

# STS 351 Minds and Machines

**Instructor:** Dr. Daniel Estrada

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**Zoom Meeting Link**

**Office:** Cullimore 419

**Office Hours:** T 1-2pm and by appt.

**Discord:** [discord.gg/NxFvdH7](https://discord.gg/NxFvdH7)

**FALL 2025 Class Meeting: TF 8:30-9:50am FMH 411**

**Course Description:** This course introduces a variety of key concepts, themes, and historical debates in the philosophy of minds and machines. The course is particularly concerned with the proposal that the mind is a computing machine, and the sociotechnical and ethical consequences of such views. Unit 1 is a crash course in the philosophy of mind, introducing various debates, puzzles, and thought experiments aimed at understanding how the mind works and . In Unit 2 we look at the history of computer science and artificial intelligence to approach the question “can computers think?”, before looking at some of the ethical complexities of AI as it manifests today

**Prerequisites:** STS 201 and STS 210, each with a grade of C or better.

## Course objectives

- Develop an understanding of key issues in historical and contemporary debates in the philosophy of AI.
- Understand philosophical debates around artificial intelligence, and the historical, scientific, and technological context in which they arise.
- Engage in peer-led debate and discussion on critical issues like agency, consciousness, and machine learning.
- Conduct scholarly research through short peer reviewed essays
- Prepare group conversations exploring the central themes of the course.

## Lesson Plan

### Unit 1: Minds and Machines

Lesson 1: How to think about thinking

Lesson 2: The problem of other minds

Lesson 3: What are minds?

- **DUE: Writing Assignment Part 1**

Lesson 4: What are minds? Part 2

Lesson 5: What are machines?

Lesson 6: What are machines? Part 2

- **DUE: Writing Assignment Part 2**

Lesson 7: Biological and technosocial complexity

- **DUE: Unit 1 Podcast**

## Unit 2: Thinking machines

Lesson 8: What are computers? What is computation?

Lesson 9: Turing Machines and GOF AI

Lesson 10: Neural networks and machine learning

- **DUE: Writing Assignment Part 3**

Lesson 11: Can computers think?

Lesson 12: AI Ethics

Lesson 13: AI Ethics Part 2

- **DUE: Writing Assignment Part 4**

Lesson 14: Robot rights

Lesson 15: Course Wrap-up

- **DUE: Unit 2 Podcast**
- **DUE: Finished Essay**

## Assignments and expectations

- **Attendance (24%):** Regular classroom attendance is **required**. Missing more than 3 class sessions will incur a grade penalty.
- **Reading notes (26%):** 300+ words of “reading notes” due for each lesson reflecting on reading assignments in the student’s own words. Must be submitted before class Friday for full credit.
- **Podcasts (20%):** Students are required to participate in two 1-hour recorded group conversations at the end of Units 1 and 2.
- **Presentation (10%):** Students are required to prepare one 10-minute presentation covering the readings for one lesson. Students can schedule their presentation on Canvas.
- **Writing Assignment (20%):** Students will write one 10-15 page argumentative essay over the course of the semester. This essay is broken into four smaller 2-3 page writing assignments that will be compiled into a completed essay.

## Grade Breakdown

- **Attendance:** 10 pts/class x 24 classes = **240 pts**
  - 27 classes total; 24 classes required for full attendance credit.
- **Reading Notes:** 20 pts/Lesson x 13 Lessons = **260 pts**
  - No notes required for Lesson 15, or for the week of your presentation.
- **Podcasts:** 100 pts/podcast x 2 = **200 pts**
- **Presentation:** 100 pts x 1 = **100 pts**
- **Writing Assignment: 200 pts**
  - Part 1: 30 pts
  - Part 2: 30 pts
  - Part 3: 30 pts
  - Part 4: 30 pts

- Finished Essay: 80 pts
- **Total: 1000 pts**

## Grade Scale

Final grades are calculated on the following scale:

A: 900+  
B+: 850+  
B: 800+  
C+: 750+  
C: 650+  
D: 500+  
F: < 500

There is a 5 point tolerance for bumping a grade to the next letter when calculating final grades.

## Course Policies

**Attendance:** Regular class attendance is required, and earns up to 24% of credit for the semester. Students can miss up to three class sessions before an impact on attendance grade. Attendance is taken at the start of class. Attendance is considered late if registered more than 5 minutes after class begins and earns 80% credit.

**Accessibility policy:** I want all students to succeed in this class, and I will gladly accommodate the special circumstances and needs of all students to make sure that happens. I understand that life doesn't happen on the semester schedule, and that school work can't always be a top priority. In pandemic conditions we all need to be more flexible with scheduling and difficult work conditions; I understand how medical issues or disability can complicate these challenges. If there is any issue impacting your performance in class, please come talk to me in office hours or send me a message by email or on Canvas! Even if you're behind on assignments, drop me a message letting me know what's up, I'm sure we can figure something out =)

**Late policy:** Assignments earn a small late penalty for material submitted after the assignment due dates posted on Canvas. I'll allow a short (~30 min) grace period for assignments due at midnight; assignments received at 12:01am will not be marked as late, but assignments received at 2am will. Late assignments are accepted until the end of the Unit.

**Excused Absences:** If you have a legitimate excuse for an event that you know about in advance (an academic conference, athletic event, National Guard duty, expected delivery date, etc.), please make arrangements with me in advance. Extensions for anticipated issues must be arranged at least 48 hours before a deadline to avoid a late penalty. Unexpected emergencies (medical emergencies, deaths in the family, etc.) should be brought to the attention of the Dean

of Students with the [Student Concern Reporting Form](#). The Dean's office is equipped to verify your situation confidentially and provide the administrative support you need. The Dean's office can also coordinate with all your instructors for any issues that arise. After an emergency and when you are able to return to school work, let me know what's up (a short note will do. Details, pictures, doctor's notes etc. are not needed). I'll recommend you contact the Dean with the form linked above if you haven't already. We can then discuss a plan for completing your missing work and getting back on track, and go from there.

See the course Canvas website for details on the assignment schedule, readings, and detailed assignment instructions.

## Plagiarism Policy

### ***NJIT Plagiarism Policy***

*“Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at:*

<http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf>

*Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. **Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university.** If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at [dos@njit.edu](mailto:dos@njit.edu)”*

**Class Plagiarism Policy:** Plagiarism means submitting work for class credit that you did not produce yourself, but presenting the material as if it were your own work. If you did not write the words yourself, you must clearly distinguish that work from your own with quotes and citations. When I am scanning for plagiarism I am looking for long blocks of text that are clearly taken from other sources (possibly with minor modifications) without proper attribution and without distinguishing it from the students own work. Passing off the work of another for credit is plagiarism, and it will not be tolerated in this class.

***Copying and pasting from the web is a form of plagiarism. Changing a few words in an extensively quoted passage is a form of plagiarism. Using AI text generators like chatGPT, Grammarly, etc is a form of plagiarism. Failing to provide adequate citations is***

***a form of plagiarism. Copying from your own work (including work from previous semesters of submitted to other courses) without acknowledgement counts as plagiarism.*** In general, you should never copy large blocks of text from any other source and present it in your own essay as if it were your own words. That includes copying text from online text generators or language translators. Check [this link](#) for a detailed explanation of legitimate paraphrase and illegitimate plagiarism. Any work you use should be given adequate citation so your readers can find and review your sources. Just as in mathematics, you need to show your work! If you use any source in your research, (including dictionaries, Wikipedia and other encyclopedias, AI chatbots, and translation tools) even if you don't quote it directly, provide a citation.

**To avoid plagiarism, you must clearly distinguish your work from the work of others. Any work taken from others must be identified with “quotation marks” and explicit citation. Changing a few words in a quote does not make it your work.** If you use online text generators (like chatGPT, Grammarly, or other text sources), you must explicitly identify that text as not being your own work. You must also cite the explicit generator used, including the version and dates it was used. If you use AI text generators at all, you must also supply the full prompt history generating that text as an appendix to your assignment. If you wrote the essay in another language and then used a translator, you should provide the original text in the original language with your submission, and cite the translator used. If you read a script in any presentation, you must include the text of that script to the plagiarism detection software on Canvas. Failure to do so will not earn credit and may be considered plagiarism.

**Suspected cases of plagiarism will be given zero credit for the assignment with a warning about the plagiarism policy. Students found plagiarizing will also forfeit all extra credit opportunities for the semester.** Repeated or extreme instances of plagiarism will be reported directly to the Dean of Students as a violation of the [Student Code of Academic Integrity](#).

See these [Plagiarism Slides](#) with detailed information on the NJIT and course policies on plagiarism, including examples of legitimate and illegitimate paraphrase, to help you understand the plagiarism policy.