

Instructors:

Dr. Dale Kiefer	Dr. Carly Kenkel	<u>Teaching Assistants:</u>
Office Hrs: Tu/Th 11a-1230p	Th/F 1230-2p	Kenny Bolster
Location: AHF M235	AHF 231A	Nico Lorenzen
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Meeting times & Location: Tue/Thu 930-1050am, ZHS 159

Textbooks: Ecobeaker/Evobeaker BISC 102 Custom, Meir
 SimUText
 REVEL for a Changing Planet, Neff
 Additional materials provided by instructors

Websites: <https://blackboard.usc.edu>
<https://kahoot.it/>

Course Description

This one semester course introduces major aspects of general biology and focuses specifically on the ecological tug of war between humans and their physical and biological environment. We will explore major topics in agriculture, biodiversity, ecosystem structure and function, pollution, and population dynamics from both historical and contemporary perspectives. The overarching aim of this course is to provide students with background knowledge sufficient to understand major challenges facing human societies today, including how to feed the world, control disease outbreaks, and sustainably manage ecosystems in the face of climate change. Please note that this course satisfies the GE-D, Life Sciences requirement and is not designed for those majoring in biology or health sciences. For students wishing to major or minor in Environmental Studies, ENST 100 is the required entry-level course.

Prerequisites: None, though working knowledge of high school biology is recommended.

Specific learning objectives. By the end of this course, students will be able to:

- 1) Explain basic concepts in biology and ecology.
- 2) Outline major biological challenges facing contemporary human societies.
- 3) Compare and contrast proposed solutions to major biological challenges.
- 4) Demonstrate basic public speaking skills.
- 5) Demonstrate critical thinking when evaluating scientific literature.

Schedule of lecture topics. *Note that the schedule is subject change.* Any schedule changes will be discussed in class and posted on Blackboard.

Date	Lecture	Lecturer	Readings	Lab
Aug 21	Course Introduction Anthropogenic Planet	Kiefer/ Kenkel	Stars & Beetles; Lucretius	No labs this week
Aug 23	Discussion of NY Times article on Stars & Beetles	Kiefer	Lucretius	
Aug 28	Human Evolution	Kiefer	Selections from Sapiens (Harari)	Prove It!
Aug 30	Human Evolution: Revolutions	Kiefer		

Sep 4	Population Dynamics & Human Population	Kiefer	ST Pop. Growth: 1, 2, 3	Growth Models
Sep 6	Ecology: Photosynthesis & Respiration	Kiefer		
Sep 11	Origins of Life	Kiefer	ST Community Dynamics: 1,2,3	EB: Isle Royale
Sep 13	Ecosystem Structure: Trophodynamics	Kiefer		
Sep 18	Community Structure	Kiefer	ST Physiological Ecology 1	Page Museum
Sep 20	Agriculture	Kiefer	ST Community Dynamics 4,5	
Sep 25	MIDTERM 1	Kiefer		Darwin's Finches
Sep 27	Darwin's Theory	Kiefer	ST Evolution 1,2	
Oct 2	Genetics & Population Genetics	Kiefer		Darwinian Snails & Mendelian Pigs
Oct 4	Infectious Disease Dynamics	Kenkel	REVEL: Human Health, Pathogens & Disease Spread	
Oct 9	Biotech & Disease Control	Kenkel		Epidemiology
Oct 11	Feeding the world	Kenkel	REVEL: Agriculture, Malnutrition & Breeding	
Oct 16	GMOs OMG!	Kenkel		Cal Sci Ctr: LA Zone
Oct 18	Invasive Species	Kenkel	REVEL: Pops/Communities, Biological Invasions	
Oct 23	Biocontrol	Kenkel		ST Nutrient Cycles 3,4
Oct 25	Pollution	Kenkel		
Oct 30	MIDTERM EXAM 2	Kenkel/Kiefer		ST Climate Change 3,4
Nov 1	Captain Planet	Kenkel	REVEL: Atmosphere & Air	
Nov 6	WATER	Kenkel	REVEL: Freshwater	Presentation of Class Papers
Nov 8	Climate Change 1: What do we really know?	Kenkel	REVEL: Climate	
Nov 13	Climate Change 2: What does it really mean?	Kenkel		Presentation of Class Papers
Nov 15	Restoration Ecology Redux	Kenkel		
Nov 20	The Selfish Gene 1	Kiefer	ST Evolution Sections 2,3,4	No Labs this Week
Nov 22	THANKSGIVING			
Nov 27	Conservation Biology	Kiefer	ST Biogeography 1,2	ST Biogeography 3,4
Nov 29	Co-operation and the Future	Kiefer		
Dec 6	MIDTERM EXAM 3	Kenkel/Kiefer	11a-1pm; Room: TBD	

On-line Resources

Additional readings for specific lectures and/or links to on-line resources will be posted on Blackboard during the semester.

Course Policies

COMMUNICATION: Email is the preferred form of communication with the instructors outside of class. Responses can be expected within 48 hours, though there may be an additional delay over weekends/holidays. If an in-person meeting is desired, please utilize office hours or email a request to set up an alternate meeting time.

Students are responsible for logging onto Blackboard (<https://blackboard.usc.edu>) and checking the course website on a regular basis. This site will be an official source for announcements, course materials, lecture notes, score postings and general discussions. Some lecture quizzes will also be completed on Blackboard. Mid-term exam and lecture quiz scores will be posted under your LECTURE SECTION. It is the student's responsibility to immediately notify the TA in the event of any mistakes, so please check scores weekly.

GRADES: Any document associated with grading may be photocopied by the instructional staff. The final letter grade will be determined by the total number of points as follows.

	Points possible	Percent
Midterm Exam x 3 (100 points ea.)	300	39%
Pop Quizzes x 27 (5 points ea.)	135	18%
Lab Contributions (5 points ea.)	65	8%
Lab Assignments x 11 (15 points ea.)	165	22%
Final Paper	50	6.5%
Presentation	50	6.5%
TOTAL	765	100%

POP QUIZZES: Your lowest lecture quiz grade will be dropped accommodating one absence with no grade penalty and no questions asked.

EXAM RE-GRADING: All graded documents will be graded in the context of expectations set by an initial evaluation of all student responses. If you feel that an error was made in the grading of an examination or lab activity, you need to do the following: 1) Prepare a printed statement explaining why you feel your grade was incorrect, and 2) submit this and your original examination to your instructor within one week of the time the examination or assignment was returned to you. Your entire exam or assignment may be re-graded and, as a result, your grade may increase or decrease from a requested re-grade. No frivolous reasons will be accepted for requesting grade changes; stated reasons for a grade change must be legitimate (e.g., error in totaling the score).

LAB CONTRIBUTIONS: Good attendance is necessary but not sufficient to earn full marks for this component of the course grade. Students who earn top scores will participate in class discussions actively, thus helping lead their peers to think critically and analytically. This requires students to chime in, asking questions, and making relevant comments in response to the questions of others.

Policy on Missed Lecture Exams and Lab activities:

UNPLANNED ABSENCES: You may be excused from an exam or labs only in the event of a documented illness or emergency as outlined by university policy, with notification to the TA or Instructor team within 48 hours. An invalid excuse, or the excuse turned in late, will result in a score of zero for the activity missed. If you miss the final examination and have provided a valid medical excuse within 72 hours of the examination time, a final course grade of incomplete (IN) will be recorded, and you will be permitted to take a make-up final examination during the following semester.

PLANNED ABSENCES: Students who wish to miss an examination or Lab Activity for observance of a religious holy day should be aware of the University's policy on such absences, published at: <http://orl.usc.edu/religiouslife/holydays/absences.html>. If the absence is approved as determined by the USC Office of Religious Life, a reasonable accommodation will be provided. If you have any anticipated

exam date conflicts due to athletic schedules or religious holidays see an instructor by WEEK 2 of the course.

Statement on Academic Conduct and Support Systems

Academic Conduct:

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, “Behavior Violating University Standards” policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

Support Systems:

Student Counseling Services (SCS) – (213) 740-7711 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. engemannshc.usc.edu/counseling

National Suicide Prevention Lifeline – 1 (800) 273-8255

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. www.suicidepreventionlifeline.org

Relationship and Sexual Violence Prevention Services (RSVP) – (213) 740-4900 – 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. engemannshc.usc.edu/rsvp

Sexual Assault Resource Center

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: sarc.usc.edu

Office of Equity and Diversity (OED)/Title IX Compliance – (213) 740-5086

Works with faculty, staff, visitors, applicants, and students around issues of protected class. equity.usc.edu

Bias Assessment Response and Support

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. studentaffairs.usc.edu/bias-assessment-response-support

The Office of Disability Services and Programs

Provides certification for students with disabilities and helps arrange relevant accommodations. dsp.usc.edu

Student Support and Advocacy – (213) 821-4710

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. studentaffairs.usc.edu/ssa

Diversity at USC

Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. diversity.usc.edu

USC Emergency Information

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible. emergency.usc.edu

USC Department of Public Safety – UPC: (213) 740-4321 – HSC: (323) 442-1000 – 24-hour emergency or to report a crime.

Provides overall safety to USC community. dps.usc.edu