

# Phil 175 Philosophy of Technology Syllabus Spring 2021

Credits: 4 | Gen Ed: SB | Prerequisites: None

## Instructor

Tim Juvshik  
South College E416  
[tjuvshik@umass.edu](mailto:tjuvshik@umass.edu)

Time: T-Th 2:30-3:45  
Room: South College E470  
Office Hours: By Appointment

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## Course Description

This course explores a number of philosophically and ethically significant questions about the nature of technology and how it interacts with, improves, harms, and ultimately structures our individual lives and society as a whole. Technological development has increased markedly since the Industrial Revolution and within the span of two centuries we have seen society become dependent on artificial sources of energy, mechanized production, and globalized communication. A proliferation of new technologies is increasingly altering the human experience, from driverless cars and virtual reality, to artificial intelligence, genetic and geo-engineering, ubiquitous internet connectivity, and social media. Questions that may be explored in this course include, but are not limited to: (a) What is technology? (b) What's the relation between science and technology? (c) Is technology necessarily good or bad for human flourishing or is it neutral? (d) Do we need a distinctive ethics for technology or particular technologies? (e) Do designers have special responsibility for how the technologies they create are used? (f) Should we geo-engineer the planet to combat climate change? (g) Should we artificially improve the human condition through genetic enhancement? (h) Is your smartphone a part of you? (i) When a driverless car hits someone, who is responsible? (j) Should we grow meat in labs rather than factory farms? (k) Can sex in a video game or with a robot ever be wrong? (l) Does social media help us live more authentically or does it structure our self-identity in harmful ways? The primary goal of this course is to engage in a range of philosophically and ethically significant questions about technology and our relation to it. The answers to these questions lie somewhere between two common attitudes towards technology: an unbridled optimism that technology will improve our lives and a romanticized Ludditism that desires a return to pre-technological human society. While there is much to appreciate and much to criticize about modern technology, both appreciation and criticism need to be tempered with critical and rational reflection, which we will pursue in this course.

## Course Goals and Learning Objectives

General Education courses are directed towards four categories of learning: Content, Critical Thinking, Communication, and Connections. In order to understand the goals of this course, it is helpful to think of them in terms of their relationship to these categories.

### *Content*

This class provides an introduction to central problems in the philosophy of technology through the analysis of historical developments of technology, current modern technology, and emerging and future technologies. Philosophical methods of reasoning, argumentation and conceptual analysis will be used to study how technology affects and structures our lives individually and society as a whole. The course will include an overview of major philosophical theories of technology from ontological, epistemic, ethical, and aesthetic perspectives, and what these theories say about what technology is, its relation to science, personal identity, culture, the environment, and humans' place in nature. We will

investigate how technology, such as social media and communication devices, affect and form our identity, whether technology determines human nature and thus distinguishes us from animals, and how different technologies mediate our relationships to ourselves, others, and our environment, both natural and socio-cultural. Given the rapidly changing nature of technology, we will look at how emerging and future technologies, such as driverless cars and AI, are constantly redefining these relationships.

### *Critical Thinking*

This course introduces students to a variety of philosophical methods and skills, with a focus on critical analysis of arguments and theories. It offers a diversity of critical perspectives on technology and technological development and its effects on individuals and societies that will expose students to core concepts in philosophy of technology, allowing students to synthesize diverse viewpoints and apply them to current, emerging, and future technologies.

### *Communication*

Throughout the course, students will have the opportunity to develop argument reconstruction and analysis skills and learn how to communicate critical evaluations of arguments and theories, orally and through written work. Students will also learn to effectively and clearly communicate their own views on topics and offer rational justification for their positions through weekly reading responses, short written assignments, and papers. Students will be able to apply the concepts, knowledge, and skills acquired in this class to new and future technologies and communicate their findings to others through oral discussion.

### *Connections*

A major underlying theme of the course is how technology is constantly evolving and concomitantly redefining and restructuring human identity, society, and relationships. Thus, students will develop the ability to apply the concepts and philosophical methods learned in this course to current emerging technology, such as virtual reality, genetic engineering, and geo-engineering, allowing them to assess its value and risks to individuals, society, and the environment. Students will also be able to identify and evaluate the role of various technologies in their own life and their larger socio-cultural context, as well as think more clearly and critically about questions concerning technology and their own use of it.

With the importance of the issues covered, in particular the ways technology impacts and changes human life, nature, and society, the focus on critical analysis and diverse perspectival thinking, and the stress on clear written and verbal communication, this course meets the goals of the General Education Social and Behavioral Sciences designation.

### **Grading**

Letter grades (corresponding to a 4-point scale: A=4, A-=3.7, B+=3.3, etc.) will be based on the following:

SNTs	20%
Short Writing Assignment 1	10%
Short Writing Assignment 2	10%
Short Writing Assignment 3	10%
Emerging Technology Paper	20%

Take-Home Exam	25%
Participation	5%

Final letter grades will be calculated by converting the combined weighted totals of the above categories to letter grades using the standard UMass conversion scale:

A=93-100%	A-=90-92.99%	B+=87-89.99%
B=83-86.99%	B-=80-82.99%	C+=77-79.99%
C=73-76.99%	C-=70-72.99%	D+=67-69.99%
D=60-66.99%	F=0-59.99%	

## Readings

There is no required textbook for this class. All course readings are available on Moodle in PDF. Any supplemental course materials (e.g. podcasts, YouTube clips, etc.) will likewise be provided on the course Moodle page.

## Assignments

### *SNTs*

The purpose of these assignments is to help you read articles more effectively, and to provide accountability for completing the readings. “Socratic Note Taking” is named after the philosopher Socrates, who famously taught by asking questions. In these notes, you will write questions as you read. Think of it as a reading quiz that you create yourself, along with an answer key. A set of notes is due for each reading. Students will be required to produce three questions and answers per reading. Collectively, these are worth 20% of your grade and they will be graded out of 3 points (0.5 for each question and answer). You can miss 5 SNTs without penalty. They are due by the start of the class in which we are discussing the relevant reading. Complete and submit your questions/answers on Moodle. I will provide sample questions/answers at the beginning of term.

### *Short Writing Assignment 1*

The first short writing assignment will involve you researching and describing the development and extinction of a historical piece of technology which is no longer currently in (widespread) use (e.g. the phonograph, horse-drawn carriages, cassette player, lead pipes, etc.). The purpose is for you to explore some piece of technology that developed in a particular socio-historical context and subsequently disappeared through technological change while relating this to the appropriate course readings. This assignment is worth 10% of your final grade and will be approximately 1-2 pages.

### *Short Writing Assignment 2*

The second short writing assignment will focus on a short story, “The Truth of Fact, The Truth of Feeling” by Ted Chiang. For this assignment, you will read Chiang’s story and reflect on the changes to both society and interpersonal relationships that the two technologies discussed cause and critically reflect on whether these changes were positive or negative for both society and individual relationships. This assignment is worth 10% of your final grade and will be approximately 1-2 pages.

### *Short Writing Assignment 3*

There is a third short writing assignment of a more informal nature which will involve you abstaining from a particular kind of technology for one week and reporting and reflecting on your experience

with its absence from your life (e.g. electric toothbrush, social media, car, Fitbit, etc.). The purpose of this assignment is to get you to reflect on the central role of technology in your everyday life. These writing assignments will be structured like a journal, are worth 10% of your final grade, and will be approximately 1-2 pages.

### *Emerging Technology Paper*

Students will write a short paper (2-3 pages), that chooses an emerging technology as a case study, worth 20% of the final grade and due around mid-semester. As they become more advanced, various technologies such as genetic and geo-engineering, AI (Siri, Alexa), virtual reality, and driverless cars pose new ethical challenges. Students will report on the moral implications and difficulties their chosen emerging technology poses using the philosophical concepts and theories we learned in class, thereby drawing connections between the course content and concrete emerging technologies that are restructuring daily life. Students will then give recommendations for future researchers, designers, users, and policy makers on how to address these challenges. Students will have the opportunity to discuss ideas in class in small groups.

### *Take-Home Final Exam*

There is a final, take-home, open book exam worth 25% of your final grade. This exam will consist in reading comprehension and critical reflection questions based on a selection of the course readings. The exam will be distributed to students during the final week of class and will be due during the exam period.

### *Participation*

There is a participation component, worth 5% of your final grade. Your showing up and being attentive and engaged in lecture will be reflected in your participation grade. Attending class is required to get full marks since this is required to actively participate. You have two 'freebie' absences which don't need to be justified. Regularly participating by asking questions, making comments and otherwise engaging with me and your peers will count towards your participation marks. You may lose marks if you are disruptive in lecture (on your phone, talking out of turn, regularly arriving late, etc.). Students may gain participation marks by coming to office hours.

*Please note:* do *not* come to class if you have any Covid-19-like symptoms or have tested positive or if someone close to you has tested positive. This will *not* affect your attendance and participation and we can find ways to make sure you are caught up on coursework. Given the uncertainty of the pandemic I'm committed to being flexible as the need arises. As per HIPAA requirements, any personal medical information you relay to me will be kept confidential.

## **Class Expectations**

- **Course Readings:** Students should do all the assigned readings *before* the class in which they're discussed. All readings are available on the course webpage. There is no textbook, but students should print articles so they can bring them to class.
- **Attendance:** Attendance in class is expected. I will take attendance and keep track of student contributions in class. You can miss up to 2 classes without penalty and without notifying me. Any further absences will need to be justified.

- **Electronics Policy:** Laptops, tablets, and phones are not permitted during class unless needed for in-class work. Using electronics is distracting to both yourself and others, and studies have shown that it lowers grades of the user and those around them. If you require a special accommodation regarding electronics please come see me to request an exemption.
- **Late Work Policy:** Late assignments without an extension will be downgraded by 1/3 of a letter grade per day after the due date (e.g. A to A-), up to a penalty of 2 full letter grades (after which they won't be accepted). Consult with me to request an extension. Late SNTs will be graded as 0.
- **Classroom Etiquette:** Students are expected to respect each other, allow others the chance to speak, and be open-minded to views different from their own. The topics covered may be controversial and evoke strong reactions. Please be aware of, and sensitive to, the feelings and experiences of others.
- **Syllabus:** Readings and schedule are subject to change. Any changes will be announced in class and on the course Moodle page.

### Academic Honesty

Students should not plagiarize their work. Just don't do it. It's not worth it, it's very easy to get caught and it undermines the whole point of you being here. I will follow UMass official policies when handling cases of academic dishonesty. After meeting with the me, a student who has plagiarized can choose between two options. The formal option involves a hearing before the Academic Dishonesty Board. The informal option involves agreeing to the instructor's terms and signing a document to that effect. This informal resolution is filed with the Academic Dishonesty Board. Should a student have three filed informal resolutions, official disciplinary action will be taken. Consult UMass' website for further information: <https://www.umass.edu/honesty/>.

### Accessibility

I am committed to making this class accessible and welcoming for all students. Students with documented disabilities are encouraged to contact Disability Services in 161 Whitmore, or at <http://www.umass.edu/disability> to register and request any accommodations you might need. If you anticipate receiving accommodations from Disability Services, but are still waiting on paperwork, please come tell me as soon as you can so that we can put necessary accommodations in place.

### Provisional Course Schedule

Date	Topic/Unit	Readings	Work Due
<i>Week 1</i> T 01/25 Th 01/27	Intro to Philosophy and Arguments	No Readings	

<u>Week 2</u> T 02/01 Th 02/03	What Is Philosophy of Technology?	Drengson, “Four Philosophies of Technology”  Marx, “Technology: The Emergence of a Hazardous Concept”	SNTs x2
<u>Week 3</u> T 02/08 Th 02/10	What Is Technology?	Ellul, “The Autonomy of Technology”  Basalla, “The Evolution of Technology”	SNTs x1  Add/Drop Deadline 02/07
<u>Week 4</u> T 02/15 Th 02/17	Science and Technology	Petroski, “The Evolution of Useful Things”  Feibelman, “Pure Science, Applied Science, and Technology”	SNTs x2
<u>Week 5</u> Th 02/24	Science and Technology	Kroes, “Design Methodology and the Nature of Technical Artefacts”	SNTs x1  Short Writing Assignment 1 Due 02/25
<u>Week 6</u> T 03/01 Th 03/03	Ethics and Technology	Tufte, “The Cognitive Style of PowerPoint”  Ferré, “Ethics, Assessment, and Technology”	SNTs x2
<u>Week 7</u> T 03/08 Th 03/10	Ethics and Technology	Nyholm, “The Ethics of Crashes with Self-Driving Cars”  De Ruitter, “Why We Should Rethink Our	SNTs x2  Emerging Tech Paper Due Friday 03/11

		Moral Intuitions about Deepfakes”	
<u>Week 8</u> <i>Spring Break</i>	<i>Spring Break</i>	<i>Spring Break</i>	
<u>Week 9</u> T 03/22 Th 03/24	Ethics and Technology	Sparrow, “Robots, Rape, and Representation”  Hartzog and Selinger, “Facial Recognition is the Perfect Tool for Oppression”	SNT’s x2
<u>Week 10</u> T 03/29 Th 03/31	Ethics and Technology	Sparrow, “Killer Robots”  Mittelstadt et al., “The Ethics of Algorithms”	SNT’s x2
<u>Week 11</u> T 04/05 Th 04/07	Technology and Society	Susser et al. “Technology, Autonomy, and Manipulation”  Nguyen, “Escape the Echo Chamber”	SNT’s x2  Short Writing Assignment 2 Due 04/08
<u>Week 12</u> T 04/12 Th 04/14	Technology and Society	Feenberg, “Democratic Rationalization: Technology, Power, and Freedom”  Wacjman, “Domestic Technology: Labour-Saving or Enslaving?”	SNT’s x 2
<u>Week 13</u> T 04/19 Th 04/21	Technology and Human Life	Turkle, “Empathy Machines: Forgetting the Body”	SNT’s x2  SRTIs (in class)

		Vold, "Is Your Smartphone A Part of You?"	
<u>Week 14</u> T 04/26 Th 04/28	Technology and Human Life	Rini, "Raising Good Robots"  Basl and Schwitzgebel, "AIs Should Have the Same Ethical Protections as Animals"	SNT's x2  Short Writing Assignment 3 Due 04/29
<u>Week 15</u> T 05/03	Technology and the Environment	Keith, "Engineering the Planet"	SNT's x1
<u>Week 16</u>  <i>Exam Period</i>	N/A	N/A	Take Home Exam Due Date 05/11  Final Grades Due 05/19