

Instructors:

	Dr. Dale Kiefer (he/him)	Dr. Carly Kenkel (she/her)	TAs:
Office Hrs:	Tu/Th 130-230pm	By Appt	Nico Lorenzen
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Meeting times & Location: Tue/Thu 930-1050am, SAL 101

Textbooks: Ecobeaker/Evobeaker BISC 102 Custom, Meir
 SimUText
 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, although a 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 and lab topics. *Note that the schedule is subject to change.* Any schedule changes will be discussed in class and posted on Blackboard.

Date	Lecture	Lecturer	Readings/Assignments	Lab
Aug 27	Course Introduction Nature vs Nurture	Kenkel	<i>She Has Her Mother's Laugh</i> excerpt	No Labs this Week
Aug 29	Darwin and Evolution	Kenkel	Selections from Campbell Biology 7 th Ed.	
Sep 3	CSI Bisc 102	Kenkel	Atlantic Article and Blog Post	1. Darwinian Snails & Mendelian Pigs
Sep 5	Infectious Disease Dynamics	Kenkel	National Geographic Article	

Sep 10	Biotech & Disease Control	Kenkel	World Economic Forum & Medium Articles	2. Epidemiology
Sep 12	Discussion of NY Times article on Stars & Beetles	Kiefer	Selections: <i>Stars & Beetles</i> ; <i>De Rerum Natura</i> (Lucretius)	
Sep 17	Discussion of Lucretius	Kiefer	Essay on <i>De Rerum Natura</i> Due either by hard copy or email at the end of lecture	3. Prove It!
Sep 19	Energy & Origins of Life	Kiefer	Term topic must be approved by today	
Sep 24	Human Evolution	Kiefer	Selections: <i>Life Ascending & Sapiens</i>	4. Pop Growth Models 1-3 Review of Term Project
Sep 26	Human Evolution: Revolutions	Kiefer	ST Pop. Growth: 1, 2, 3	
Oct 1	Population Dynamics & Human Population	Kiefer		
Oct 3	MIDTERM 1 Lec 1-9		Bring both a pen and #2 pencil	5. Cal Sci Center
Oct 8	Feeding the world	Kenkel	National Geographic Article	
Oct 10	GMOs OMG!	Kenkel	Scientific American Article Annotated Bibliographies Due	6. ST Nutrient Cycles 3,4
Oct 15	Invasive Species	Kenkel	Smithsonian Article	No Labs this Week
Oct 17	FALL RECESS			
Oct 22	Biocontrol	Kenkel	The Conversation Article Term Paper Outlines Due via Turnitin	7. NHMLA
Oct 24	Pollution	Kenkel	LA Curbed Article	
Oct 29	Water	Kenkel	NY Times Article; WRI blog	8. ST Climate Change 3,4
Oct 31	Climate change 1: What do we really know?	Kenkel	IPCC Summary for Policymakers: SPM1	
Nov 5	MIDTERM 2 Lec 10-17		Bring both a pen and #2 pencil	9. Isle Royale
Nov 7	Climate change 2: What does it really mean?	Kenkel	IPCC Summary for Policymakers: SPM2	
Nov 12	Restoration Ecology Redux	Kenkel	Yale 360 Article	10. Presentation of Research Topic
Nov 14	Ecology: Photosynthesis & Respiration	Kiefer	ST Physiological Ecology I	
Nov 19	Ecosystem Structure: Trophodynamics	Kiefer	ST Ecosystem Ecology 1-5	11. Presentation of Research Topic
Nov 21	Community Structure	Kiefer	ST Community Dynamics 1,2,3	
Nov 26	The Selfish Gene 1	Kiefer	ST Evolution 2,3,4 Term Papers Due via Turnitin	No Labs this Week
Nov 28	THANKSGIVING			
Dec 3	The Selfish Gene 2	Kiefer	Selections: <i>The Selfish Gene</i>	12. ST Biogeography 3,4
Dec 5	Co-operation and the Future	Kiefer	ST Biogeography 1,2	
Dec 12	MIDTERM 3 Lec 18-26		11am – 1pm in SAL 101 Bring both a pen and #2 pencil	

Description of Assessments and Assignments

Pop Quizzes. In-class quizzes will occur randomly throughout the semester and must be completed in class at the time the quiz is given. Quizzes will be administered using kahoot.it. To receive credit you must log in with your USC username during the defined quiz time. There will be no make-up opportunities provided for missed quizzes. Your three lowest lecture quiz grades will be dropped, accommodating three absences with no grade penalty and no questions asked.

Lucretius Essay. You will write a short response (2 pages) to the *De Rerum Natura* reading in the third week of the semester and submit by hard copy or email at the end of lecture on September 17th. Specific guidelines will be given in lecture. The best essays will be posted to Blackboard.

Term Paper. You will write an 8-10 page research paper on a topic of your choosing within the scope of Human-Environment interactions. You must obtain TA approval for your general topic selection by September 19. Prior to submitting the final paper (Due November 26), you will also create an annotated bibliography (Due October 10) and an outline for your research topic (Due October 22). Specific directions and rubrics and Turnitin links can be found on Blackboard under Assignments, and will be discussed in your lab sections during the week of September 23rd.

Term Presentation. You will script and create a visual aid (e.g. powerpoint) for a 10 minute presentation to share the findings of your research topic with your lab mates. Feedback from these presentations can be used to improve your final term paper. Specific directions will be provided in your lab section and additional guides and rubrics can be found on Blackboard under Assignments.

Midterm Exams. There will be three midterm exams consisting of 25-30 multiple choice questions (worth 70 points) and three essay questions (select 3 out of 5 prompts to respond to, worth 10 points each). Material will be drawn from lectures, readings, and laboratory material. Please bring both a pen (for essays) and a #2 pencil (for multiple choice scantrons) to each exam.

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.

Lab Assignments. You will be required to complete in-lab exercises using the guidelines and resources provided and following instructions given by your TA. Specific rubrics and due dates will be specified by your TA at each lab meeting.

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. Dr. Kenkel's office hours are by appointment. Bookings can be made at <https://drcarlykenkel-bisc102.youcanbook.me/>.

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 may 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.

TECHNOLOGY: Students are required to bring an internet-enabled device with browser capabilities, such as a cell phone or a laptop to class. During class time, it is expected that students will use their devices to participate in in-class quizzes. Students are encouraged to use their personal devices for academic purposes during class, including looking up terms, doing research, and completing in-class work. Please make sure devices are silenced so as not to disturb classmates. Students who require a laptop to complete in-class work can check one out through the *Laptop Loaner Program* <https://itservices.usc.edu/spaces/laptoploaner>.

GRADES: Any document associated with grading may be photocopied by the instructional staff. The final letter grade will be assigned on a curve at the end of the semester based on the class distribution and determined by the total number of points as follows.

	Points possible	Percent
Midterm Exam x 3 (100 points ea.)	300	39.5%
Pop Quizzes x 17 (5 points ea.)	85	11%
Lucretius Essay	10	1%
Lab Contributions x 12 (5 points ea.)	60	8%
Lab Assignments x 10 (15 points ea.)	150	20%
Term Paper Topic Approval	5	0.5%
Annotated Bibliography	30	4%
Term Paper Outline	20	3%
Final Paper	50	6.5%
Presentation	50	6.5%
TOTAL	760	100%

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).

EXTRA CREDIT: There are no extra credit opportunities and no exceptions to this policy.

LATE WORK: All late assignments must be uploaded to TurnItIn or to your TA personally. All will be date stamped and penalized 5 points per day late.

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 <https://orl.usc.edu/life/calendar/absences/>. 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, policy.usc.edu/scientific-misconduct.

Support Systems:

Student Health Counseling Services - (213) 740-7711 – 24/7 on call
engemannshc.usc.edu/counseling

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

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call
suicidepreventionlifeline.org

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-4900 – 24/7 on call
engemannshc.usc.edu/rsvp

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office of Equity and Diversity (OED) | Title IX - (213) 740-5086

equity.usc.edu, titleix.usc.edu

Information about how to get help or help a survivor of harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. The university prohibits discrimination or harassment based on the following protected characteristics: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations.

Bias Assessment Response and Support - (213) 740-2421

studentaffairs.usc.edu/bias-assessment-response-support

Avenue to report incidents of bias, hate crimes, and microaggressions for appropriate investigation and response.

The Office of Disability Services and Programs - (213) 740-0776

dsp.usc.edu

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

USC Support and Advocacy - (213) 821-4710

studentaffairs.usc.edu/ssu

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity at USC - (213) 740-2101

diversity.usc.edu

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

dps.usc.edu, emergency.usc.edu

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call

dps.usc.edu

Non-emergency assistance or information.