

Fall 2023

## STS-375 (001): AI and the Human Mind

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# STS 375

## AI and the Human Mind

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**Office Hours:** by appt.

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**Class Meeting:** F 8:30 am - 11:20 am CKB 215

### Course Description

What does it mean for a machine to know? What does this say about the possibility of human knowledge? In this course, we will explore what artificial intelligence (or, AI) is, how it works, how the field has developed, how the specific technical implementations of AI influence and are influenced by sociocultural factors, what barriers exist to AI research, what threats AI development may pose, and what AI can tell us about ourselves. This is not a programming course, and although some attention will be paid to AI technologies and algorithms, no coding will be involved. This course is appropriate for students at any level of previous AI experience. This course satisfies the three credit 300 GER in History and Humanities. 3 credits, 3 contact hours.

Prerequisites: [ENGL 102](#) with a grade of C or higher, and one History and Humanities GER 200 level course with a grade of C or higher.

### Course Objectives

In this course, students will:

- Define *artificial intelligence*, *mind*, and related concepts.
- Identify historical and modern perspectives on minds, machines, and AI
- Review the history and current practices in AI and machine learning in order to develop some intuition for how ML models are implemented, trained, and deployed in a variety of real world applications
- Assess important concepts, methods, debates, and controversies in AI by directly engaging with recent scholarship in the field

### Course Overview

The course consists of the following assignments and expectations, which are explained in more detail in the syllabus below.

- Regular classroom attendance and participation in class activities is expected. Students can miss 2 classes without penalty. (20%)
- 300+ words of “reading notes” due at the start of each class, reflecting on reading assignments for the week (20%)

- One presentation on weekly readings (10%).
- One presentation on a topic of your choice. (20%)
- Unit 1 paper (5%)
- Peer Review assignment (5%)
- One midterm paper (10%)
- One final paper (10%)

Grades breakdown as follows

- **Participation and attendance:** 200 pts
- **Reading notes:** 10 x 20 pts = 200 pts
- **Reading presentation:** 100 pts
- **Final presentation:** 200 pts
- **Unit 1 paper:** 50 pts
- **Midterm paper:** 100 pts
- **Peer review assignment:** 50 pts
- **Final paper:** 100 pts

**Total: 1000 points**

Final grades are calculated on the following scale:

A: 900+

B+: 850+

B: 800+

C+: 700+

C: 600+

D: 500+

F: < 500

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

## Lesson Plan

Lesson themes and major assignment due dates are listed below. Assignments are in bold and indented to distinguish them from class meetings. Assignments are typically due on Wednesdays. Reading notes are due at the beginning of every class session. Student presentation schedule and all readings can be found on Canvas.

Unit 1: Actions and passions

F 9/8 Causation

F 9/15 De Anima

F 9/22 Objections to Aristotle

## W 9/27 **Unit 1 PAPER**

### Unit 2: Minds and machines

F 9/29 Meditations

F 10/6 Human Minds **MIDTERM PROPOSAL DUE**

F 10/13 Animal Minds

F 10/20 Mechanical Minds **Midterm draft due. In class peer review**

W 10/25 **MIDTERM PAPER DUE**

### Unit 3: Computation and meaning

F 10/27 Turing & Computation

F 11/3 Turing & Lovelace **Peer review open discussion**

W 11/8 **Peer Feedback**

F 11/10 Machine Learning

M 11/13 **Last day to withdraw**

W 11/15 **Peer Replies**

F 11/17 Can machines think?

F 11/22 Robot Rights debate (Thanksgiving)

F 12/1 Student presentations **Final proposal due**

F 12/8 Student Presentations **Final peer review**

12/20 **Final paper/presentation due**

## Daily classroom schedule

We will take a 10 minute break at 9:50 am, and will resume class at 10 am.

## Attendance Policy

Please be in the classroom at the start of class. I will take a small deduction in attendance credit for students who are more than 15 minutes late. Students who are more than an hour late will lose half credit on attendance. Students can miss two class sessions without penalty. There are 14 class sessions scheduled for the semester, 12 of which are required for full attendance credit. Attendance grades are calculated as follows:

$$9 \text{ points per class} \times 12 \text{ required attendance days} = 108 \text{ points}$$

Students who are 15 minutes late are penalized 2 points. Students more than an hour late are penalized 5 points.

## Reading Notes

Students are asked to read the week's material before class, and to prepare at least 300 words of "reading notes by the start of class. Reading notes document your engagements with the readings. Reading notes should be in your own words. You should not just copy quotes or paraphrase the source material. You can include quotes from the text in your notes, but you should clearly mark this material with quotes and cited page numbers to distinguish it from your own work. Any quoted material does not contribute to the word count. Reading notes do not need to be a completed essay. Fragments of thoughts, bullet points, and scattered reactions to the text are fine, although you should try to make your reactions clear to me and other students. You can try to summarize and interpret parts of the readings in your own words. You can also react to the text itself, discussing whether or not you agree with some claims or positions. You can also use the text as a jumping off point for exploring your own thoughts and ideas related to course themes. Any sincere engagement with the material will earn credit on this assignment. See Canvas for more assignment details.

## Presentations

Students are expected to complete two presentations over the course of the semester. One presentation will be on the weekly readings in units 1, 2, and 3. The second presentation will happen at the end of the semester, and can be on any topic of your choosing related to the course themes.

The **reading presentations** are 5-10 minute sessions in which students present and discuss some of the readings for the week. Reading presentations are not required to be a full formal presentation with slides, although that's fine. Reading presentations are meant for students to guide a class discussion of the readings. You don't have to cover all the readings, of course! Just pick something from the readings you want to talk about, and prepare a discussion of the text, and perhaps some questions for the class to consider regarding the reading. Highlight the important parts of the text (key terms, definitions, compelling quotes, etc). Raise questions for clarification and class discussion, connect the readings to other class discussions and themes. Your goal in this assignment is simply to help the class process and discuss the readings. You can of course contribute your own thoughts on these topics, but the focus should be on processing the reading material. Students can schedule their readings on Canvas by joining a Reading Presentation group, which has other students presenting on the same material. Students can prepare this presentation with others in their group, or they can prepare a reading presentation independently, but either way they should coordinate with their group to divide the reading material and time among each student.

The **final presentations** are ~10 minute presentations on any topic students want to explore related to course themes and readings. Give your own take on some issue we've discussed in class, conduct some independent research, share your insight into some philosophical position or argument. The presentation is your chance to express your own views and ideas to the class. These presentations will be given at the end of the semester, after Unit 3. Your presentation

should include slides and should be around 8 minutes long, with a couple of minutes for Q&A from the class. Students can work individually or in pairs; pairs should plan presentations of around 13 minutes, with some Q&A for a total of 15 minutes.

## Papers

Students have three formal writing assignments. Papers are typically written as argumentative essays, aimed at developing a clear thesis. However, papers can also engage in conceptual analysis and other forms of philosophical writing. What's important for a paper is that it provides an opportunity to engage deeply with some subject matter.

The **Unit 1 paper** is a 3-5 page paper completed at the end of Unit 1. The paper can engage with any issues related to Unit 1 readings and themes. As the first formal writing assignment, the requirements for this essay are not very high. Try some arguments or ideas out. Sincere engagement with the material and assignment will earn credit.

The **Unit 2 paper** is a 5-7 page paper that functions as a midterm assignment. Students can choose topics relevant to course readings and themes. The midterm should be well organized, it should be directly engaged with scholarly sources relevant to course themes and readings, and it should demonstrate some competence with the material it discusses. This paper will be prepared over several weeks. Students will initially submit a proposal for the paper, with feedback from the instructor. Later, students will be expected to come to class with a draft of the paper that is at least 50% completed for peer feedback. See the assignment schedule on Canvas for details. The midterm will also be used for the Peer Review assignment described below.

The **Unit 3 paper** is a 5-7 page paper that functions as a final assignment. The assignment is identical with the midterm, including the proposal and peer feedback in class, but it will not include a Peer Review afterwards.

All assignment details can be found on Canvas.

### **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)”*