GESM 121: Ethics of Science and Technology

Instructor: Elisa Warford, Ph.D.
Section 35400
Tu/Th 2:00-3:20 p.m. Pacific Time
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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.
   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 min-
   utes.

Science, technology, and society are interrelated in every aspect of our lives—transportation,
communications, politics, health care, and commerce. New technologies and scientific findings
undeniably shape society, such as the way social media platforms have transformed our relation-
ships with others; likewise, society shapes the types of technologies we develop and the scientific
studies we pursue, such as when environmental regulations spur new ways to produce energy.
These technologies and scientific findings influence our decisions on both individual and societal
levels. These decisions have profound ethical implications that must be considered as we enact
public policies related to science and technology. This course asks the broad questions, *what are
the ethical values that underpin the technologies we develop and use? Are these values desirable?
Do the technologies help us pursue* eudaimonia, *Aristotle's "the good life"?*

To answer this question, we will first endeavor to define the terms *science* and *technology*. We'll
also discuss the ethical nature of science and technology: are they inherently value-neutral or val-
ue-laden? Next, we'll familiarize ourselves with prominent Western moral theories to gain a vo-
cabulary of ethics, and then we'll use these terms and concepts to analyze the ethics of some of
society's most pressing technological issues, including the coronavirus pandemic and racial justice.
The issues we discuss will be determined in part by the interests of the class.

Prerequisite(s): None
Co-Requisite/Concurrent Enrollment: None
Recommended Preparation: None

Learning Objectives

By the end of the course, students should be able to

• Identify ethical issues related to science and technology
• Think critically about the interrelationships between science, technology, and the society in
  which they are produced, and the ethical issues inherent in these relationships
• Understand a range of moral theories and apply these theories to ethical issues
• Conduct academic research into ethical issues in science and technology
• Communicate these analyses cogently in oral and written form

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).

A word about emailing your professors
You should think of your emails to me and your other professors as professional communications rather than texts to your friends; that is, your email should represent your best professional self. This means, in part, that you should not use a salutation of "Hey prof!" and you should use an appropriate closing (e.g., "Best regards" or "Regards" if "Sincerely" sounds too formal) and your name. The body of your email should be clear, concise, well organized, and free of grammatical errors.

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 seminar, which means that the class format is largely based on live class discussion. 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 sheets, course handouts, your grades, announcements, Zoom links and recordings, and other course materials will be posted on our course Blackboard space. Please check Blackboard often.

Assignments

The assignments for the course are designed to provide a range of ways for you to develop and exchange your ideas about the course topics.

Summaries
>Two short summaries of class readings, plus a comment and/or discussion question (min. 1-2 pages, double-spaced). You will sign up for the articles on a Google doc.

Discussion forums
>Ten short original posts (minimum 150 words) to discussion forums as indicated on the schedule of classes. You must also respond to at least two original posts (minimum 100 words) for each forum. These posts will be ungraded—you will receive participation points only, though insightful posts and additional posts will boost your general participation grade.
>- Original posts should refer to readings and make other original arguments.
>- Original posts can also ask questions for others to respond to.
>- Original posts and replies can include links to articles, video clips, or other media.

Term paper
>Ethical analysis of a current technology (7-8 pages, double-spaced)

Two mid-term short-answer and essay exams

Final reflective essay

Participation
>This includes your attendance, your preparation of the readings, engagement in class discussions and activities, reading quizzes.

Grading Breakdown

There are 1000 possible points in the course. Course grades will be calculated using a standard breakdown: A=93.5–94% and higher; A-=93.4%–90%; B+=86.5%–89.4%; B=86.4%–83.4%. Point breakdown is as follows:

Two collaboratively written summaries of reading assignments (75 points each)	150
Ten discussion forum posts (5 points each)	50
Two short-answer and essay midterm exams (200 points each)	400
Term paper: Ethical analysis	200
Final reflective essay	150
Participation	50
Total	1000

Assignment Submissions

Unless otherwise directed, summaries, the term paper, and exams will be submitted through Turnitin as PDFs. Papers should be formatted as specified in the assignment.

Late Paper Policy

Because we will be using the summaries in class, they are due by 10:00 a.m. on the day we discuss the article in class. At my discretion, late summaries, exams, and term papers will be penalized one plus- or minus- letter grade for each additional class period they are late. Any paper not turned in will result in a 0. *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/.

Required Texts

Shafer-Landau, Russ (ed.) *Ethical Theory: An Anthology*. 2nd ed. Malden, MA: Wiley-Blackwell, 2012.

Selected readings (available on Blackboard and the internet)

Course Schedule (subject to change)

Please complete the 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.

ET = *Ethical Theory* textbook

BB = Available on Blackboard

> *Unit 1: The ethical nature of science and technology*
> What do we mean by these terms? Is "progress" in science and technology controllable, or is it out of our hands, inexorable? Are science and technology value-neutral or value-laden?

Week 1	*Introduction and definitions*	
	Tu 8/18	Introduction to course Discussion of summaries and possible topics for study Icebreaker—start with a thought problem—trolley problem? Do something with polls?
	Th 8/20	Definitions of technology and science Marx, Leo. "Technology: The Emergence of a Hazardous Concept," *Technology and Culture* 51 (2010): 561-577. [BB]
	F 8/21	**Discussion post #1 due**
Week 2	*Technological autonomy: Does technology control us, or do we control technology?*	
	Tu 8/25	Winner, Langdon. *Autonomous Technology*. Cambridge: MIT Press, 1977. **73-106.** [BB]
	Th 8/27	Jonas, Hans. "Toward a Philosophy of Technology" [BB]
	F 8/28	**Discussion post #2 due**
Week 3	Tu 9/1	*Does technology have values?*

		Winner, Langdon. "Do Artifacts Have Politics?" *The Whale and the Reactor*. Chicago: U Chicago P, 1986. 19-39. [BB]
	Th 9/3	Illies, Christian and Anthonie Meijers. "Artefacts Without Agency," *The Monist*, vol 92, 2009. 420-440. [BB]
	F 9/4	**Discussion post #3 due**
Week 4	Tu 9/8	**Open-book midterm exam #1**

Unit 2: Moral theories and the language of ethics
When we make value judgments in ethics, what are the ethical principles we base them on? How do we decide what is right or wrong, ethical or unethical? In this unit, we explore common ethical theories—and their limitations—and ways to apply the theories to ethical issues.

	Th 9/10	*Consequentialist ethics* Smart, "Extreme and Restricted Utilitarianism," 423-427 [ET] Singer, "Famine, Affluence and Morality," 466-473 [ET]
Week 5	Tu 9/15	Harris, "The Survival Lottery," 474-478 [ET] Hare, "What is Wrong with Slavery," 458-465 [ET]
	F 9/16	**Discussion post #4 due**
	Th 9/17	*Deontological ethics* O'Neill, "Kantian Approaches to Some Famine Problems," 510-520 [ET] Thomson, "Killing, Letting Die, and the Trolley Problem," 543-552 [ET]
Week 6	Tu 9/22	McGinn, "Technology, Demography, and the Anachronism of Traditional Rights" **[BB]**
	F 9/23	**Discussion post #5 due**
	Th 9/24	*Justice, virtue, and care ethics* Rawls, "A Theory of Justice," 581-592 [ET]
Week 7	Tu 9/29	Aristotle, "The Nature of Virtue," 622-624 (Book II, "How a virtue of character is acquired"; "Habituation"; "Virtuous actions versus virtuous character") [ET] Annas, "Being Virtuous and Doing the Right Thing," 676-686 [ET]
	Th 10/1	Tronto, "An Ethic of Care" [BB]

	F 10/2	Discussion post #6 due
Week 8	Tu 10/6	*Moral standing* Singer, "All Animals are Equal," 361-371 [ET] Feinberg, "The Rights of Animals and Unborn Generations," 372-380 [ET]
	Th 10/8	Midterm review
	F 10/9	**Discussion post #7 due**
Week 9	Tu 10/13	**Midterm exam #2**

Unit 3: Topics in Ethics—TENTATIVE SCHEDULE
What are the ethical implications for the technologies that are being developed today?
Now we'll use the theories and concepts we have learned to discuss the ethics of the technologies that are changing the way we experience our world.

	Th 10/15	*Topics in Ethics 1: Ethics of the Pandemic* *Introduce term paper* Ezekiel et al. Vaccine development
Week 10	Tu 10/20	Vaccine/immunity passports
	Th 10/22	
	F 10/23	**Discussion post #8 due**
Week 11		*Topics in Ethics 2: Criminal Justice and Racial Equity (surveillance and predictive algorithms)*
	Tu 10/27	
	Th 10/29	
	F 10/30	**Discussion post #9 due**
Week 12		*Topics in Ethics 3(?): Ethics of Online Classes and Relationships* As we shift to an almost all-online environment with our relationships, what are the ethical implications?
	Tu 11/3	
	Th 11/5	
	F 11/6	**Discussion post #10 due** (summary of term paper)

Week 13	Tu 11/10	Work and online conferences on ethical analyses Evaluations
	Th 11/12	Work on paper; online conferences
Term papers due:		TBD
Final reflective essay:		Tuesday, November 17, 2:00–4:00 Due date TBD