

# Philosophy of Technology

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**Semester:** Spring 2025  
**Room:** 225 Miner Hall

**Time:** Mon./Wed. 9:00-10:15am  
**Course Website:** Canvas

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**Instructor:** Jamee Elder  
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**Office Hours:** Mon. 1:30-3:30pm  
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**Office Hours:** TBA  
**Location:** TBA

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*This syllabus was last updated January 1, 2025.*

## 1 Course Description

Technology is integrated into every aspect of our lives. Computers of all shapes and sizes are part of our daily routines, and we now socialise, shop, do our banking, get our news, and even meet potential dates online. Medical innovations have the capacity to alter the course of a person's life, but access to life-saving interventions is contingent on a patient's physical and social position in the world. Emerging AI applications such as Stockfish, IBM Watson and ChatGPT have the ability to perform many tasks as well or better than humans. In this course we will explore how emerging technologies transform the world we live in and how ethical issues arise through these interactions. In doing so, we will be guided by questions such as: what values shape the design and implementation of a technology? Whose life is made better and whose life is made worse? To what extent do we control emerging technologies, and to what extent does it control us? Some topics that we will cover include: social media and identity; privacy and big data; artificial intelligence; and human augmentation. Drawing from a range of literature, this course will engage students in interdisciplinary discussions about the opportunities and pitfalls of emerging technologies.

## 2 Learning Goals

By the end of this course you will be able to:

- Craft and critique philosophical arguments.
- Apply philosophical theories and arguments to real-world applications related to emerging technologies.
- Appreciate the relationship between ethical and social values (e.g., toward the value of work, distribution of resources, accessibility) and the design and implementation of technology.
- Identify morally-salient features of case studies involving emerging technologies.
- Communicate clearly about the ethics of emerging technologies.

## 3 Course Requirements

### 3.1 Class Citizenship (15%)

Students are expected to carefully study all required readings for each class and come prepared to discuss them, raise questions about them, and draw attention to their strengths and weaknesses.

In addition, students will complete pre-class reading journals, end-of-class one-minute papers, and two in-class workshops. These activities will not be graded, but will contribute to your overall grade for 'class citizenship'.

### 3.2 Short Papers (40%)

You will complete two short papers of **1000-1500 words** in length, responding to a specific question or reacting to a short reading.

- Short Paper 1 (20%): Due **Friday 14 February** by **5:00pm**.
- Short Paper 2 (20%): Due **Friday 14 March** by **5:00pm**.

### 3.3 Final Paper (45%)

You will complete a final research paper of **2000-2500 words** on a topic of your choice, related to the topics discussed in class.

This project will be broken up into several steps:

1. A draft abstract and annotated bibliography (15%)
  - due **Friday 4 April** by **5:00pm**
2. A first draft presenting your main arguments (this should be submitted via canvas by the due date but will not be graded. Instead, you will get feedback via in-class peer-review)
  - due **Friday 18 April** by **5:00pm**
3. Final paper (30%)
  - due **Friday 2 May** by **12:00pm** (our designated exam period)

Further instructions for each step of this paper project will be distributed separately.

**Attendance:** You should attend every class. However, I understand that extenuating circumstances arise that can make this difficult. If you cannot attend a class or will be more than 15 minutes late, please let me know.

### 3.4 Letter Grade Conversion

$\geq 93.00$	A	73.00 - 76.99	C
90.00 - 92.99	A-	70.00 - 72.99	C-
87.00 - 89.99	B+	67.00 - 69.99	D+
83.00 - 86.99	B	63.00 - 66.99	D
80.00 - 82.99	B-	60.00 - 62.99	D-
77.00 - 79.99	C+	$\leq 59.99$	F

#### What do these grades mean?

According to Tufts, letter grades such as As, Bs, and Cs, translate as follows:

- A. Superior work.
- B. Meritorious work.
- C. Work without marked merit or defect.
- D. Unsatisfactory work but allowable for credit, subject to the restrictions specified under the requirements for graduation. Some departments disallow credit toward the concentration requirement.

In this class, work in the A range must be clear, accurate and insightful, both in the interpretation of other texts and in their arguments for original claims. (Note: A final grade of A+ will be given rarely, and only for consistently exceptional work). Work in the B range is good work that is mostly clear, accurate, and may offer good analysis that lacks the original insight of an A paper. Work in the C range is satisfactory work that may be unclear in places, contain inaccuracies, or lack original analysis. Assignments in the D range may be incomplete, or deficient in clarity and accuracy.

## 4 Text(s)

There are no required textbooks. All required course readings will be uploaded to Canvas or will be freely available online. In some cases, you may need to use your Tufts credentials to access something through the Tufts library. Please feel free to ask me if you need help accessing any of the readings.

## 5 Course Outline

All readings listed here are subject to change. The current version of this document will always be available on **Canvas**.

## Summary of Topics

		Date	Topic
Preliminaries	Week 1	15 January	Intro to philosophy of technology
		Week 2	20 January
	22 January		Ethical frameworks
	27 January		Technomoral virtues
	Social Media	Week 3	29 January
Week 4			3 February
		5 February	Distraction and morals
		Week 5	10 February
12 February			Data as surveillance
Data & Privacy	Week 6	19 February	Surveillance and politics
		20 February	Virtues in the panopticon
	AI & Robots	Week 7	24 February
26 February			Technological unemployment
Week 8		3 March	Machine learning & understanding
		5 March	Algorithmic bias & fairness
Week 9		10 March	NO CLASS (JE AT CONFERENCE)
		12 March	Robots at war and at home
Spring Break			
Human Augmentation	Week 10	24 March	<i>Workshop: Bibliographies</i>
		26 March	Human Enhancement
	Week 11	31 March	Disability, Transhumanism
		2 April	Gene editing and designer babies
	Week 12	7 April	Enhancement worth wanting
Week 13		9 April	Surveillance and objectivity
	14 April	Truth, Language, and Thought	
	16 April	The Extended Mind	
Objectivity, Values, & Design	Week 14	21 April	NO CLASS (PATRIOTS' DAY)
		23 April	<i>Peer feedback session</i>
Wrapping Up	Week 15	28 April	Wrap-Up and Review

## Detailed Schedule

Note that all major assignment deadlines appear in the appropriate place in the following course outline, indicated by a “\*\*\*”

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### Unit 0. Introduction & Preliminaries

#### Week 1:

Monday: NO CLASS

Wednesday: Introduction to philosophy of technology

- Introductions & preliminaries (no required reading)

#### Week 2:

Monday: NO CLASS

Wednesday: Ethical frameworks

- Michael J. Quinn. *Ethics for the Information Age*. Pearson, 7th edition, 2017, Chapter 2, sections 2.6-2.11 (pp. 67-94)

#### Week 3:

Monday: Technomoral virtues

- Shannon Vallor. *Technology and the Virtues: A Philosophical Guide to a Future Worth Wanting*. Oxford University Press, New York, 2016, Introduction and Chapter 6, “Technomoral Wisdom for an Uncertain Future: 21st Century Virtues”
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### Unit 1: Social Media

Wednesday: Connection and Isolation

- Sherry Turkle. *Alone Together: Why We Expect More From Technology and Less From Each Other*. Basic Books, New York, NY, 2011, Chapter 8 (pp. 151-170)

#### Week 4:

Monday: Parasocial relationships

- Sci Guys Podcast, *The Science of Parasocial Relationships (with Shaaba.)*. Watch: <https://youtu.be/c9YJKLxd2UU> or listen wherever you get your podcasts. Episode webpage: <https://bit.ly/45znnG2>.
- OPTIONAL: Shaaba Lotun, Veronica M Lamarche, Spyridon Samothrakis, Gillian M Sandstrom, and Ana Matran-Fernandez. Parasocial relationships on youtube reduce prejudice towards mental health issues. *Scientific reports*, 12(1):16565–16565, 2022

Wednesday: Distraction and morals

- Shannon Vallor. *Technology and the Virtues: A Philosophical Guide to a Future Worth Wanting*. Oxford University Press, New York, 2016, Chapter 7, “New Social Media and the Technomoral Virtues”
- Mark Robinson, “Is Your Cellphone Destroying Your Morals? Devices, Distraction and the Impossible Ethics of Modern Life”, <https://bit.ly/30xn73i>

### Week 5:

Monday: Social media and democracy

- Regina Rini. Weaponized Skepticism: An Analysis of Social Media Deception as Applied Political Epistemology. In *Political Epistemology*. Oxford University Press, 2021. doi: 10.1093/oso/9780192893338.003.0003, Chapter 6

## Unit 2. Data Security & Privacy

Wednesday: Data as surveillance

- Bruce Schneier. *Data and Goliath*. W. W. Norton and Company, New York, NY, 2015, Chapters 1 & 2: “Data as a By-product of Computing” and “Data as Surveillance” (pp.15-38)

\*\*\* **Friday 14 February: Submit First Short Paper by 5:00pm (via Canvas)**

### Week 6:

Monday: NO CLASS

Wednesday: Surveillance and politics

- Bruce Schneier. *Data and Goliath*. W. W. Norton and Company, New York, NY, 2015, Chapters 7 & 10: “Political Liberty and Justice” and “Privacy” (pp.107-126, pp.147-157)

Thursday: Virtues in the panopticon

- Chapter 8 “Surveillance and the Examined Life: Cultivating the Technomoral Self in a Panoptic World”

## Unit 3. Artificial Intelligence & Robots

### Week 7:

Monday: AI and sentience

- John R. Searle. Minds, brains, and programs. *Behavioral and Brain Sciences*, 3(3): 417–424, 1980. doi: 10.1017/S0140525X00005756

Wednesday: Technological unemployment

- Michael J. Quinn. *Ethics for the Information Age*. Pearson, 7th edition, 2017, Chapter 10, section 10.2 (pp.458-69): Automation and Employment.

- Angela Watercutter. AI, the WGA Strike, and What Luddites Got Right. *Wired*, 2023. URL <https://www.wired.com/story/wga-strike-artificial-intelligence-luddites/>

### Week 8:

Monday: Machine learning and understanding

- Emily Sullivan. Understanding from Machine Learning Models. *The British journal for the philosophy of science*, 73(1):109–133, 2022

Wednesday: Bias and Fairness

- Watch “Algorithmic Bias and Fairness: Crash Course AI #18”
- Reuben Binns. What can political philosophy teach us about algorithmic fairness? *IEEE Security & Privacy*, 16(3):73–80, 2018. doi: 10.1109/MSP.2018.2701147

### Week 9:

Monday: NO CLASS

Wednesday: Robots at war and at home

Shannon Vallor. *Technology and the Virtues: A Philosophical Guide to a Future Worth Wanting*. Oxford University Press, New York, 2016, Chapter 9 “Robots at War and at Home: Preserving the Technomoral Virtues of Care and Courage”

\*\*\* Friday 14 March: Submit Second Short Paper by 5:00pm (via Canvas)

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★ SPRING BREAK ★

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### Week 10:

Monday: *In-class Workshop: annotated bibliography*

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## Unit 4. Human Augmentation

Wednesday: Human enhancement

- Eric Juengst and Daniel Moseley. Human Enhancement. In Edward N. Zalta, editor, *The Stanford Encyclopedia of Philosophy*. Metaphysics Research Lab, Stanford University, Summer 2019 edition, 2019

### Week 11:

Monday: Disability & transhumanism

- Watch: *Fixed: the science/fiction of human enhancement*. Making Change Media, 2013. Access with Tufts credentials at: <https://www.kanopy.com/en/tufts/video/144970>

Wednesday: Gene editing and designer babies

- Andrew Niccol. *GATTACA*. Image Entertainment, 1997

**\*\*\* Friday 4 April: Submit Annotated Bibliography Assignment by 5:00pm (via Canvas)**

**Week 12:**

Monday: Enhancement worth wanting

- Chapter 10, “Knowing What to Wish For: Technomoral Wisdom and Human Enhancement Technology”

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**Unit 5. Objectivity, Values, & Design**

Wednesday: Surveillance and objectivity

- Watch: Theo Anthony. *All Light, Everywhere*. Neon, 2021. Access with Tufts credentials at: <https://www.kanopy.com/en/tufts/video/12333392>

**Week 13:**

Monday: Truth, language, and thought

- ‘The Truth of Fact, the Truth of Feeling’ in Ted Chiang. *Exhalation*. Alfred A. Knopf, New York, first edition. edition, 2019 (short story)

Wednesday: The extended mind

- Andy Clark and David Chalmers. The Extended Mind. *Analysis*, 58(1):7–19, 01 1998. doi: 10.1093/analys/58.1.7

**\*\*\* Friday 18 April: Submit Research Paper Draft by 5:00pm (via Canvas).**

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**Week 14:**

Monday: NO CLASS

Wednesday: *Peer Feedback Session*

- Your partner’s draft

**Week 15:**

Monday: Wrap up and review

- No required reading

**\*\*\* Friday 2 May: Submit Final Paper by 5:00pm (via Canvas).**



## 6 Course Policies

### 6.1 Late Work & Extensions

Please let me know as soon as possible (and ideally *before* the deadline) if you know that you will struggle to meet a deadline. When you do, we can determine a reasonable timeline for you to complete the assignment or, under some circumstances, an alternative way for you to demonstrate your learning

***All students are entitled to one no-questions-asked 24-hour extension for each major assignment*** (short papers, annotated bibliography, final paper). You still need to let me know if you want to use one of these extensions!

***Further extensions*** are available at my discretion. I promise to be as flexible as possible in offering reasonable extensions.

Late work without an extension will be penalized by 1/3 of a letter grade per day (so, e.g., an A- handed in one day late would become a B+).

## 7 Other Policies and Resources

### 7.1 Tufts Academic Resources

The **StAAR Center** offers a variety of FREE resources, available to *all students*. Students may make an appointment to work on any writing-related project or assignment, attend subject tutoring in a variety of disciplines, or meet with an academic coach to hone fundamental academic skills like time management or overcoming procrastination. Students can make an appointment for any of these services by visiting [go.tufts.edu/TutorFinder](https://go.tufts.edu/TutorFinder), or by visiting their website: <https://students.tufts.edu/staar-center>

### 7.2 Accommodations

Tufts is committed to providing equal access and support to all qualified students through the provision of reasonable accommodations. If you have a disability that requires reasonable accommodations, you are encouraged to contact the StAAR Center at:

- [StaarCenter@tufts.edu](mailto:StaarCenter@tufts.edu) or
- 617-627-4539.

Please be aware that accommodations cannot be enacted retroactively, making timeliness a critical aspect for their provision.

In addition, students with or without a formally documented disability are warmly encouraged to contact me about accommodations. I am committed to collaborating with students to ensure that my course does not present unreasonable or inequitable barriers to their success.

### 7.3 Religious Accommodations

Tufts University faculty, staff, and administration highly value and acknowledge the religious diversity of its student body. Students seeking religious accommodations related to their holy days are encouraged to collaborate with faculty to make arrangements during the

first week of each semester. The religious holy days calendar, including the holy days policy from the Faculty Handbook, is available [here](#) for your reference. Students seeking additional support may refer to the University Religious Accommodations Policy, available [here](#). The University Chaplaincy is also available to respond to questions on religious observances; their contact information is available [here](#).

## 7.4 Academic Integrity

All members of the Tufts community are responsible for integrity in their own behavior and for contributing to an overall environment of integrity at the university. You can find resources relating to academic integrity in the Tufts Academic Integrity handbook ([click here](#)). It is your responsibility to familiarize yourself with the requirements of ethical behavior and academic work as described in Tufts' Academic Integrity handbook.

If you ever have a question about the expectations concerning a particular assignment or project in this course, please ask me for clarification.

The Faculty of the School of Arts and Sciences and the School of Engineering are required to report suspected cases of academic integrity violations to the Dean of Student Affairs Office. If I suspect that you have cheated or plagiarized in this class, I must report the situation to the dean.

## 7.5 Guidelines for the use of AI

In this course, you may use AI tools for your learning, just as you can collaborate with your peers for things such as brainstorming, getting feedback, revising, or editing of your own work. However, you may not submit any work generated by an AI program as your own. This is a violation of Tufts Academic Integrity policies.

To help guide you in the use of AI in this course, consider the following guidelines:

- Familiarize yourself with AI tools, including that: Bias is embedded in the creation of these systems and in their output and you may encounter harmful language and ideas; AI platforms can produce inaccurate or false information with confidence (so called hallucinations, e.g, it frequently invent false references); Text from AI may closely mimic human knowledge, understanding and even human emotions; Many of these tools retain the rights to use your information and the content shared with them in a variety of ways.
- Cite all AI tools when used or referred to in assigned work. See [How to Cite ChatGPT](#) from the APA & [How to Cite Generative AI](#) from the MLA. Identify the way it contributed to your work. For example, you can include a statement that you asked an AI to “identify any grammatical or spelling errors” in your writing, or you used it to get started in thinking about topics for your paper. Any statement directly generated by an AI system should be in quotes.
- If you have questions please ask via email, in office hours or during class.

## 7.6 Student Support, Including Mental Health

As a student, there may be times when personal stressors or difficulties interfere with your academic performance or well-being. The [Dean of Student Affairs Office](#) offers

support and care to undergraduates and graduate students who are experiencing difficulties, and can also aid faculty in their work with students. In addition, through Tufts' **Counseling and Mental Health Service** (CMHS) students can access mental health support 24/7, and they can provide information on additional resources. CMHS also provides confidential consultation, brief counseling, and urgent care at no cost for all Tufts undergraduates as well as for graduate students who have paid the student health fee. To make an appointment, call 617-627-3360. Please visit the CMHS website: <http://go.tufts.edu/Counseling> to learn more about their services and resources.

## **8 Other Resources**

### **8.1 The Stanford Encyclopedia of Philosophy**

Find it online here: <https://plato.stanford.edu/>

The SEP is a good place to start when learning about a new philosophical topic. The SEP entries are written by experts in that area and generally provide a good overview of the issues.

A good next step is often to follow up by reading the sources that the SEP entry sites on a particular issue.