"Nothing in biology makes sense except in the light of evolution."
– Theodosius Dobzhansky, Evolutionary Geneticist (1900-1975)

Course Information

Course Description	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.
Credits	4
Instructor	Prof. Keefe Reuther Email address: kdreuther@ucsd.edu (**please put BILD 3 in the subject line**)
Course Format	This is an in-person course. If you are unable to take an exam in-person due to circumstances outside of your control, please contact Dr. Keefe ASAP.
Course Elements	<u>Lectures & Exams:</u> MWF 4-4:50pm (all lectures will be recorded for later viewing) in **PETERSON 110** <u>Discussion Sections & Section Activities:</u> Your registered discussion time (see next table)
Asynchronous Course Elements	<u>Quizzes</u> (posted each Friday and due Sunday 11:59pm on Canvas)

INSTRUCTIONAL ASSISTANTS AND DISCUSSION SECTION TIMES:

SECTION	DAY	TIME	BUILDING	ROOM	IA	EMAIL
D01	M	8:00a-8:50a	WLH	2115	Viet	vdn003@ucsd.edu
D02	M	3:00p-3:50p	APM	2301	Alan	asinthav@ucsd.edu
D03	M	12:00p-12:50p	SEQUO	147	Jimmy	jidinh@ucsd.edu
D04	W	8:00p-8:50p	WLH	2206	Xuanyu	xudong@ucsd.edu
D05	W	9:00p-9:50p	WLH	2206	Justin	jhh003@ucsd.edu
D06	F	8:00a-8:50a	APM	2301	Adele	w1hong@ucsd.edu
D07	F	1:00p-1:50p	APM	2301	Mugdha	mudesai@ucsd.edu
D08	F	3:00p-3:50p	HSS	2321	Fabian	flim@ucsd.edu
D09	Th	7:00p-7:50p	HSS	2321	Fabian	flim@ucsd.edu

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. I also have posted freely downloadable OpenStax textbooks on Canvas.**

LECTURE 'NOTES': A pdf of figures and pictures from the lecture PowerPoints will be posted on Canvas. Video recordings of both the core lecture video and the Zoom class presentations will be available in the Canvas weekly modules.

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.**

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 four 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.

LEARNING PHILOSOPHY:

This course is designed to be an environment for everyone to learn and construct a shared understanding of the material. **Active participation** by engaging with the lecture material, asking and answering questions, and contributing to breakout sessions during discussion time is expected. Being able to communicate understanding, and confusion, is critical to success in any discipline, and is very useful for learning. To encourage collaboration, section activities will be done in groups, and grades will not be assigned on a curve. Instead of memorization, we will focus on developing an understanding of fundamental concepts as they apply to different examples. Therefore, assignments and assessments will include questions that are based on solving problems in new contexts.

OVERALL COURSE EXPECTATIONS:

What you can do to support your success in the course:	What I will do to support your success in the course:
Read the syllabus and stay current with course information	Be prepared and bring my enthusiasm for teaching to each session. Provide all materials and course information in the time you need it.
Keep up with readings and lab assignments, as each one builds on the previous one.	Respond to emails within one working day, and provide timely feedback on assignments / submissions.
Contribute to the learning environment with fairness, cooperation, and professionalism	Establish a learning environment with fairness, cooperation and professionalism, and will take action if these principles are violated.
Treat your classmates, instructional assistants and myself honestly and ethically	Treat you honestly and ethically, and will address any concerns you might have
Commit to excel with integrity. Have the courage to act in ways that are honest, fair, responsible, respectful & trustworthy. Please read UC San Diego's Policy on Integrity of Scholarship and take the integrity pledge!	Uphold integrity standards and create an atmosphere that fosters active learning, creativity, critical thinking, and honest collaboration.
Manage your time, so you can stay on track with the course and complete	Only assign work that is vital to the course, and will work to meet the standard credit hour

tasks on time	allotment for the course.
Communicate with me if you determine that a deadline cannot be met due to extenuating circumstances	Consider requests for adjustments and will make reasonable exceptions available to all students when approved

A TYPICAL WEEK IN THIS COURSE

WHAT?	WHERE?
Going to lecture	In-person and synchronous (MWF) The course will be in-person and synchronous. A videocast will be available asynchronously.
Section Meetings/Problem Sets	In-person and synchronous This will NOT be recorded. However, the section activity may be done on your own time asynchronously. You will benefit greatly from attending (working with others and the IA), but it is not mandatory.
Office Hours	Some will be in-person and some will be via Zoom (see Canvas for details)

WEEKLY STUDENT DELIVERABLES

All due times are 11:59pm PST	
Sunday EVERY WEEK	Quizzes, Section Activities
Sunday after week 1	Pre-Course Survey #1 & #2, Syllabus Quiz
Monday week 4	Midterm 1
Monday week 7	Midterm 2
Sunday week 10	Post-Course Survey #1 & #2, CAPEs
Finals Week	Final Exam

COURSE LECTURE SCHEDULE

Week	Lecture Topic (timing may vary)
0	Introduction
1	Evolution - History and Evidence
2	Natural & Sexual Selection
3	Genetic Drift, Gene Flow, Mutation
4	**MIDTERM 1** (**Monday**) Speciation
5	History of life Diversity: Prokaryotes, Protists, Plants
6	Diversity: Fungi & Animals
7	**MIDTERM 2** (**Monday**) Human Evolution **HOLIDAY** (**Friday**)
8	Intro to Ecology Population Ecology
9	Community Ecology **HOLIDAY**(**Wednesday and Friday**)
10	Ecosystem Ecology Conservation Biology & Climate Science

GRADING:

Midterm 1	10%
Midterm 2 (cumulative)	15%
Final Exam (cumulative)	25%
Quizzes (lowest score dropped)	25%
Syllabus Quiz	2%
Section Activities (lowest score dropped)	15%
iClicker Participation (4 classes dropped)	8%
80% of the class fills out a CAPE (EXTRA CREDIT)	0.5% points
Surveys (EXTRA CREDIT)	0.5% points

Grade cut-offs will never be shifted up, but may be shifted down depending on the final overall grade distribution. There is NO rounding of your course grade.

Name	Range	
A+	100%	to 97%
A	< 97%	to 93%
A-	< 93%	to 90%
B+	< 90%	to 87%
B	< 87%	to 83%
B-	< 83%	to 80%
C+	< 80%	to 77%
C	< 77%	to 73%
C-	< 73%	to 70%
D	< 70%	to 60%
F	< 60%	to 0%

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:
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. Section Activity: This will be completed in small groups. Students that do not attend their section will be responsible for completing the section activity on their own time before Sunday night.

OFFICE HOURS: Dr. Keefe and the Instructional Assistants will have a combination of in-person and virtual office hours. **You do NOT need to have a question or anything prepared to come to office hours!** It's a laid back atmosphere where we can talk about course content, careers, degrees, nerdy science stuff in a group of whoever shows up. If no one has questions, Dr. Keefe will make up questions and practice problems for you to go over. Come and hang out!!!

QUIZZES: Course assignments will be administered through Gradescope on Canvas. Questions will be posted Friday and you will have 2 hours to complete the quiz in one sitting before Sunday night at 11:59pm. The quiz will cover the lecture material from the previous week. The quizzes are open book, open note, open internet, BUT YOU MAY NOT work together to find answers or share questions. **Your lowest quiz grade will be dropped.**

MIDTERMS: There will be two, held during lecture time. **MAKE-UP EXAMS ARE NOT AVAILABLE.** It is your responsibility to email Dr. Reuther if you cannot make a particular quiz time. **Each exam will be cumulative, with a focus on material presented since the previous exams.**

LATE ASSIGNMENTS AND QUIZZES
Assignments must be submitted on time to be eligible for full credit. Except in the case of medical or family emergencies, late assignments will be subjected to a 0.5% deduction per hour late. Assignments never turned in will receive 30% credit and assignments turned in late will receive a lowest deduction of 50% It is your responsibility to fill out the late assignment request form on Canvas BEFORE an assignment is due.

SUPPLEMENTAL INSTRUCTION (SI):
These sessions offer students the opportunity to master course material within a community of learners. The SI program gives students a safe and inclusive environment to engage with, ask questions, and review lecture material with their peers. The SI Leaders facilitate these

discussions through activities and guided questioning. The SI session and leader information for your course can be found here.

Natalie Lepska	In-Person	Wednesday	7:30pm-9:00pm	Center 316
Natalie Lepska	Virtual	Monday	7:30pm-9:00pm	Zoom

https://ucsd.zoom.us/j/94541890382.

Content Tutoring:

- Accessible through drop-in and appointment via Zoom. Available Monday through Friday and Sunday
- Students can practice problem solving, clarify any concept confusion, or go over your past assignments

Learning Strategies:
- Students have access to a Canvas site with study strategy and exam prep resources, one-on-one appointments, and workshops

REGRADES
If a grading error has been made, you should submit a regrade request to Dr. Keefe using the regrade request form available on Canvas.

LETTERS OF RECOMMENDATION
If you think you may want me to write you a letter of recommendation (or any other instructor), please consider what a good letter would contain and how your actions in the course demonstrate the qualities you will want highlighted in a good letter. When students ask me for a letter of recommendation, I ask them to write to me about how they demonstrated critical thinking, leadership, collaboration, and professionalism. I will be specifically looking for examples of these qualities *that I could have noticed* during lab/lecture and office hours. Be sure to actively participate in the discussions, talk to me during the lab/lecture and my office hours: ask questions, offer your own ideas and interpretations of your results, bring interesting facts/papers that are connected to the material we are studying. If you don't actively show the qualities that are needed to write a good letter, it will be hard for me to write a letter that is meaningful and useful.
Therefore, in order to ensure I am able to write substantive, insightful, and informative letters, I am only able to potentially write letters for students who fit the following criteria:
- If you are applying for an undergraduate grant/job/program:
  - You must have received at least a "B-" grade in one of my courses or be actively enrolled and passing one of my courses.
  - You must have met with me more than once outside of class (e.g. office hours/Coffee with a Prof) OR the letter is more than 2 months from being due and we can schedule at least one significant meeting.
- If you are applying for a post-graduate program (e.g. med school, post-bacc program)
  - You must satisfy ONE of the following criteria:
    - You received an "A-" or higher in one course.

- You took more than one class with me and demonstrated clear improvement.
- You worked with me as an Instructional Assistant or in some other professional capacity.
  - AND you must ALSO satisfy ONE of the following criteria:
    - We have met and talked multiple times in a way where I was reasonably able to assess your potential for your applied program. Examples include office hours, IA meetings, or Coffee-with-a-prof.
    - The due date for the letter is greater than one academic quarter away and you commit to meeting with me at least once to have a formal conversation.

ACADEMIC INTEGRITY:

https://students.ucsd.edu/academics/academic-integrity/index.html

Students are expected to do their own work, as outlined in the UCSD Policy on Academic Integrity. Academic misconduct is broadly defined as any prohibited and dishonest means to receive course credit, a higher grade, or avoid a lower grade. Academic misconduct misrepresents your knowledge and abilities, which undermines the instructor's ability to determine how well you're doing in the course. Please do not risk your future by cheating.

Students suspected of AI violations on exams will be invited to Zoom follow-up meetings where they will be asked to (in real time, on video) justify their answers (before the graded exams or solutions are released). If the instructor isn't convinced during the meeting, or the student refuses to participate, they're submitted for AI violations.

Integrity of scholarship is essential for an academic community. The University expects that both students and faculty 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(s) to whom it is assigned, without unauthorized aid of any kind. In this course, we need to establish a set of shared values. Following are values* adopted from the International Center for Academic Integrity, which serve as the foundation for academic integrity.

	As students we will........	As the teaching team we will.....
Honesty	- 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	- 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	• Complete assignments on time and in full preparation for class • Show up to class on time and be mentally and physically present • Participate fully and contribute to team learning and activities	• 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	• Speak openly with one another while respecting diverse viewpoints and perspectives • Provide sufficient space for others to voice their ideas	• Respect your perspectives even while we challenge you to think more deeply and critically • Help facilitate respectful exchange of ideas
Fairness	• 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	• Create fair assignments and exams and grade them in a fair and timely manner • Treat all students and collaborative teams equally
Trustworthiness	• 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	• 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	• Say or do something when we see actions that undermine any of the above values • Accept the consequences of upholding and protecting the above values	• Say or do something when we see actions that undermine any of the above values • Accept the consequences of upholding and protecting the above values

* This class statement of values is adapted with permission from Tricia Bertram Gallant Ph.D.

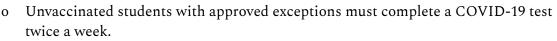**CAMPUS SAFETY REQUIREMENTS AND EXPECTATIONS**

Keeping our campus healthy takes all of us. You are expected to follow the campus safety requirements and pursue personal protection practices to protect yourself and the others around you. These include:

Participate in the university's daily screening process.

Everyone must complete a Daily Symptom Survey to access a university-controlled facility.

Participate in the university's testing program.

All students are required to participate in the COVID-19 Testing program as required by their vaccination status:

o   Unvaccinated students with approved exceptions must complete a COVID-19 test twice a week.
o   Students who are fully vaccinated must complete a COVID-19 test once a week, for the first four weeks of the quarter.
o

Wear a well-fitted face covering that covers your nose and mouth at all times.
Everyone is required to <u>wear face coverings indoors</u> regardless of vaccination status. If you see someone not wearing a face covering or wearing it incorrectly, then kindly ask them to mask up.

Monitor the daily potential exposure report.
Every day the university will update the potential exposure report with building and some classroom information and the dates of exposure. Download the <u>CA COVID Notify app</u> to your phone to receive an alert if you have been potentially exposed to COVID-19.

Assist in the contact tracing process.
If you're contacted by a case investigator, it means you have been identified as <u>close contact</u>, please respond promptly. You must assist with identifying other individuals who might have some degree of risk due to close contact with individuals who have been diagnosed with COVID-19.

Contact the instructional team if you are impacted by COVID-19
Please note that due to the ongoing COVID-19 Pandemic, changes may be made in response to new developments and information.

CAMPUS POLICIES

- **UC San Diego Principles of Community**
- **UC San Diego Policy on Integrity of Scholarship**
- **Religious Accommodation**
- **Nondiscrimination and Harassment**
- **UC San Diego Student Conduct Code**

<u>Diversity and equity statement</u>
It is important for us to make sure that how we teach this course and how we accommodate different student needs reflects the differences of race, ability, sexual orientation, age, and gender identity that enrich our classroom experience and campus. If you have any concerns related to diversity and equity in the course, please contact the instructor.

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.

STUDENT RESOURCES

Learning and Academic Support	
Ask a Librarian: Library Support *Chat or make an appointment with a librarian to focus on your research needs* **Course Reserves, Connecting from Off-Campus and Research Support** *Find supplemental course materials* **First Gen Student Success Coaching Program** *Peer mentor program that provides students with information, resources, and support in meeting their goals* **Office of Academic Support & Instructional Services (OASIS)** *Intellectual and personal development support*	**Writing Hub Services in the Teaching + Learning Commons** *One-on-one online writing tutoring and workshops on key writing topics* **Supplemental Instruction** *Peer-assisted study sessions through the Academic Achievement Hub to improve success in historically challenging courses* **Tutoring – Content** *Drop-in and online tutoring through the Academic Achievement Hub* **Tutoring – Learning Strategies** *Address learning challenges with a metacognitive approach*
Support for Well-being and Inclusion	
Basic Needs at UCSD *Any student who has difficulty accessing sufficient food to eat every day, or who lacks a safe and stable place to live is encouraged to contact:* foodpantry@ucsd.edu | basicneeds@ucsd.edu | *(858) 246-2632* **Counseling and Psychological Services** *Confidential counseling and consultations for psychiatric service and mental health programming* **Triton Concern Line** *Report students of concern:* (858) 246-1111 **Office for Students with Disabilities (OSD**)	**Community and Resource Centers** **Office of Equity, Diversity, and Inclusion** *As part of the* Office of Equity, Diversity, and Inclusion *the campus community centers provide programs and resources for students and contribute toward the evolution of a socially just campus* (858).822-.3542 | diversity@ucsd.edu **Get Involved** *Student organizations, clubs, service opportunities, and many other ways to connect with others on campus* **Undocumented Student Services** *Programs and services are designed to help students overcome obstacles that arise from their*

Supports students with disabilities and accessibility across campus	*immigration status and support them through personal and academic excellence*

PRIVACY PRACTICES IN THIS COURSE
(From https://cio.ucop.edu/privacy-tips-for-your-syllabus/)
This course is a community built on trust; as a learning community, we are collectively responsible for upholding privacy protections. In order to create a community built on trust and the most effective learning experience, our interactions, discussions, and course activities must remain private and free from external intrusion. We have obligations to each other to preserve privacy and cultivate fearless inquiry. We respect the individual dignity of all and will refrain from actions that diminish others' ability to learn.

As your instructor, I am committed to protecting your privacy by only using university-approved course technologies and adhering to the Family Educational Rights and Privacy Act (FERPA) https://catalog.ucsd.edu/about/policies/notification-of-rights/index.html and Campus Privacy Office guidelines. This includes using your educational data only as allowed by FERPA, for example, for legitimate educational purposes such as submitting your final grades to the registrar's office.

Please note the following privacy practices for our course:

Course platform. This course uses Canvas, Zoom, and Gradescope, which collects information about your engagement with course materials. I will review this information periodically to ensure students are engaged and look for signs of students falling behind. I will also review this information in case of academic misconduct allegations, if relevant.

Online/video classes. Regarding video-conferencing, while I ask, to the extent you are comfortable and able, that you keep your videos on during lessons to aid in the development of our learning community, I also understand that may not always be possible. Know that you will not be penalized for choosing to disable your video during synchronous course sessions. You are welcome to use an appropriate virtual background if you do not want to have your surroundings visible. Be mindful of others who may not wish to be visible or recorded in the background.

Using learning materials. Course materials (videos, assignments, problem sets, etc.) are for use in this course only. You may not upload them to external sites, share with students outside of this course, or post them for public commentary without my written permission. We will not pin or take screenshots of fellow classmates or record sessions during synchronous online sessions or share discussion thread posts from the learning management system unless granted explicit

permission to do so. Unauthorized sharing or uploading to exam questions, test answers, or summaries of exams is prohibited.

<u>Using live class recordings.</u> We are recording class meetings to support remote students and to provide everyone in the class with useful study aids. These recordings will be available for review through our learning management system. Students are prohibited from recording the class themselves unless a student has an approved academic accommodation for such recording. The university strictly prohibits anyone from duplicating, downloading, or sharing live class recordings with anyone outside of this course, for any reason.

<u>Sharing student informatio**n**</u>. You may work on group projects with other students or be asked to review or respond to their work. Other materials and activities may provoke debate, argument, or spirited discussion; some of us may volunteer sensitive personal information. Do not share others' personal information, including class dialogue or performance, on sensitive topics outside of our course community. Student work, discussion posts, and all other forms of student information related to this course should be handled with respect and remain within interactions of this course. You may publicly post your own work, provided it does not violate academic dishonesty policies or show responses to assessments; public posting of group work requires consent from all group members. Research conducted as part of a class is subject to UC research policies and may include sensitive information. Students may not share research information without permission from the instructor.

<u>Sharing course information with others.</u> Do not post images or identifiable conversations that occur in class to social media or to those beyond our learning community. Sharing private information about our course community (including discussions, activities, presentations, student work, etc.) with others for the purpose of inviting external attention, intrusion, ridicule, or harassment is an egregious breach of trust.

If you have concerns after reviewing these privacy, I invite you to reach out.

SUBJECT TO CHANGE POLICY
Due to unforeseen circumstances, minor aspects of this syllabus may change. This includes changes to scheduling, grading values, and policy. It is the responsibility of the instructor and instructional assistants to announce changes with reasonable notice in multiple formats (e.g. lecture and Canvas announcements, email, etc.). It is the responsibility of the student to make note of these changes and communicate with the instructor if you have questions or concerns about the changes.