PHIL 0440: MINDS AND MACHINES

Course Syllabus

Course Information

Instructor: Professor Emily Jane O'Dell
Email: Emily.odell@scupi.cn
Office: 317
Office hours: By appointment

Credit hours: 3

Room: Zone 3-111

Prerequisites: None

This introductory level course is devoted to explicating and critically evaluating the thesis that the human mind, or at least its cognitive faculty, can be understood as a computing machine. Readings are primarily from contemporary authors, and include both scientists and philosophers. We will begin by exploring the following questions: What is "mind"? What is a "machine"? We will look at the history of mind and machine intersections and developments. We will carefully examine the latest (and future) technologies in engineering, medical science, information technology, computer science, disability design and other fields that involve brain-machine interfaces. Students will also watch and discuss films that highlight these present and futuristic technologies. The goal of this class is to provide students with a critical understanding of these philosophical and bioethical issues.

Student Learning Outcomes

With successful completion of this course, students will be able to:

- comprehend theoretical, cultural, scientific and technological understandings of "mind" and "machine"
- grasp the history of the fields mind studies and their relations to power
- understand a number of different "mind" and "machine" interfaces and applications
- analyze different cultural approaches to the bioethics of mind and machine technologies
- employ critical strategies in considering bioethical challenges in the present and future
- discuss the latest technological advances in treating posthuman / cyborg approaches to augmenting the capabilities of the mind using machines
- critique and discuss cinematic representations of minds and machines in film

Assignments and Evaluation:

You will be evaluated in the following tentative activities according to the grading policy. Activities can include:

Short Response Paper	A short response to the course material (films)	15%
Observing the Mind	A personal exploration of the "mind" and "machine" – a two day diary of technology usage	15%
Mid-term	Mid-term exam on the material	20%
Final	Final on the material	25%
Homework and/or In-class activities	This may include routine writing, group work, forum posts on Blackboard. To be decided by instructor.	25%
Total		100%

Schedule:

	Topic(s)	***Materials***	***Major Assignments***
Week 1	Introduction: What is Mind? What is a Machine?	In-class writing and video assignments	• Plato's "Allegory of the Cave" • Eric Schwitzgebel, 1% Skepticism • Berkeley, G: The Principles of Human Knowledge
Week 2	How Do We "Know": Knowledge / Skepticism	BCIs "The Merging Of Human And Machine: Two Frontiers Of Emerging Technologies" "Are You Ready for Tech That Connects to Your Brain?"	• René Descartes, Meditations on First Philosophy • René Descartes and Princess Elisabeth of Bohemia, Correspondence between Descartes and Princess Elisabeth • Raymond Smullyan, An Unfortunate Dualist • Brie Gertler, In Defense of Mind-Body Dualism
Week 3	Are You a Brain in a Vat?	Film: *Matrix*	• Ned Markosian, Do you Know you are not a Brain in a Vat?

		In-class Videos: Jennifer Nagel, The Problem of Skepticism Andrew Skegg, Are you a Brain in a Vat?	• Pollack, Brain in a Vat • Jim Pryor, What's so Bad about Living in the Matrix?
Week 4	Skepticism Challenges / The Simulation Argument	Film: *Ex Machina* and Videos on the simulation hypothesis	• Nick Bostrom, Are you living in a computer simulation? • Nick Bostrom, The Simulation Argument: Why the Probability that You are Living in a Matrix is quite high • Dennis Overbye, Big Brain Theory: Have Cosmologists' Lost Theirs?
Week 5	The Turing Test and The Chinese Room	Film: *The Imitation Game*	• Alan Turing, Computing Machinery and Intelligence • The Turing Test • Benjamin Bratton, Outing A.I.: Beyond the Turing Test • Robert Sparrow, The Turing Triage Test • John Searle, Minds, Brains, and Programs
Week 6	What is the Nature of Reality?	Film: *Eternal Sunshine of the Spotless Mind*	• "Scientists made an AI that reads your mind so it can generate portraits you'll find attractive"

			• David Chalmers, The Matrix as Metaphysics • Jennifer Nagel, New responses to skepticism • Jennifer Nagel, The problem of skepticism • Philip K. Dick, How to build a universe that doesn't fall apart two days later • George Berkeley, The Principles of Human Knowledge
Week 7	Virtual Reality and Its Implications	Film: *eXistenZ* (1999)	• David Velleman, Virtual Selves • "Brain-Machine-Interfaces - brain manipulation or brain control?" • David Chalmers, The Virtual and the Real
Week 8	Conceptualizing Ethics and Value in Real and Virtual Worlds	Film: *Minority Report*	• Judith Jarvis Thomson, The Trolley Problem • J.D. Haynes, Decoding Mental States from Brain Activity in Humans • Robert Nozick, The Experience Machine • David Chalmers, The Virtual and the Real • Internet Encyclopedia of Philosophy, Act and Rule Utilitarianism
Week 9	The Ethics and Perils of AI	Film Clips:	• Nick Bostrom and Eliezer Yudkowsky, The Ethics of Artificial Intelligence

		Good Kill *Drone* *Eye in the Sky*	• Nick Bostrom & Eliezer Yudkowsky, Descartes' Evil Genius • O. K. Bouwsma, The Philosophical Review, Vol. 58, No. 2. (Mar., 1949), pp. 141-151.
Week 10	Consciousness and Materialism: Where are You?	*Inception*	• Janet Levin, Functionalism • Dennett, Daniel. "Where Am I?" • Ned Block, Troubles with Functionalism • David Chalmers, The Puzzle of Conscious Experience • Hilary Putnam, The Nature of Mental States
Week 11	Illusionism: Melding Minds and Making Machines	*Blade Runner*	• David Chalmers, The Meta-problem of Consciousness • Daniel Dennett, Facing Backward on the Problem of Consciousness • Keith Frankish, Illusionism as a Theory of Consciousness • "Mind Meld: Synthetic Training brought to Life"
Week 12	The Consciousness of Matter: Panpsychism in Perspective	Film: *Her*	• Christof Koch, Tononi's "Complex" Theory of Consciousness • Hedda Hassel Morch, Is Matter Conscious? • David Chalmers, Panpsychism and Panprotopsychism • Galen Strawson, Why Physicalism entails Panpsychism

Week 13	Externalizing the Mind through Machines	Video: David Chalmers, Is Your Phone Part of your Mind? Film: *Robot and Frank*	• Nicholas Carr, Is Google Making Us Stupid? • Michael Coulter, Is technology Eating our Brains? • Michael Lynch, How the Internet Promotes a New Way of knowing
Week 14	Transhumanism: Cyborgs Rising [Disability and Technology]	Film: *Upgrade*	• Florida Man Becomes First Person to Live With Advanced Mind-Controlled Robotic Arm • "'It's like you have a hand again': An ultra-precise mind-controlled prosthetic" • "What Brain-Computer Interfaces Could Mean for the Future of Work" • Susan Schneider, Future Minds: Transhumanism, Cognitive Enhancement and the Nature of Persons
Week 15	AI Consciousness	Film: *A.I.*	• Susan Schneider and Edwin Turner, "Is Anyone Home? A Way to Find Out If AI Has Become Self-Aware"
Week 16	Final Review		

Note**:** This schedule is subject to change based on the needs of the class at the instructor's discretion.

Student Use of Electronic Technology Policy:
Students must use electronic technology (including cell phones, laptops, tablets, and iPads) in appropriate ways during classes. Out of respect, cell phones should generally be turned off or on silent and stored out of sight. They should not be used during classroom activities unless the instructor has given permission. Electronic devices are forbidden during quizzes, tests or other in-class graded assignments, unless the instructor has given permission.

Technology use in this class is meant to improve the learning environment for all students. Please be respectful of your instructor and classmates and use the technology appropriately.

If you have questions about what this means, please talk to your individual instructor.

Recording:

To ensure the free and open discussion of ideas, students may NOT record classroom lectures, discussions, and/or activities without the advance written permission of the instructor, and any such recording properly recorded in advance can be used solely for the student's own private study.

Make-up Policy for Missed Assignments and Tests:
Students are responsible for the assignments in their classes. Assignments include in-class activities, quizzes, tests, homework, and any other work related to classes.

- If you are absent from class, you should try to contact one of the students in your class to find out what work was missed.
- If you cannot find out from another student about what work you have missed, when you return to class you must talk to your instructors about the missed work and if/when you can make up the work. You are responsible for talking to your teacher; your teacher is not responsible for reminding you about missed work.
- If you are absent from class on the due date of an assignment, you must hand in the assignment and be prepared to make up tests the day that you return to class or on a date decided with your teacher.
- If you know you will be absent, talk to your teacher before you leave or email your teacher to find out about the work that you will miss while you are away.
- If you have not been absent from class and you want to hand in an assignment late, you must first discuss the reason with your teacher before or on the due date. Do not assume that your teacher will accept late assignments. Also, you will lose points for late work in this situation.
- If you and your teacher arrange to meet so that you can make up an assignment and you miss that meeting, you will receive a "0" for that assignment.

SCUPI Honor Code:

Students in this course must follow the SCUPI Honor Code. This includes:

- must not get help from anyone to do his/her work without the teacher's permission.
- must not get help from any outside sources to do his/her work without the teacher's permission.
- must not copy the words of another and present those words as his/her own work.

Participating in these activities can result in an F. Turning in work that is not your own can result in an F.

Writing Center Policy: first instance will result in failure in assignment with option of re-write; second instance will result in failure of assignment and meeting with Writing Center director; third instance will result in failure in the course and referral to university officials for Honor Code violation.

Participation:

Active participation is crucial for language learning. Participating in class makes you an engaged learner of English. In this class, participation means:

- arriving to class on time
- staying on task (including appropriate use of technology)
- actively listening to your classmates and teacher when they speak in class
- asking questions
- bringing all class materials
- attending class regularly
- completing all homework on time
- actively and constructively participating in class activities
- being prepared to answer questions
- using only English in class