

ORGANISMIC AND EVOLUTIONARY BIOLOGY - BILD 3 | 2019
Fall Quarter, Dr. Keefe Reuther

INSTRUCTOR:

Dr. Keefe Reuther,

Office: HSS (Humanities and Social Sciences Building) 1145D

Office hours: MWF 10:30am-11:30am

OFFICE HOURS LOCATION Monday and Friday 3880 APM Prime; Wednesday Pac Hall 3502

Email address: kdreuther@ucsd.edu (please put **BILD 3** in the subject line)

VENUE: MWF 12:00p-12:50p WLH 2001

INSTRUCTIONAL ASSISTANTS:

Name	Email Address
Alexander	aneu@ucsd.edu
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COURSE OBJECTIVES: This course deals with the living world at the level of whole organisms, populations, communities, biomes, ecosystems and the biosphere. It is designed to introduce you to the fields of evolution, systematics, ecology, environmental science, behavior and conservation biology. The major focus of the course will be on evolution, since an understanding of the evolutionary process enables us to grasp why there are so many different kinds of living things, how they interact with each other to produce complex ecosystems, the ways in which these interactions may lead to the evolution of complex behaviors, how evolution has often brought about large changes in body plan, and how species (including ourselves) are likely to continue to evolve. Such knowledge is essential for understanding biology in general, and provides the tools for our stewardship of the planet's biota and the sustainability of the ecological services we take for granted.

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COURSE SCHEDULE

MWF 12:00p-12:50p WLH 2001

Week	Lecture Topic
0	Introduction
1	Evolution: History & Evidence
2	Mechanisms of Evolution: Natural Selection FRIDAY CLASS IS VIDEOCAST
3	Mechanisms of Evolution: Sexual Selection, Drift, Gene Flow and Mutation
4	MIDTERM 1 - Monday Speciation
5	Phylogenetic Systematics
6	History of Life Prokaryotes & Protists & Plants
7	MONDAY HOLIDAY MIDTERM 2 (Cumulative) - Wednesday Fungal and Animal Diversity
8	Animal Diversity Cont.; Human Evolution
9	FRIDAY HOLIDAY Intro to Ecology; Population Ecology
10	Community Ecology; Ecosystem Ecology
	Final Exam: 12/12/19 Thursday 11:30am-2:30pm

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SECTION SCHEDULE

Week	Section Topic
0 & 1	NO SECTION
2	Natural Selection Activity (For Credit)
3	Midterm 1 Prep (For Credit)
4	Mechanisms of Evolution Activity (For Credit)
5	Phylogeny Practice Activity (For Credit)
6	Midterm 2 Prep (For Credit)
7	Section Optional for Holiday - Group Office Hours
8	Human Evolution Activity (For Credit)
9	Ecology Activity (For Credit)
10	Final Exam Prep (For Credit)

<u>Section</u>	<u>Day</u>	<u>Time</u>	<u>Building</u>	<u>Room</u>	<u>IA</u>
C01	M	9:00a-9:50a	HSS	2150	Jun-Hee
C02	M	6:00p-6:50p	CENTR	217B	Kimberly
C03	M	7:00p-7:50p	CENTR	217B	Elizabeth
C04	W	5:00p-5:50p	HSS	2154	Wenshuai
C05	W	3:00p-3:50p	HSS	2154	Nili
C06	W	4:00p-4:50p	HSS	2154	Carolynne
C07	W	7:00p-7:50p	HSS	2321	Emily
C08	F	3:00p-3:50p	HSS	1305	Sophie
C09	Th	7:00p-7:50p	HSS	2154	Alexander
C10	Th	8:00p-8:50p	HSS	2154	Alexander
C11	F	4:00p-4:50p	HSS	2321	Andrea

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C12 F 5:00p-5:50p HSS 2321 Alicia

LEARNING OUTCOMES: See posted documents on Canvas.

CONTACT: The best way to contact me is by email: kdreuther@ucsd.edu. On all emails PLEASE put BILD 3 in the subject line to indicate that the email pertains to this course. If you email about anything regarding your status in the course, please include your UCSD username, and PID. If you have questions about course content, it is often faster to email your IA directly.

TEXTBOOK: Bild 3 Custom Campbell Biology, Volume 3, 11 Edition OR Campbell Biology, 11 Edition, available at the Price Center Bookstore. It is **OPTIONAL**.

LECTURE 'NOTES': A pdf of figures and pictures from the lecture PowerPoints will be posted on Canvas.

iCLICKERS: Required. The frequency in the classroom is "" You must register your clicker on Canvas during week 1. Beginning Monday, Week 1, you must answer at least 50% of the questions in a single lecture to receive participation points for that lecture. You may miss three lectures during the session and still receive full participation credit. Forgotten remotes or dead batteries or any other similar issue will not be considered excuses for missed participation. It is the student's responsibility to make sure they have a working iClicker remote for all classes.

VIDEOCASTING: Class lectures are videocast and are available for download soon after lecture. DO NOT COUNT ON THE VIDEOCAST WORKING EVERY TIME! Download videocasts at <http://podcast.ucsd.edu/>

TECHNOLOGY POLICY: Bring your phones/tablets/laptops to class! We will use the internet for in-class activities and it is a great resource for taking notes. None of these may be used during quizzes or exams in class. **Respect other students!** Keep in mind technology can be extremely distracting. Please silence all devices and do not play videos or pictures or cute cat memes that are not directly tied to what we are doing in class.

WEBSITE: Everything related to the class is kept on the Canvas site (<https://Canvas.ucsd.edu/webapps/login/>). **Announcements** of exam room changes and many other important matters will be posted on the Canvas site. Check the site often! **All grades will be posted on Canvas.**

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GRADING:

Midterm 1	55 points
Midterm 2 (cumulative)	70 points
Final Exam (cumulative)	200 points
Quizzes(15 points each; lowest score dropped)	120 points
Syllabus Quiz	4 points
Section Activities (5 points each; lowest score dropped)	35 points
iClicker Participation (2 points each; 3 classes dropped)	46 points
TOTAL	530 points
80% of the class fills out a CAPE (EXTRA CREDIT)	5 points

These guidelines will be used to assign grades:

- > (85%) A (A-, A or A+)
- > (75%) B (B-, B or B+)
- > (65%) C (C-, C or C+)
- > (55%) D

If necessary, these cutoffs will be adjusted downward so that at least 50% of students in the class receive an A or a B, but they will not be adjusted upward for any reason. There is NO rounding of grades. The ONLY recourse to receive a higher grade is to successfully submit a regrade request on an exam.

ACADEMIC ACHIEVEMENT HUB: the Academic Achievement Hub (AAH) in the Teaching + Learning Commons will be offering Supplemental Instruction (SI) group study sessions.

1. STUDY GROUP (SG) - SG SESSIONS BEGIN ON MONDAY, SEPTEMBER 30TH.

- STUDY GROUP PROGRAM IS A MODIFIED VERSION OF SUPPLEMENTAL INSTRUCTION, WHICH IS A HIGHLY TRAINED, PEER-LED PROGRAM THAT TARGETS DIFFICULT CLASSES AND PROVIDES

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OPPORTUNITIES FOR STUDENTS TO MEET AND COLLABORATE WITH PEERS TAKING THE COURSE THROUGH GROUP WORK.

- TYPICALLY, SG SESSION MEETS ONE (1) TIME A WEEK FOR 80 MINUTES EACH TIME.

2. DROP-IN CONTENT TUTORING - TUTORING BEGINS ON MONDAY, SEPTEMBER 30TH.

- GENERAL TUTORING HOURS ARE 12PM - 9PM FROM MONDAY TO THURSDAY AND 12PM - 7PM ON FRIDAY.
- STUDENTS DO NOT NEED TO REGISTER FOR TUTORING AS THEY ARE OPEN TO ALL STUDENTS ENROLLED IN YOUR SECTION OF THE COURSE.
- AIMED AT PROMOTING INDEPENDENT LEARNING AND BUILDING CONFIDENCE AS THEY ENHANCE THEIR UNDERSTANDING OF COURSE MATERIAL. *(SEE LINK TO WEBPAGE BELOW.)*

3. LEARNING STRATEGIES TUTORING - ONE ON ONE APPOINTMENTS AND WORKSHOPS FOR ALL STUDENTS.

- PROVIDES STUDENTS SUPPORT IN TIME MANAGEMENT AND HOW TO LEARN STRATEGIES THAT DEEPEN THEIR CONTENT UNDERSTANDING.
- STUDENTS MAKE AN APPOINTMENT OR VIEW THE WORKSHOP SCHEDULE, VIA THE WEBSITE. *(SEE LINK TO WEBPAGE BELOW.)*

SG LEADER: **BILD 3: JELAN WALY** JWALY@UCSD.EDU

SG SCHEDULE: **FRIDAY 1:00P- 2:20P AT YORK 3010**

WEBPAGE LINKS:

DROP-IN CONTENT TUTORING:

[HTTPS://COMMONS.UCSD.EDU/ACADEMIC-SUPPORT/CONTENT-TUTORING/INDEX.HTML](https://commons.ucsd.edu/academic-support/content-tutoring/index.html)

SUPPLEMENTAL INSTRUCTION:

[HTTPS://COMMONS.UCSD.EDU/ACADEMIC-SUPPORT/SUPPLEMENTAL-INSTRUCTION/INDEX.HTML](https://commons.ucsd.edu/academic-support/supplemental-instruction/index.html)

STUDY GROUP: [HTTPS://COMMONS.UCSD.EDU/ACADEMIC-SUPPORT/STUDY-GROUPS/INDEX.HTML](https://commons.ucsd.edu/academic-support/study-groups/index.html)

LEARNING STRATEGIES:

[HTTPS://COMMONS.UCSD.EDU/ACADEMIC-SUPPORT/LEARNING-STRATEGIES/INDEX.HTML](https://commons.ucsd.edu/academic-support/learning-strategies/index.html)

SECTIONS AND SECTION MEETINGS: You must attend the section you registered for and there is no official switching of sections, since registration for each individual section is completely independent (i.e. you would need to drop the course and then register for the waitlist of another section.)

The section meetings provide for:

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1. Academic review. Each week the IA will provide an opportunity to review the previous week's lectures and readings. This review may take the form of answering your specific and general questions, clarifying something important presented quickly in lectures, expanding on something important described in the textbook, or working through a numerical problem of the type found on the exams. To benefit from these meetings you must prepare by completing both your lecture notes and the assigned reading. There is no need to bring the textbook to the Section meeting.
2. Specific and separate activities, for credit, that must be completed in section. Check Canvas at least a couple of days before your section to make sure you have completed all necessary preparations.

QUIZZES: Course assignments will be administered through Canvas. You will have 45-60 minutes to answer 20 multiple choice questions. The quiz will cover the lecture material from the previous week. **Your lowest quiz grade will be dropped.** See the course calendar for due dates.

MIDTERM AND FINAL EXAMS: There will be two midterms, held during lecture time. **MAKE-UP EXAMS ARE NOT AVAILABLE. EXAMS ARE OFFERED AT THE SCHEDULED TIME ONLY.** The exam will consist of multiple choice, short essay, short answer, and quantitative or graphical material designed to test your ability to synthesize information presented in class and in discussion section. **Each exam will be cumulative, with a focus on material presented since the previous exams.** I cannot change your final exam time, even if you have three exams scheduled on the same day. **You must have a photo ID to turn in your exam.**

MISSED EXAMS: There are no make-up exams, so unexcused absences from scheduled exams will be recorded as zeroes. Unusual and serious problems that affect your ability to take a scheduled exam (e.g., death or serious illness in the family or personal tragedy/health issue) must be communicated to me directly. You will be required to provide documentation of an unavoidable emergency (e.g., serious illness, etc.). For a missed midterm exam with valid documentation, you will not make up the exam, but everything else in the course will be graded proportionally higher. For a missed final with valid documentation, you will be issued an incomplete grade, which can then be made up with the instructor after the end of the quarter.

RE-GRADES: It is your responsibility to check your exam for clerical errors in grading. If a grading error has been made, you should submit a regrade request to me at the end of a lecture within one week of return of the exam. Download and fill out the exam

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regrade form found on Canvas and staple it to the front of your exam. No re-grades are possible for exams written in pencil or non-permanent ink. Students who submit exams for re-grading understand that we may (1) re-grade the entire exam, and (2) compare the submitted paper to a scanned copy of the original exam. Since course grades are due with the Division of Biology 72 hours after the final exam is given, re-grades of the final will be handled as follows: Graded final exams will be available for pickup at the exam depot week 1 of the spring quarter. If the re-grade request is valid and it affects the letter grade of the student in the course, then we will change your course grade accordingly.

Writing and Critical Expression Hub:

<http://commons.ucsd.edu/students/writing/index.html>

The Writing and Critical Expression Hub provides support for undergraduates working on course papers, i.e. laboratory reports and the research proposal, as well as other independent writing projects. Writing mentors can help at any stage of the writing process, from brainstorming to final polishing. The Writing and Critical Expression Hub offers: one-on-one writing tutoring by appointment; supportive and in-depth conversations about writing, the writing process, and writing skills; help with every stage in the writing process, walk-in tutoring; and workshops on writing.

Accessibility and inclusion:

<http://disabilities.ucsd.edu> | osd@ucsd.edu | 858-534-4382

Any student with a disability is welcome to contact us early in the quarter to work out reasonable accommodations to support their success in this course. Students requesting accommodations for this course due to a disability must provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD). Students are required to present their AFA letters to faculty and to the OSD Liaison in the Division of Biological Sciences in advance so that accommodations may be arranged.

Discrimination and harassment: The Office for the Prevention of Harassment & Discrimination (OPHD) provides assistance to students, faculty, and staff regarding reports of bias, harassment, and discrimination. OPHD is the UC San Diego Title IX office. Title IX of the Education Amendments of 1972 is the federal law that prohibits sex discrimination in educational institutions that are recipients of federal funds. Students have the right to an educational environment that is free from harassment and discrimination.

Students have options for reporting incidents of sexual violence and sexual harassment. Sexual violence includes sexual assault, dating violence, domestic violence, and stalking.

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Information about reporting options may be obtained at OPHD at 858-534-8298, ophd@ucsd.edu, or <http://ophd.ucsd.edu>. Students may receive confidential assistance at CARE at the Sexual Assault Resource Center at 858-534-5793, sarc@ucsd.edu, or <http://care.ucsd.edu>, or Counseling and Psychological Services (CAPS) at 858-534-3755 or <http://caps.ucsd.edu>.

Students may feel more comfortable discussing their particular concern with a trusted employee. This may be a student affairs staff member, a faculty member, a department chair, or other university official. These individuals have an obligation to report incidents of sexual violence and sexual harassment to OPHD. This does not necessarily mean that a formal complaint will be filed.

If you find yourself in an uncomfortable situation, ask for help. The university is committed to upholding policies regarding nondiscrimination, sexual violence, and sexual harassment.

Academic integrity:

<http://students.ucsd.edu/academics/academic-integrity/index.html>

Integrity of scholarship is essential for an academic learning community. In this course and at the university, we expect that both students and the instructional team 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. Instructors, for their part, will exercise care in planning and collaborating with students on academic work, so that academic integrity is upheld.

When people collaborate to work toward a common goal, shared values must be established so that everyone understands the acceptable ways for working together. In organizations, these are commonly called codes of conduct or ethics. In this course, we are using a statement of values⁴ in support of codes of ethics, like the Policy on Integrity of Scholarship, to state explicitly our values and describe the behaviors for maintaining and protecting those values.

The following values are fundamental to academic integrity and are adapted from the International Center for Academic Integrity. In our course, these values are open to discussions and possible alterations based on mutual agreements among all students and the instructional team. In collaborative work, each group should discuss these values and must articulate the expectations for how they are made manifest within the group's work together.

	As students, we will ...	As the instructional team, we
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		will ...
Honesty	<ul style="list-style-type: none"> • Honestly demonstrate your knowledge and abilities according to expectations listed in the syllabus or in relation to specific assignments and exams • Communicate openly without using deception, including citing appropriate sources 	<ul style="list-style-type: none"> • Give you honest feedback on your demonstration of knowledge and abilities on assignments and exams • Communicate openly and honestly about the expectations and standards of the course through the syllabus and in relation to assignments and exams
Responsibility	<ul style="list-style-type: none"> • Complete assignments on time and in full preparation for class • Show up to class on time and be mentally physically present • Participate fully and contribute to team learning and activities 	<ul style="list-style-type: none"> • Give you timely feedback on your assignments and exams • Show up to class on time and be mentally and physically present • Create relevant assessments and class activities
Respect	<ul style="list-style-type: none"> • Speak openly with one another while respecting diverse viewpoints and perspectives • Provide sufficient space for others to voice their ideas 	<ul style="list-style-type: none"> • Respect your perspectives even while we challenge you to think more deeply and critically • Help facilitate respectful exchange of ideas

Fairness	<ul style="list-style-type: none"> ● Contribute fully and equally to collaborative work, so that we are not freeloading off of others on our teams ● Not seek unfair advantage over fellow students in the course 	<ul style="list-style-type: none"> ● Create fair assignments and exams and grade them in a fair and timely manner ● Treat all students and collaborative teams equally
Trustworthiness	<ul style="list-style-type: none"> ● Not engage in personal affairs while on class time ● Be open and transparent about what we are doing in class ● Not distribute course materials to others in an unauthorized fashion 	<ul style="list-style-type: none"> ● Be available to all students when we say we will be ● Follow through on our promises ● Not modify the expectations or standards without communicating with everyone in the course
Courage	<ul style="list-style-type: none"> ● Say or do something when we see actions that undermine any of the above values ● Accept a lower or failing grade or other consequences of upholding and protecting the above values 	<ul style="list-style-type: none"> ● Say or do something when we see actions that undermine any of the above values ● Accept the consequences (e.g. lower teaching evaluations) of upholding and protecting the above values

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⁴ This class statement of values is adapted from Tricia Bertram Gallant Ph.D.

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Note: Syllabus and lecture schedule are subject to modification at my discretion.

TIPS ON HOW TO DO WELL:

1. Print out or download lecture slides before each lecture. DON'T DO THIS MORE THAN 48 HOURS BEFORE CLASS! I often make last minute changes to the PowerPoint to incorporate recent research.
2. Be present and take good notes during lectures (I will often use the board for explanation, which slows down the pace and allows you to take notes on the lecture slides).
3. Use the textbook and internet resources (see the Links Section of the course Canvas page) as reference material to help you better understand lecture material. It's rarely beneficial to read a textbook like a novel from front to back. Use the index and table of contents to find material covered in class.
4. Attend discussion section and prepare well for them. Go through the previous week's material and come up with specific topics or questions for the IA to clarify.
5. Take all the material from lecture, the videocast, the textbook, and the PowerPoints and consolidate it in a fashion that makes sense. The key to understanding and remembering so much complex concepts and terminology is to ORGANIZE, ORGANIZE, ORGANIZE!
6. Assess yourself frequently and accurately! Just looking at flashcards is rarely enough. Try and teach a topic to a friend or draw out an important figure from memory.
7. When you study, keep a running list of questions and issues you are having with the material. Bring those questions to office hours or a study group.
8. It's better to study for short bursts often than in massive cramming sessions.

Watch these videos linked below for even more effective study tips:

<https://www.youtube.com/watch?v=FyBdA61GmJ0>

<https://www.youtube.com/watch?v=p60rN9JEapg>

Since your grade will be decided entirely from your final score and not based on how you do compared to other students in the class, it will never hurt you to help fellow students. In fact, research on learning has shown that whether you are on top of the material or are having a hard time understanding the concepts, you will improve your learning by discussing the material with other students. Participation in study groups and in peer discussion of clicker questions is therefore, highly recommended.

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