

BISC 112Lxg/ENGL 112Lxg – DRAFT syllabus

Data, Denial, or Doom?: Talking About Climate Change

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La Tuna fire, Los Angeles, CA, 2017. [CC BY-SA 2.0](https://creativecommons.org/licenses/by-sa/2.0/)

Course Description

Glacier melt; agricultural collapse; species extinction; global warming: the world we live in is indelibly shaped by climate change. In this course we explore the different kinds of stories we use to describe this shaping, from data sets and scientific reports to popular journalism and post-apocalyptic movies. Although students will gain basic understanding of climate change and its biological consequences, the primary aim of the course is not to provide a comprehensive overview of climate science. Rather, we will dive deeply into several major problems posed by climate change, trying to understand how overlapping—and at times competing—stories articulate and respond to these problems, and how these stories influence social perceptions and actions. Topics include the effects of climate change on extreme weather, on biodiversity, and on human societies, as well as challenges with telling climate histories and predicting climate futures.

Along the way we will ask key questions: how can we meaningfully connect quantitative descriptions of climate change with qualitative histories? How do global warming's massive and long-ranging effects challenge our sense of scale? What new kinds of storytelling do we need to invent to talk about climate change, given its complex relationship between cause and effect and its reliance on ongoing processes over singular events? What is the relationship between microhistories of climate change, especially those produced within different disciplinary fields, and the overall picture?

A guiding assumption of this course is that responding to climate change demands an interdisciplinary approach. It defies the categorization that would split the natural sciences, the social sciences, and the humanities: it is just as cultural and political as it is environmental, biological, and economic. Rather than reinforce strict disciplinary divides, this course seeks to understand how distinct disciplinary practices and methods of explanation can come together to create new hybrid models of learning, storytelling, and action.

Learning Objectives

At the end of this course, students will be able to:

- Explain key concepts and issues related to climate change, including climate forcing, feedback loops, mitigation, and adaptation.
- Collect and analyze quantitative data on how climate impacts weather patterns, biodiversity, and human societies, and synthesize the results in diverse formats.
- Analyze how mass-media discussions of climate change make use of different disciplinary frameworks.
- Evaluate the effects of interpretative and stylistic differences between quantitative and qualitative approaches to describing climate change, across genres including data sets, charts and graphs, lab reports, popular science journalism, climate fiction or "cli-fi," documentaries, and film.
- Create a multi-modal project on an issue relating to climate change, incorporating both quantitative and qualitative formats.
- Reflect on your own role within climate change as a denizen of the 21st century.

Course Books

Andrew Dessler, *Introduction to Modern Climate Change*, 2nd ed. (online version available through the USC Library)

Andreas Schmittner, *Introduction to Climate Science* (available online through the Oregon State University Ecampus)

"Talking About Climate Change" Course Reader

Margaret Atwood, *Oryx and Crake* (Anchor, 2004)

Ridley Scott, *Blade Runner* (accessible through ARES Course Reserves)

Description of Assignments and Grading Breakdown

You will write **four blog posts**. Two will analyze how discussions of climate change in popular media (e.g. on Twitter, in newspapers, in a comic strip) translate scientific data into other narrative formats, and/or make use of multiple disciplinary frameworks, and the other two will reflect on framings of climate problems encountered on our field trips.

You will attend **weekly labs** in which you collect, analyze, and present on climate change datasets, and discuss class readings. **Three required field trips** will replace some of the labs: to the USC Wrigley Institute for Environmental Studies, to the Pacific Visions wing at the Aquarium of the Pacific, and to an arts event engaging with climate change (TBA).

You will write a **1–3 page paper** “translating” a climate change story from one format into another (e.g. adapting a data set for a news article, or adapting an article for a short story).

You will complete a **midterm exam** in which you explain key concepts and issues related to climate change; analyze data sets and describe how they might be reported on in different narrative formats; and evaluate stylistic differences between presentations of climate science across different genres in a case study.

Over the second half of the semester, you will complete a **capstone project** in multiple stages. These stages include: developing a research question regarding the biological impacts of climate; gathering and synthesizing relevant data and presenting it in a **2–3 page scientific report**; contacting an expert on your issue; writing **2–3 pages** on your issue in in another fictive or nonfictive format of your choice; and writing a **1-page op-ed** recommending a course of action or commenting on an ongoing scientific debate, which you will send to a media outlet of your choice.

Assignment	Points
Blog Posts	60
Paper 1	90
Midterm Exam	200
Lab (including participation)	300
Final Project	350

Final Grade: A 930–1000; A- 895–929; B+ 870–894; B 830–869; B- 795–829; C+ 770–794; C 730–769

Expectations

You will:

- **attend class regularly and on time.** You must clear legitimate absences—for illness, religious holidays, or emergencies—with us beforehand. After two unexcused absences, each further unexcused absence will cost 25 points from your participation grade. Three instances of tardiness count as an unexcused absence.

- **closely read assigned texts**, making notes while you read, and come to class prepared for discussion.
- **be engaged and focused in class and lab**, listening to others respectfully and with openness to differing points of view, and avoiding the distractions of phones and computers.
- **work to produce creative and intelligent writing**.
- **turn your work in on time**. Assignments turned in after the due date will be penalized by 25 points for each day that they are late.

We will:

- **prepare for class time** while remaining flexible to respond to your interests, questions, and concerns.
- **approach each day with enthusiasm** and an openness to learning alongside you.
- **communicate clearly and in a timely manner** about assignments, deadlines, and grading criteria.
- **be available** over email and in office hours to discuss issues relating to the course, and to serve as a resource for your reading, thinking, and writing.
- **read your work carefully, provide thoughtful feedback, and evaluate it fairly** according to clear standards.

Schedule of Readings			
	Topics	Readings	Tasks
Week 1	Climate Histories	from Bert Bolin, <i>A History of the Science and Politics of Climate Change</i> from Intergovernmental Panel on Climate Change, Reports 1 and 5	
Week 2		"Climate Change," from <i>Anthropocene: The Human Epoch</i> , by Jennifer Baichwal, Nicholas de Pencier and Edward Burtynsky NPR, "Climate Has Changed Many Times Before. Here's How Humans Handled It"	Lab 1

		Naomi Oreskes and Erik M. Conway, "The Denial of Global Warming"	
Week 3	Ecosystem	Withgott & Laposata Ch 3: Evolution, Biodiversity, and Population Ecology from Edward O. Wilson, <i>The Future of Life</i>	Lab 2
Week 4		Withgott & Laposata Ch 11: Biodiversity and Conservation Biology from <i>BBC: Planet Earth</i> from Elizabeth Kolbert, <i>The Sixth Extinction</i>	Due: Paper 1
Week 5		Withgott & Laposata Ch 4: Species Interactions and Community Ecology Brooke Jarvis, "The Insect Apocalypse is Here: What Does it Mean for the Rest of Life on Earth?" from Lauren E. Oakes, <i>In Search of the Canary Tree: The Story of a Scientist, a Cypress, and a Changing World</i>	Lab 3
Week 6	Global Case 1: The shrinking Arctic	Withgott & Laposata, Ch 18: Global Climate Change Rockwell & Gormezano (2009) The early bear gets the goose: climate change, polar bears and lesser snow geese in western Hudson Bay Paul Walde, "Requiem for a Glacier" Khoa Le, <i>The Lonely Polar Bear</i>	Feb 17: Field Trip to Aquarium of the Pacific
Week 7	Case 2: Coral Bleaching	from Iain McCalman, <i>The Reef: A Passionate History</i> Lauren Tousignant, "The Great Barrier Reef was never dead" Emma Silverman, "The Great Barrier Reef Shows Significant Signs of Recovery" Hughes et al. (2019) Global warming impairs stock-recruitment dynamics of corals Livia Albeck-Ripka, "The Great Barrier Reef Was Seen as 'Too Big to Fail.' A Study Suggests It Isn't."	Lab 4

Week 8	Case 3: California Wildfires	<p>from Fourth National Climate Assessment, Volume II: Impacts, Risks, and Adaptation in the United States</p> <p>Pausas & Keeley (2019) Wildfires as an ecosystem service.</p> <p>from Michael Kodas, <i>Megafire: The Race to Extinguish a Deadly Epidemic of Flame</i></p> <p><i>New York Times</i>, "California Hasn't Seen Fires Like This: Pictures of a State in Flames"</p> <p>Space.com, "In Photos: The 2018 California Wildfires as Seen from Space"</p>	Lab 5
Week 9		<p>MIDTERM EXAM</p> <p>March 4-6: Field Trip to Wrigley Institute, Catalina Island</p>	Midterm
Week 10	Individual	<p>from Dipesh Chakrabarty, "The Climate of History: Four Theses"</p> <p>Withgott & Laposata Ch 8: Human Population</p>	Due: Project Research Question
Week 11		<p>from Elizabeth Rush, <i>Rising: Dispatches from the New American Shore</i></p> <p>Mac McClelland, "Slip Sliding Away"</p> <p>Ashley Cooper, <i>Images from a Warming Planet</i></p> <p>NOAA, Global and Regional Sea Level Rise Scenarios for the United States</p> <p>Marshall Shepherd, "4 Reasons Climate Change Impacts On Agriculture Matter To You"</p> <p>Renee Cho, "How Climate Change Is Exacerbating the Spread of Disease"</p>	Lab 6
Week 12		<p>Withgott & Laposata Ch 6: Ethics, Economics, and Sustainable Development</p> <p>Roy Scranton, "Learning to Die in the Anthropocene"</p>	Lab 7 Due: Project Report
Week 13	Climate Futures	<p>Ridley Scott, <i>Blade Runner</i></p> <p>Margaret Atwood, <i>Oryx and Crake</i></p>	Lab 8
Week 14		Margaret Atwood, <i>Oryx and Crake</i> , cont'd	Field Trip (TBA)

		Richard Conniff, "Rebuilding the Natural World: A Shift in Ecological Restoration" from Gwynne Dyer, <i>Climate Wars</i> Mark Lynas, from <i>Six Degrees: Our Future on a Hotter Planet</i>	Due: Project Paper
Week 15		Timothy Mitchell, "Carbon Democracy" Tim Flannery, "2084: The Carbon Dictatorship?" from Alan Weisman, <i>The World Without Us</i>	Lab 9 Due: Project Op-ed
Week 16		Capstone Project Due	

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