Course # | Tech Ethics

Description

This course explores the moral, social, and political implications of advances in biotechnology, artificial intelligence, and the science of climate change. We will ask how science and technology are transforming the way we work, learn, make friends, raise children, conduct our politics, care for our planet, and understand what it means to be human. Should we edit the genes of our children, extend the human lifespan, and genetically enhance our athletic ability and IQ? Can we use the law to prevent others from doing so? Can algorithms be fair? If a machine learning model generates useful predictions (in medicine, for example, or in criminal law), does it matter if we cannot explain or understand how it arrives at its predictions? In an age of big data and social media, is privacy over? What would a just response to global warming look like? In what ways does uncertainty challenge our ability to understand what we should do about climate change? Why might geoengineering be ethically problematic? Are advances in technology a threat to the future of democracy?

Assignments

(1) *Two Reading Critiques*: Sign up to write a 1,000-word critique of a reading from Parts 1 and 2 of the course. These should both summarize and evaluate the reading. While your evaluations should take a position on the reading— i.e., do you agree or disagree with the author's thesis? —they should also attempt to situate the article in the wider context of both the course as a whole and the section we are studying at that time. A critique does not necessarily mean the same thing as criticism. Strong criticism can often stand in the way of subtlety and depth. If you decide to be strongly critical, you should be sure to be critical in a way that still does justice to the author's argument. Moreover, although you are responsible for summarizing the reading, a summary is not the same thing as a "play-by-play" of the reading. A good summary should be able to convey the essence of the reading without giving all the details. Fill in details only insofar as it is necessary to explicate the essential points. The best way to approach these critiques is to think of yourself as the teacher. What should students know from your reading? What questions should they ask about it? Finally, your critique should introduce questions and topics that would be useful and important for the class to take up in discussion. On the day that we cover the reading you critiqued, you should also be prepared both to summarize the reading and to facilitate the class's discussion of this material: you will become the teacher! Also, if writing on more than one reading, you should feel free either to concentrate entirely on one reading or to write an integrative analysis of all of them. This should be posted to the course site forty-eight hours before the class on which the reading is due to give those who will critique it time to write their critiques.

(2) *Two Peer Critique Responses*: In order further to facilitate productive discussion in class, you will also be responsible for writing two 300-word critiques of your peers' critiques over the course of the semester. These should evaluate and react to the main arguments that your classmate has made in their critiques. You should answer the following kinds of questions: Do they misunderstand the reading? Do they overstate the author's case? Do they understate it? Is their disagreement justified? You should email me these critiques before the beginning of the class on which we will cover this reading. This should also be posted to the course site for all to access.

(3) *Pre-class Polling*: Regardless of whether you are writing a critique for the meeting, everyone will be asked to record their tentative position on all the reflection questions for each class meeting. Responses will not be shared in a publicly identifiable way and will only be used to help set the stage for each class discussion.

(4) *Simulations*: Three in-class simulation will take place throughout the semester. In addition to participating in these activities, you will be asked to respond to several short reflection questions about the experience.

(5) *Personal Action Project*: At the beginning of "Part 3" of the semester, you will be asked to reflect on your personal impact on climate change. Decide whether or what action(s) to take to address your personal contribution to climate change and write a short paper explaining your choice. At the end of the semester, you will reevaluate your choice, again writing a short paper reflecting on this assignment. (300 – 500 words each.)

(6) *Final Exam*: A 24-hour take home exam in which you will be presented with a case structurally like those discussed in the course but focusing on a new technology. You will be asked to identify the ethically salient features of the case from each of the major ethical perspectives (consequentialism, deontology, virtue ethics), as well as the

judgments that must be made within each framework in order to arrive at an actionable conclusion. 1000 – 1500 words.

Course Schedule

1. The Ethics of Human Bio-enhancement

01.
Introduction: Tech Ethics and Responsibility
- Hans Jonas: "Technology and Responsibility"
- Carl Elliot: *Better Than Well*, chapter 4 (beta blockers)

02.
Designer Babies: Embryo Screening & Cloning
- Sarah Zhang (*The Atlantic*): "The Last Children of Down Syndrome"
- David Plotz (*Slate*): "The Rise of the Smart Sperm Shopper"
- President's Council on Bioethics (2002): "The Ethics of Cloning to Produce Children"

03.
Designer Babies: Genetic Engineering
- Genetic Engineering Will Change Everything Forever – CRISPR [YouTube]
- McDougall, "Acting Parentally: An Argument Against Sex Selection"
- Julian Savulescu: "Procreative Beneficence: Why We Should Select the Best Children"

04.
Eugenics 2.0?
- Michael Sandel (*The Atlantic*): "The Case against Perfection: Ethics in the Age of Genetic Engineering"
- Allen Buchanan, et al.: "Eugenics and Its Shadow," in *From Chance to Choice: Genetics and Justice*. Ch. 2

05.
Enhancing Our Bodies
- Carl Elliot: *Better Than Well*, ch. 1.
- President's Council on Bioethics (2003): *Beyond Therapy Report*, ch. 3.
- Savulescu, Foddy, and Clayton: "Why We Should Allow Performance Enhancing Drugs in Sports"

06.
Enhancing Our Minds & Souls
- Maria Konnikova (*The Atlantic*): "Hacking the Brain: How we might make ourselves smarter in the future"
- Ronald Bailey: *Liberation Biology*, chapter 7
- Persson and Savulescu: "Unfit for the Future?: Human Nature, Scientific Progress and the Need for Moral Enhancement"

07.
Life Extension
- Larry Temkin: "Is Living Longer Living Better?"
- [Simulation: Life Extension]

2. Ethics and A.I.

08.
Algorithmic Decisionmaking
- Jonathan Zittrain (*The New Yorker*): "The Hidden Costs of Automated Thinking"
- David Weinberger (*Wired*): "Our Machines Now Have Knowledge We'll Never Understand"
- Bostrom and Yudkowsky: "The Ethics of Artificial Intelligence"

Racist A.I.?

09.
- Helen Nissenbaum: "How computer systems embody values."
- Julia Angwin et al. (*Pro Publica*): "Machine Bias: There's software used across the country to predict future criminals. And it's biased against blacks."
- Angwin and Larson (*Pro Publica*): "The Tiger Mom Tax: Asians Are Nearly Twice as Likely to Get a Higher Price from Princeton Review"

Predictive Policing

10.
- Lum and Isaac: "To Predict and Serve?"
- Anna Maria Barry-Jester, Ben Casselman and Dana Goldstein (*The Marshall Project*): "The New Science of Sentencing: Should prison sentences be based on crimes that haven't been committed yet?"
- Reuben Binns: "Algorithmic Accountability and Public Reason"

Love in the Time of Algorithms

11.
- Jeannie Suk Gerson: "Sex Lex Machina: Intimacy and Artificial Intelligence"
- Shelly Turkle: *Alone Together*, Introduction ('Alone Together') & Chapter 3 ('True Companions')

Social Media, 'Fake News' & Regulation

12.
- Claire Wardle, "More than Fake News" [YouTube]
- Will Knight (*MIT Tech Review*): "Fake America Great Again"
- [Simulation: Regulating Social Media]

Social Credit Systems

13.
- Simina Mistreanu (*Foreign Policy*): "Life Inside China's Social Credit Laboratory"
- Christina Larson (*Technology Review*): "Who needs democracy when you have data?"
- Liu Caiyu (*Global Times*): "Social credit system to restore morality"
- Shen Yi (*Global Times*): "Ideology tints West's view of China's technology"

Automation

14.
- D. H. Autor: "Will automation take away our jobs?" [TED talk]
- John Danaher: "Will Life Be Worth Living in a World Without Work? Technological Unemployment and the Meaning of Life"

Robot Rights?

15.
- Joanna Bryson: "Robots Should Be Slaves"
- Tyler Jaynes: "Legal Personhood for Artificial Intelligence: Citizenship as the Exception to the Rule"

The Singularity & Machine Morality

16.
- Sam Harris: "Can we build AI without losing control over it?" [TED talk]
- Nick Bostrom: "What happens when our computers get smarter than we are?" [TED talk]
- Allen, Varner, and Zinser: "Prolegomena to any future artificial moral agent"

The Future of Democracy

17.
- Zeynep Tufekci: "Machine intelligence makes human morals more important" [TED talk]
- Yuval Noah Harari (*The Atlantic*): "Why Technology Favors Tyranny"
- John Danaher: "The Threat of Algocracy: Reality, Resistance and Accommodation"

	3. Responding to Climate Change
18.	**Distributive Justice** ▪ Henry Shue: "Global Environment and International Inequality"
19.	**Intergenerational Justice: The Identity Problem** ▪ Derek Parfit: "Energy Policy and the Further Future: The Identity Problem"
20.	**Intergenerational Justice: Intergenerational Equity** ▪ Gareth Davies: "Climate Change and Reversed Intergenerational Equity: The Problem of Costs Now, for Benefits Later"
21.	**What We Owe to Polar Bears** ▪ Clare Palmer: "Does nature matter? The place of the nonhuman in the ethics of climate change"
22.	**Uncertainty & Risk** ▪ Kelsey Piper (*Vox*): Is climate change an "existential threat" — or just a catastrophic one? ▪ [Simulation: Gene Drives]
23.	**Mitigation vs. Adaptation** ▪ Climate Reality Project: "Climate Adaptation vs. Mitigation: What's the Difference, and Why Does it Matter?" ▪ Dale Jamieson: "Adaptation, Mitigation, and Justice"
24.	**Geoengineering** ▪ Stephen Gardiner: "Ethics and Geoengineering: An Overview"