about this course. Because there are so many students in this course, we cannot answer individual questions about course content and these emails will be deleted. Attend lectures, discussion sections, TA/IA and professor office hours, use Piazza (see below), and talk to your fellow students to get answers to individual questions. Or ask during lecture!

COURSE WEBSITES

Reading assignments to complete before class and lecture slides to download after class:

TritonEd.ucsd.edu (BILD 3 - Stockwell [SP16])

YOU WILL NEED TO CHECK THE TritonEd SITE SEVERAL TIMES A WEEK.

Video Podcast: podcast.ucsd.edu

Questions for and interactions with other students and IAs: Use the Piazza link on our TritonEd page.

COURSE DESCRIPTION

BILD 3 is an introduction to the biological fields of evolution and ecology. 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.

REQUIRED MATERIALS

- **Textbook:** Campbell Biology in Focus. I will assign brief readings from this book for most lectures, and there will be reading quiz questions at the beginning of each class, so you need access to the book to succeed in the class. Used copies may be available online or at the bookstore, and the book is on reserve at Geisel Library. I have arranged with the publisher to make a subsection of the book available that includes only the chapters we will use in this class, which is less expensive than the full textbook; this is available at the UCSD bookstore. The publisher of Campbell Biology in Focus 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.

- **iClicker:** Older versions of the iclicker can be used as long as the remote ID can be read and the remote can be registered on TritonEd. 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).

GRADING

- 100 Points: Midterm
- 200 Points: Final (cumulative)
- 30 Points: Clicker participation in lecture (see below)
- 30 Points: Clicker quizzes at the beginning of each class (see below)
- 30 Points: Discussion section participation/attitude (3 points per required discussion section)
- 30 Points: Homework/in-section work

There will be a small number of extra credit points available; details announced later. Extra credit points will be added after the final points for the class have been curved.

CLICKERS

We will be using clickers in class. This is a response system that allows you to answer questions I pose in class. There will be two kinds of clicker questions:

- 1) Quiz questions: At the start of each class, there will be clicker questions that will be graded on correctness. Some will be questions on the reading due for this lecture, and one will be an exam-style question on the material from the previous lecture or the previous week's required discussion section. Grades on these quizzes will be based on the proportion of each day's quiz questions that you answered correctly.
- 2) Participation questions: There will be other clicker questions during lectures, which are intended to spark discussion and to help both of us — you AND me — gauge how well you are understanding the material. These are graded only on participation (you get credit for clicking in, regardless of which answer you choose).

To receive credit, you need to register your iclicker remote using the link on our TritonEd course menu. iclickers will be used during every lecture.

See the last pages of the syllabus for more details on clickers and clicker grades.

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.

For the first week of class, we will be practicing with the clickers and the points will not count. This is a great opportunity to make sure you know how to use your clicker and your clicker is working properly. I will post the points on TritonEd so you can check. Starting the first lecture of the second week, you will receive points for answering clicker questions in lecture. I will assume your clickers are working properly by this time. See the end of this document (*Clicker Instructions*) for details.

LECTURES

Check TritonEd for the reading assignments to be completed by the beginning of each lecture. All material presented in lectures (and in the readings) is fair game for the exams. Do not expect to skip lectures and still do well in the course. Lecture slides will be posted on TritonEd.ucsd.edu after each lecture, but they are, at best, outlines, and essential material will be presented in class that does not

appear on them or in the textbook. Participating in in-class discussions is also important to your understanding of the material. Lectures will be posted as a video podcast within 24 hours after each class time and can be accessed at podcast.ucsd.edu. Be aware that the podcast misses material that's presented on the chalkboard.

DISCUSSION SECTIONS

IA-led discussion sections **are required** unless noted on the section schedule below. You must attend the discussion section you registered for. You will receive points for participating in discussion section. Sections will meet beginning in week 1. Sections will discuss assigned readings, discuss material from lecture, or do exercises. **All material from section readings is fair game for the exams.** See the IA list below for information regarding times and locations of discussion sections.

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 IAs, and sometimes myself. Rather than emailing questions to the teaching staff, I encourage you to post your questions on Piazza. If you have problems or feedback for the developers, email team@piazza.com. To get to our Piazza page, click the Piazza link on our TritonEd site.

EXAMS

There is one midterm worth 100 points and a final exam worth 200 points. Exams will cover material covered in lecture, readings assigned for lecture and section, and section exercises. Use the learning objectives as a guide to what lecture/reading material you need to know for the 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, covering the whole class but weighting the second half of the class more heavily. Exam scores will be available after grading is complete, but the exams will not be returned. Questions concerning exams will be addressed in Discussion Sections or in TA/IA and/or Professor office hours. **We will check photo ID at each exam, so please bring a photo ID. Students who do NOT have photo ID will not be permitted to take 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.

TritonEd:

Reading assignments: By the end of each lecture day, I will post the reading assignment for the next lecture on TritonEd. You should complete this reading assignment by the start of the next class. There will be a clicker quiz on the reading at the beginning of each class.

Lecture slides: Research suggests that students learn best if they take independent notes, so I do not post lecture slides in advance. Lecture slides in PDF form will be available on TritonEd (<https://TritonEd.ucsd.edu>) the day following the lecture. I will number slides to help you refer to

them in your notes. If you are registered for the course or on the wait list, you should have access to the course web site now.

Access:

Instruction on how to access TritonEd 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 TritonEd 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 you get over 90% of the points you will receive an A, over 80% you will receive at least a B, etc. If needed to adjust the distribution of letter grades upward, grades will be based on a curve. The curve will only be used (if it is used) to move letter grade thresholds down, so it can only help your grade, not hurt it. For those taking the class pass/no pass (P/NP), the minimum final grade to receive a grade of P is a C-. The final course curve is based on the students that are enrolled in the course at the end of the quarter. Please note that the University will not allow us 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>).

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

ACADEMIC HONESTY

Integrity of scholarship is essential for an academic community. The University expects that both faculty and students will honor this principle and in so doing protect the validity of University intellectual work. For students, this means that all academic work will be done by the individual to whom it is assigned, without unauthorized aid of any kind.

Specifically, no student shall

- Knowingly procure, provide, or accept any unauthorized material that contains questions or answers to any examination or assignment to be given at a subsequent time.
- Complete, in part or in total, any examination or assignment for another person.
- Knowingly allow any examination or assignment to be completed, in part or in whole, for himself or herself by another person.
- Plagiarize or copy the work of another person and submit it as his or her own work.
- Employ aids excluded by the instructor in undertaking course work or in completing any exam or assignment.
- Alter graded class assignments or examinations and then resubmit them for regrading.
- Submit substantially the same material in more than one course without prior authorization

Any violation of UCSD's Policy on Integrity of Scholarship will be reported to the Academic Integrity Office. If you do not understand these expectations and authorizations, please speak with the Instructor as soon as possible. Please read the official UCSD policy at <http://students.ucsd.edu/academics/academic-integrity/policy.html>

ETIQUETTE FOR EMAILS AND IN THE CLASSROOM

All emails to professors and TAs/IAs should be polite and respectful, include your **first and last name** in the body of the email, and have **BILD 3 in the subject line**. Do not rely on email as a sure and immediate form of communication with the instructor. The most certain way to get your questions answered is to ask on Piazza or attend office hours.

You are expected to arrive on time for lecture, turn off cell phones, and respect your classmates.

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.

SPECIAL ACCOMMODATIONS

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.**

BILD 3 TIPS FOR SUCCESS

Here is the best strategy for getting an A in this class:

- 1) Do the reading assignments (posted on TritonEd) before each class.
- 2) Go to lecture, participate in discussions, and take notes.
- 3) Pay attention to the learning objectives provided. I base exams on these.
- 4) When you take notes, write down a summary and essential details of the lecture; don't try to write down every word. The process of synthesizing and summarizing the lecture in your notes helps you learn the material.
- 5) 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.
- 6) If you miss lecture, listen to the podcast and take notes as if you were in class. However, it's better to come to class; I use the blackboard often and that does not show up in the podcasts.
- 7) Study in groups! It's more efficient and helps build your confidence. It's a big class and a big university, and you will do best if you build a network of peers to learn with and get support from. Quiz each other on the learning objectives and other class material to find out what you actually know vs. what you thought you knew until you had to explain it to a friend!
- 8) Reflect on how many of the Lecture Review quiz questions you get right, and how confident you are in your answers. These are the kinds of questions you should expect to see on exams.

- 9) Go to your discussion section to have questions answered, discuss topics in detail, and get extra help and guidance.
- 10) Ask for clarification during lecture. **I repeat, feel free to ask questions during lecture!**
- 11) Go to the professor and your IA's office hours and ask questions. It's not an imposition; we expect and want you to do it! The best students ask for help.

The amount of material presented in this course can seem overwhelming if you don't keep up on a regular basis. I will make an effort to adjust the lectures to your pace. However, because the lectures build on each other, you must put a constant and steady amount of effort into the lectures. If you fall behind, the interaction between the different lectures will make it difficult for you to recover. If you keep pace, this course should be rewarding.

Bring any questions to discussion section, contact IAs through email or office hours, or come to my office hours. Office hours are the best place to ask complex questions – you will get a much more thorough answer. Don't wait until the last minute. You should have a clear understanding of all the examples - why was each example important? Use the text to reinforce concepts discussed in lecture.

If you are having academic difficulty, OASIS (<http://oasis.ucsd.edu/>) can help. They provide tutoring, as well as classes in study skills and time management. If you are having personal difficulties, do not hesitate to seek help at Psychological and Counseling Services (psychservices.ucsd.edu/resources_students_web/resources_students.html), which is free to students. They can help you get over many types of hurdles.

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>).

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

Participation questions:

If you answer at least 80% of the participation questions during the quarter, you will get full credit (30 points). If you answer less than 80% of the questions, your participation grade will be based on the proportion of questions you answered. For example, if you answer 70% of the questions, you will get $(70\%)(30 \text{ points}) = 21 \text{ points}$.

Quiz questions:

If you answer **at least** 80% of the quiz questions during the quarter, the remaining quiz questions will be ignored when calculating for your grade; your grade will be based on the 80+% of the quiz questions you answered. If you answer **less than** 80% of the quiz questions, the missing questions will be counted as wrong answers. Examples:

Answered 92% of quiz questions and got 87% of the answers correct. Overall quiz grade: 87%.

Answered 75% of quiz questions and got 100% of the answers correct. Overall quiz grade: 75%.

If this seems complicated, all you really need to know is: make sure you answer at least 80% of the clicker questions!

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. Make a note of your ID number in case it becomes unreadable.

Register your clicker:

You must register your clicker through TritonEd to receive credit for responses during class.

If you have not registered your clicker by April 22, then it will be too late and you will receive zero clicker points.

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

NOTE: The instructions that come with your remote ask you to register your clicker at www.iclicker.com. While you are welcome to do this, it is not necessary.

You will not see your clicker points on TritonEd 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 clicker to receive clicker points.

Using your clicker

Turn your clicker on with the orange power button. Set it to the frequency in our room. 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 clicker screen. While the timer is going, you can change your answer as many times as you want by pressing different buttons. Like all technologies, clickers sometimes malfunction. This is why I give full clicker credit if you answer 80% 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 in TritonEd *and* you need to email one of the head TAs (Lindsay DeRight Goldasich (lright@ucsd.edu) or Marika Schulhof (mschulho@ucsd.edu)) with this information before the next lecture): a) your student ID number b) your clicker ID.

Clicker Troubleshooting

Sometimes clickers break, and some days there is a good reason for missing lecture. **That is why you receive full credit for only answering 80% 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 TritonEd (NOT at www.iclicker.com)
- Make sure your remote is on the correct frequency
- 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 troubleshoot 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.

Schedule of lecture topics (subject to change at instructor discretion):

Week 1 (March 28 - April 1):

Introduction to the class and to evolutionary biology
History of evolutionary thought
Evidence of evolution

Week 2 (April 4 - 8):

Evidence of evolution (continued)
Natural selection

Week 3 (April 11 - 15):

The genetics of populations
Evolutionary processes and genetic variation
Phylogenetic trees

Week 4 (April 18 - 22):

Phylogenetic trees (continued)
Speciation
History of life on Earth

Week 5 (April 25 - 29):

History of life on Earth (continued)

Saturday, April 30, 11:00am-12:20pm: Midterm exam

Week 6 (May 2 - 6):

Evolutionary development (evo-devo)
Human evolution

Week 7 (May 9 - 13):

Biodiversity

Week 8 (May 16 - 20):

Physical environment, biomes, climate
Population ecology

Week 9 (May 23 - 27):

Community ecology
Ecosystem ecology

Week 10 (May 30 - June 3)

Note: May 30 is a holiday, no class
Ecosystem ecology (continued)
Conservation biology
Evolution in conservation and medicine

Saturday, June 4th, 3:00pm-6:00pm: Comprehensive final exam

Important Dates: Last day to add: April 8. Last day to drop without a W: April 22. Last day to drop with a W: May. 27.

DISCUSSION SECTION SCHEDULE

You must attend the discussion section you are registered for in order to receive credit. If there is a particular week in which you have a special, valid reason for needing to attend an alternate discussion section, email your IA and the IA of the alternate discussion section to see if they are able to accommodate you.

Note: readings and worksheets for discussion sections can be downloaded from our TritonEd website.

Week	Activity
1 (starts 3/28)	Get to know your class and syllabus scavenger hunt
2 (starts 4/4)	Natural selection reading discussion
3 (starts 4/11)	TBA
4 (starts 4/18)	Population genetics exercise
5 (starts 4/25)	Phylogenetics exercise
6 (starts 5/2)	TBA
7 (starts 5/9)	Biodiversity reading discussion
8 (starts 5/16)	TBA
9 (starts 5/23)	Ecology reading discussion
10 (starts 5/30)	Conservation reading discussion*

**Students whose discussion section falls on Monday, May 30 (a holiday) will turn in a half-page commentary on the reading assignment instead of attending section.*

TAs and IAs for Monday/Wednesday/Friday lecture class:

TA/IA	Email	Discussion section day and time	Discussion place	Office hour time and place
Justin Vu	jnvu@ucsd.edu	Mon 5:00-5:50 PM	Center 220	Mon 11-11:50, Art of Espresso (Mandeville)
Ashley (Eun Chae) Moon	emoon@ucsd.edu	Mon 6:00-6:50 PM	Center 220	Wed 12:30-1:30 PM, Perks coffee
Ross Dreiling	rdreilin@ucsd.edu	Mon 7:00-7:50 PM	Center 220	Tues 10-11 AM, Geisel second floor east
Monique Lu	mal071@ucsd.edu	Tues 5:00-5:50 PM	Center 220	Tues 6-7PM, Price Center Theater
Jonathan Hanna	johanna@ucsd.edu	Wed 9:00-9:50 AM	York 4080A	Thurs 3-4PM, Price Center theater
Ivy Dang	i1dang@ucsd.edu	Wed 10:00-10:50 AM	York 4080A	Mon 12:30-1:30PM Price Theater
Jess Davids	jdavids@ucsd.edu	Wed 11:00-11:50 AM	York 4080A	Wed 1-2PM, Art of Espresso (Mandeville)
Marika Schulhof	mschulho@ucsd.edu	Wed 5:00-5:50 PM	HSS 2321	Wed 2:30-3:30 Muir Biology 1208
Marika Schulhof	mschulho@ucsd.edu	Wed 6:00-6:50 PM	HSS 2321	Wed 2:30-3:30 Muir Biology 1208
Jafar Essayli	jmessayl@ucsd.edu	Wed 8:00-8:50 PM	WLH 2114	Thurs 4-5 Muir Woods
Madilyn Schneider	meschnei@ucsd.edu	Thurs 8:00-8:50 PM	WLH 2114	Tues 5-6PM, Revelle Commuter Lounge
Eric Hsieh	ebhsieh@ucsd.edu	Fri 9:00-9:50 AM	HSS 2154	Thurs 12:30-1:30, Roots

Students attending MWF lecture may come to the office hours of any IA listed above.

TAs and IAs for Tuesday/Thursday lecture class:

TA/IA	Email	Discussion section day and time	Discussion place	Office hour time and place
Alex Ngo	aqngo@ucsd.edu	Tue 7:00-7:50 PM	HSS 1305	Tues 8-9PM Middle of Muir (MOM)
Joana Abed Elahad	joabedel@ucsd.edu	Tue 8:00-8:50 PM	HSS 1305	Mon 6:30-7:30 pm, Hi Thai
Lindsay DeRight Goldasich	ldeRight@ucsd.edu	Wed 8:00-8:50 AM	Center 217A	Wed 9:30-10:30 AM Muir Biology 1260
Ye Kim	yhk009@ucsd.edu	Wed 11:00-11:50 AM	WLH 2206	Wed 8:45-9:45 Sun God lounge (PriceCtr)
Lindsay DeRight Goldasich	ldeRight@ucsd.edu	Wed 12:00-12:50 PM	WLH 2206	Wed 9:30-10:30 AM Muir Biology 1260
Lindsay DeRight Goldasich	ldeRight@ucsd.edu	Wed 1:00-1:50 PM	WLH 2206	Wed 9:30-10:30 AM Muir Biology 1260
Mohammad Shenasa	mshenasa@ucsd.edu	Wed 2:00-2:50 PM	Center 217A	Mon 1-2 PM, Muir Woods
Shreya Banerjee	smbanerj@ucsd.edu	Wed 3:00-3:50 PM	APM 2301	Wed 1-2 PM, Muir Woods
Vincent Ma	vxma@ucsd.edu	Wed 4:00-4:50 PM	HSS 1305	Wed 3-4 PM, Sun God Lounge
Joan Lee	jel198@ucsd.edu	Mon 11:00-11:50 AM	WLH 2114	Tues 11-12, Art of Espresso (Mandeville)
Joseph Miller	j7miller@ucsd.edu	Fri 3:00-3:50 PM	Mandeville B104	Wed 3-4 PM Peets

Students attending TTh lecture may come to the office hours of any IA listed above.