



Instructor: Elisa Warford, Ph.D.

Sections: 66848

Tu/Th 3:30-4:50 p.m. Pacific Time

warford@usc.edu

Zoom Personal Meeting ID: <https://usc.zoom.us/my/elisawarford>

OHE 106N, 213-821-5832

Zoom office hours: T/Th 11:00 a.m.–12:00 p.m., and by appointment.

To attend an office hour, sign into Blackboard, click “USC Zoom,” click “Personal Meeting Room,” and join the meeting. If I’m with another student, I’ll ask you to return in a few minutes.

Course Overview and Objectives

A 2018 report by the U.N.’s Intergovernmental Panel on Climate Change concluded that climate change is occurring earlier and more quickly than scientists previously thought. The report urges a rapid reduction in carbon emissions to avoid devastating consequences to humans, animals, and the environment. To reduce emissions, engineers must develop and improve sustainable technologies in fields such as energy, transportation, buildings, and agriculture. Other technologies will be needed to help us adapt to the new climate. Clearly, engineering plays a vital role in mitigating and adapting to climate change.

But engineering does not happen in a cultural vacuum; it operates in a complex sociotechnical system in which national and global politics, economics, and culture affect the development and implementation of climate change-related technologies. The ethical implications of the technologies must also be considered: for example, communities of color are disproportionately affected by climate and pollution problems. Further, the risks of climate change and the technologies and policies addressing it must be clearly and persuasively communicated to the public and policy-makers.

The theme of our readings, discussions, and writing this semester will thus be the engineering and communication of climate change and sustainability. **Given the current heightened attention to anti-racism, we’ll be focusing especially on environmental justice matters.** You’ll be writing papers, articles and reports, giving oral presentations, and learning to present data in drawings and graphs. For a group project, you’ll review the research on a technology related to climate change and sustainability and its sociopolitical implications.

By the end of this course, you should be able to:

- Write for academic, public, and professional audiences.
- Demonstrate research and documentation abilities at the upper-division level.
- Write accurate, precise technical prose.

- Revise and edit to advanced academic and professional standards.
- Understand and cogently communicate the ethical issues related to climate change and climate change-related technologies.
- Compose a professional report that surveys the research on a climate-change related technology.
- Prepare and give professional oral presentations for a variety of audiences and purposes.
- Use visual aids in both written and oral communications.
- Work collaboratively to research, write, and present information and ideas.
- Typeset papers in LaTeX

Catalogue Description

WRIT 340 Advanced Writing (3-4, FaSpSm): Instruction in writing for various audiences on topics related to a student's professional or disciplinary interests, with some emphasis on issues of broad public concern. *Prerequisite:* WRIT 130 WRIT 140, or WRIT 150. *Required.*

Contact Me

Office hours

I will be available in my personal Zoom room at the hours listed at the top of the syllabus. Follow the instructions there for joining. No appointment is necessary. If these hours are inconvenient for you, please email me for an appointment.

Email

Outside of office hours, email is the best way to contact me (warford@usc.edu). Please email if you have questions about the course or your progress in it. I do my best to respond to emails as quickly as possible (but expect a longer turnaround over the weekend).

Synchronous Zoom Classes

All classes will meet synchronously on Zoom unless otherwise indicated on the class schedule. To join the Zoom meeting, sign into the course on Blackboard, click "USC Zoom" on the lefthand column, and join the meeting for that day. All classes will be automatically recorded and available under USC Zoom for asynchronous viewing (and transcripts).

It is a violation of [USC policy](#) to disseminate the Zoom recordings (or other course notes or recordings) to anyone other than for the purposes of individual or group study or other uses relevant to the class.

Attendance

There is no official attendance policy for this course. However, it is not a lecture course for which you can easily download notes from lecture slides or watch a lecture online. Rather, it is a skills-based course, which means that the class format is largely based on live class discussion and workshopping. Therefore, for you to succeed in the

course, it is important that you attend the synchronous sessions; you will be at a disadvantage—and the class will not be as engaging—if you must rely on recorded Zoom sessions.

However, if you are taking the class from a time zone in which the class time is outside the hours of 7:00 a.m. to 10:00 p.m. in your local time, you are not required to attend the live sessions but rather should watch the Zoom sessions asynchronously. I will work to accommodate your situation.

I also realize that we continue to face challenging circumstances that might prevent you from attending the synchronous sessions. Please reach out to me if you are having difficulties attending so that we can work out a solution. You should also view the Zoom recording and check Blackboard for announcements or schedule changes.

Zoom Etiquette

Cameras: Please make every effort to turn on your camera during our class meetings. This helps me gauge your engagement and comprehension and helps create class community and accountability. I recognize, however, that conditions might prevent you from using the camera, such as technological issues, illness, or your home environment (though many privacy concerns can be ameliorated with virtual backgrounds). Please let me know if you are unable to use your camera for any of these or other reasons.

Classroom environment: Please dress similarly to how you would dress for an in-person class (from the waist up, at least). Shirts are required! If possible, find a quiet place to Zoom and avoid Zooming from bed. I realize, however, that this might not be possible, so I'm flexible on this. You may eat during class, but please do not distract others by doing so.

Chat: While we'll be using the Zoom chat feature as a class, please limit your private chat to matters about the class.

Blackboard

This syllabus (including updates to it as necessary), the paper assignment prompts, course handouts, your grades, announcements, and other course materials will be posted on our course Blackboard space. Please check Blackboard often.

Assignments and Grading

You will be evaluated on the following assignments and activities:

Ethics analysis paper

An academic research paper in which you analyze an ethical issue related to technologies that address climate change or sustainability.

Interdisciplinary technology review

A collaboratively written review on the technological, economic, policy, and/or ethical aspects of a technology related to climate change or sustainability.

Technical description or research summary

The technical description is a brief description of the technology related to climate change or sustainability. The research summary is a summary of a scholarly article related to your technology review. The description or summary will become a part of your literature review.

Op-ed article

An op-ed article in which you address a specific demographic in the public on the usefulness of a certain technology to combat climate change.

Oral presentation of the technology discussed in the op-ed article

Portfolio

Revisions of your ethics paper and op-ed article.

Participation

Your level of involvement and professionalism in the class (see below).

Overall class participation

In general, I will award high participation grades to those who demonstrate an active engagement in the class: attending class regularly and arriving on time, acting professionally in class, doing the readings before class, and making valuable contributions to the class during draft workshops, group work sessions, and class discussions.

You can lose points by being absent, being consistently late, texting during class or taking phone calls, working on other screens, coming to class unprepared, or otherwise exhibiting a lack of engagement.

Grade breakdown

Each assignment will receive a specified number of points, for a total of 1000 points.

Assignment	Points
Ethics paper	200
Interdisciplinary technology review	150
Proposal memo for tech review	75
Technical description for tech review	75
Op-ed article	150
TED presentation	100
Portfolio	200

Assignment	Points
Class participation	50
Total	1000

There is no curve in this course: an A is 94% and above, A- 90-93.5%, B+ 87-89.5% and so on.

Paper grades will be based on a common WRIT 340 rubric, available at <http://viterbi.usc.edu/academics/programs/ewp/writing/>. The rubric for oral presentations can be found on Blackboard.

Rough draft feedback policy

I am happy to provide suggestions on rough drafts. Due to time constraints, I will provide general feedback on entire rough drafts only in a live Zoom conference. If you have specific questions about a paper, such as its introduction, support for a particular paragraph, or citation questions, I will be happy to answer those questions over email.

Paper submissions

Unless otherwise directed, papers will be submitted through Turnitin as PDFs. Formatting should adhere to the guidelines specified for the assignment.

Late papers

Papers are due by 11:59 p.m. on the day specified on the schedule of assignments. However, you will be allowed one late paper without penalty, for whatever reason, for the ethics paper, op-ed article, or portfolio. You have one class period (until 11:59 p.m.) after the original due date to turn in the paper without penalty. Thus, if the paper is due on a Tuesday night, and you use the extension, you will have until Thursday night to submit the paper. After that, it will be penalized one plus- or minus- letter grade for each additional class period it is late. You do not need to inform me in advance that you will be using the extension.

Any other paper turned in late will be penalized one plus- or minus- letter grade for each class period it is late.

Any paper not turned in will result in a 0, which will significantly lower your course grade. *It is therefore always in your best interest to turn in a paper, even if it is very late. I will always accept late papers.*

Academic Integrity

Plagiarism is an issue in both academia and the professional world. With the proliferation of digital resources on the Internet, many of which cut and paste information from

one website to another with no acknowledgement of the original source, it can be difficult for students to understand the importance of clear documentation. However, both students and professionals can face serious consequences for claiming someone else's work as their own.

Because we are in an academic setting, plagiarism (e.g., submitting someone else's work—in whole or in part—as your own, submitting your own work completed for another class without my permission) or falsifying information will not be tolerated. This includes failing to document sources properly, paraphrasing too closely to the original, and, of course, outright stealing. Depending on the violation, according to official University sanctions, you may fail the paper, fail the course, and risk suspension from the school. For an overview of the University's policies concerning academic integrity, including what constitutes plagiarism, see <http://web-app.usc.edu/scampus/>.

Students with Disabilities

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to TA) as early in the semester as possible.

Required Texts and Materials

None.

Recommended Texts

Williams, Joseph M. and Gregory G. Colomb. *Style: Lessons in Clarity and Grace*. 11th ed. Boston: Longman, 2010.

Available at Amazon and in the bookstore.

Tufte, Edward. *Visual and Statistical Thinking: Displays of Evidence for Making Decisions*.

Available as an e-book (\$2) or in print at <http://www.edwardtufte.com/tufte/ebooks>

Available in print at Amazon (\$7)

Course Schedule (subject to change)

Please complete any readings before coming to class on the day they appear on the schedule. Bring the reading to class on these days as well, as we will be working from it. Bring your laptop to class every day.

[BB] indicates reading is available on Blackboard

All classes will meet live on Zoom unless indicated as asynchronous. Zoom recordings will be shared with class.

Unit 1: Ethics of Climate Change

An ethical analysis of an engineering issue or technology related to climate change.

Week 1	Tu 8/18	Introduction to course and climate change communication—environmental justice Get-acquainted exercises Climate change audience paragraph Reading: “Here’s What Extreme Heat Looks Like: Profoundly Unequal,” https://www.nytimes.com/interactive/2020/08/06/climate/climate-change-inequality-heat.html?referrer=masthead
	Th 8/20	<i>Ethics of climate change and the role of technology</i> Reading: Gardiner, “A Perfect Moral Storm” [BB]
Week 2	Tu 8/25	Ethical issues of solar energy, nuclear energy, fossil fuels Reading: Jamieson, “Energy, Ethics, and the Transformation of Nature” [BB]
	Th 8/27	Ethical theory and application Case study: TBA Introduce ethics assignment
Week 3	Tu 9/1	Research day—use Ethics Paper Research Guide Abstracts and introductions—use Abstract Template Abstracts due via email by midnight (warford@usc.edu)
	Th 9/3	Reading: Example article TBA Formatting: Introduction to LaTeX
Week 4	Tu 9/8	Individual Zoom conferences—Sign up for appointment on Google doc

Wed 9/9 Individual Zoom conferences—Sign up for appointment on Google doc

Th 9/10 Workshopping master class
Due in class: Introduction paragraph, one body paragraph (analysis)
Style: Clear subjects

F 9/11 **Online, asynchronous peer review begins. Upload papers by noon.**
Use PeerMark assignment (under Assignments in Blackboard). For help, see <https://help.turnitin.com/feedback-studio/blackboard/basic/student/student-category.htm#PeerMark>

Unit 2: Interdisciplinary Technology Reviews

A collaboratively written report on a technology related to climate change.

Week 5

M 9/14 Peer reviews due by 11:59 p.m.

Tu 9/15 Introduction to interdisciplinary technology review
Select groups and topics
Style: Clear verbs

Th 9/17 **Ethics papers due on Blackboard by 11:59 p.m.**
Group meetings in breakout rooms
Proposal writing

Week 6

Tu 9/22 **Proposals due on Blackboard by 11:59 p.m.**
Group meetings
Meeting notes

Th 9/24 Technical description and research summaries
Style: Cohesion and coherence
Meeting notes due

Week 7

Tu 9/29 Climate change data visualization
In-class work on technical descriptions
Style: Managing emphasis

Th 10/1 **Technical description/research summary rough drafts due in class (pair with group members)**
Draft workshop with group members
Style: Cohesion and coherence

Week 8

Tu 10/6 Work on interdisciplinary reviews

Technical description/research summary due by 11:59 on Blackboard

- Th 10/8 Asynchronous work on your interdisciplinary reviews. Professor Warford available during class time.
- Week 9** Tu 10/13 Online team Zoom conferences with Prof. Warford. Sign up for a time on Google. Send Prof. Warford a Google link to the draft of the report before your conference.

Unit 3: Writing for the General Public: Op-Ed Articles

An opinion piece for a mainstream news outlet about your ethics topic or your technology review topic.

- Th 10/15 Introduction to op-ed assignment
Yale Climate Communication
Reading: Somerville & Hassol, “Communicating the Science of Climate Change” [BB]
- F 10/16 Interdisciplinary reviews due by 11:59 p.m. on Blackboard (tentative due date)**
- Week 10** Tu 10/20 Reading: Stephens, “Tips for Aspiring Op-Ed Writers”
<https://www.nytimes.com/2017/08/25/opinion/tips-for-aspiring-op-ed-writers.html>
Lecture: Editing for concision
Guest lecture—Marc
Professional and student examples
Professional examples
- Th 10/22 **Online, asynchronous peer review of op-eds. Upload op-ed drafts by noon, Pacific Time**
- F 10/23 Peer reviews due by 11:59 p.m., Pacific time**
- Week 11** Tu 10/27 **Op-ed articles due on Blackboard**
Presentation assignment prompt
Video: How to give effective talks

Online Presentations

A 5-minute online presentation on Zoom. The presentation will be based on your op-ed/interdisciplinary review or ethics paper. You will present live on Zoom, but if circumstances don't allow this, then please arrange to record your presentation on Zoom and share it with Prof. Warford.

- Th 10/29 Slide design
Assertion-Evidence template

WRIT 340 Communication for Engineers

Week 12	Tu 11/3	Live Zoom presentations
	Th 11/5	Live Zoom presentations
Week 13	Tu 11/10	Portfolios, class wrap-up
	Th 11/12	Optional portfolio online conferences. Sign up for a time slot on Google:

Deadline for portfolios: TBA