



Instructors:

	Dr. Dale Kiefer (he/him)	Dr. Carly Kenkel (she/her)	<u>TAs:</u>
Office Hrs:		By Appt	TBD
Location:	AHF M235	AHF 231A	
Email:	kiefer@usc.edu	ckenkel@usc.edu	

Meeting times & Location: Tue/Thu 930-1050am, online only (recorded)

Textbooks: Ecobeaker/Evobeaker BISC 102 Custom, Meir
 SimUText
 Additional materials provided by instructors

Websites: <https://blackboard.usc.edu>
 <zoom link for lectures>
 <slack channel>

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
Jan 19	1. Course Introduction Anthropogenic Planet	Kiefer/ Kenkel	Selections: <i>Stars & Beetles</i> ; <i>De Rerum Natura</i> (Lucretius)	No Labs this Week
Jan 21	2. Discussion of Stars & Beetles article	Kiefer	<i>De Rerum Natura</i> (Lucretius)	
Jan 26	3. Human Evolution	Kiefer	Selections: <i>Life Ascending & Sapiens</i>	1. My Footprint

Jan 28	4. Human Evolution: Revolutions	Kiefer	Essay on <i>De Rerum Natura</i> Due	
Feb 02	5. Population Dynamics & Human Population	Kiefer	ST Pop. Growth: 1, 2, 3	2. Pop Growth Models 1-3 Review of Term Project
Feb 04	6. Ecology: Photosynthesis & Respiration	Kiefer	ST Physiological Ecology 1,2	
Feb 09	7. Origins of Life	Kiefer	ST Ecosystem Ecology: 1,2,4	
Feb 11	8. Ecosystem Structure: Trophodynamics	Kiefer	Term paper topic must be approved by today	3. ST Nutrient Cycles 3,4
Feb 16	9. Community Structure	Kiefer	ST Community Dynamics 1,2,3	4. Mendelian Pigs
Feb 18	10. The Selfish Gene 1	Kiefer	Selections: <i>The Selfish Gene</i>	
Feb 23	MIDTERM 1 Lec 1-9	Kiefer		5. ST Isle Royale
Feb 25	11. The Selfish Gene 2	Kiefer		
Mar 02	12. Co-operation and the Future	Kiefer	ST Biogeography 1,2	6. Darwinian Snails
Mar 04	13. Nature vs Nurture; Evolution revisited	Kenkel	<i>She Has Her Mother's Laugh</i> excerpt Selections from Campbell Biology 7 th Ed. Annotated Bibliographies Due	
Mar 09	14. CSI Bisc 102	Kenkel	Atlantic Article and Blog Post	7. ST Community Dynamics 1,2,3
Mar 11	15. Infectious Disease Dynamics	Kenkel	National Geographic Article	
Mar 16	16. Biotech & Disease Control	Kenkel	World Economic Forum & Medium Articles	8. Epidemiology
Mar 18	17. COVID: A Case Study	Kenkel	TBD Term Paper Outlines Due via Turnitin	
Mar 23	18. Mid-semester Q&A	Kenkel		No Labs this Week
Mar 25	MIDTERM 2 Lec 10-17	Kenkel		
Mar 30	19. Feeding the world	Kenkel	National Geographic Article	9. Presentation of Research Topic
Apr 01	20. GMOs OMG!	Kenkel	Scientific American Article	
Apr 06	21. Invasive Species	Kenkel	Smithsonian Article	10. Presentation of Research Topic
Apr 08	22. Biocontrol	Kenkel	The Conversation Article	
Apr 13	23. Pollution	Kenkel	LA Curbed Article	11. No Labs this Week
Apr 15	24. Water	Kenkel	NY Times Article; WRI blog Term Papers Due via Turnitin	
Apr 20	25. Fire Ecology	Kenkel	TBD	12. ST Climate Change 3,4
Apr 22	26. Climate change 1: What do we really know?	Kenkel	IPCC Summary for Policymakers: SPM1	

Apr 27	27. Climate change 2: What does it really mean?	Kenkel	IPCC Summary for Policymakers: SPM2	13. ST Experimental Design
Apr 29	28. Restoration Ecology Redux	Kenkel	Yale 360 Article	
May TBD	MIDTERM 3 Lec19-28	Kenkel		

Description of Assessments and Assignments

Pre-lecture Quizzes. Short, pre-lecture quizzes will occur throughout the semester and must be completed by the lecture date and time. No make-up opportunities will be provided, but your three lowest quiz scores will be dropped to accommodate unplanned scheduling issues.

Lucretius Essay. You will write a short response (~2 pages) to the *De Rerum Natura* reading in the semester 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 February 11. Prior to submitting the final paper (Due April 15), you will also create an annotated bibliography (Due March 04) and an outline for your research topic (Due March 18). 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 February 2nd.

Term Presentation. You will script and create a visual aid (e.g. powerpoint) for an 8-10 minute presentation in order 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 short answer 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.

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

Course meetings will take place online via zoom. Lectures will be recorded live and posted to blackboard at the end of class.

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

Course Policies

COMMUNICATION: For general questions the course Slack is the preferred form of communication. For personal questions, please email the specific instructors. Responses can be expected within 48 hours, though there may be an additional delay over weekends/holidays. If a one on one 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 slack channel on a regular basis. Blackboard will be an official source for announcements, course materials, lecture notes, and score postings, while Slack will be used as a form for general discussions and questions. 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 will need an internet-enabled device with browser capabilities. Students who require a laptop 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	38.5%
Quizzes x 20 (5 points ea.)	100	13%
Lucretius Essay	10	1%
Lab Contributions x 12 (5 points ea.)	60	8%
Lab Assignments x 10 (15 points ea.)	150	19%
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	775	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 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/ssa

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.