01 : 730 : 329 : 02 **Fall 2019**

Minds, Machines, and Persons

Meeting time and place

Mondays and Thursdays at 9:50 AM – 11:10 AM
Room 214 (Mondays) and Room 104 (Thursdays) in Scott Hall

Instructor

Name:	Alexander Skiles ('Alex'; 'Professor Skiles')
Office:	Room 546, Gateway Transit Village (106 Somerset St., 5th floor)
Office hours:	Mondays and Thursdays at 1:30 PM – 2:30 PM
Email:	alexander.skiles@rutgers.edu

Course description

This course addresses two distinct, but interconnected, questions at the heart of contemporary philosophy of mind, cognitive science, neurobiology, and the 'artificial intelligence' program:

- *Question #1* Imagine you had all the time, money, labor, and smarts a person could ever want. Would you be able to build a machine that can think, as well as one that can feel emotion, and be consciously aware of its surroundings?
- *Question #2* Is the human mind itself a type of thinking machine? Are all your mental states and processes—your beliefs, desires, emotions, moods, conscious experiences, and all the rest of it—nothing more than a matter of how regions of your brain interact with themselves and the external environment?

We will address *Question #2* in part by documenting the rise of 'functionalist' theories in both the philosophical and empirical study of the mind during the 20th century, and discussing the key arguments for and against them. Along the way, we will explore *Question #1* by discussing some of the main approaches to artificial intelligence, and some conceptual obstacles they face. We will end by discussing how both *Question #1* and *Question #2* bear on more speculative questions about the mind-machine interface (e.g. extended cognition, cognitive enhancement technology, the 'singularity hypothesis', mind uploading, and virtual reality).

Course learning goals

- To develop an in-depth understanding of the main questions, positions, and concepts at the intersection of contemporary philosophy of mind, cognitive science, and AI research
- To reconstruct and evaluate the arguments for/against these main positions
- To hone your critical reading skills, and practice how to present and critique your opinions and those of others clearly, crisply, fairly, and cogently—out loud and in writing
- To enhance your philosophical creativity

Course prerequisites

The only official requirement is successful completion of one philosophy course. Unofficially, having taken some prior philosophy courses, as well as some familiarity with basic formal logic (i.e. what you would encounter in 730 : 201 at Rutgers, which covers sentential and first-order systems), would be quite useful—the topics covered in this course are somewhat advanced.

Course assessments

- Discussion questions submitted at the beginning of each class **7%**
- Three peer-reviewed response papers of 3-5 pages each **3 x 16%**
- An in-class midterm exam (short answer and essays) **15%**
- An in-class cumulative final exam (short answers and essays) **30%**

Course texts

The required textbook is by David Braddon-Mitchell and Frank Jackson, *Philosophy of Mind and Cognition: An Introduction*, 2nd edition, Blackwell Publishing. Please be sure to acquire the correct edition! And please be sure to acquire a hard copy—rented, new, used, or print-outs of a PDF are all fine. The other texts will be posted on the course website (URL TBD).

Course schedule (open to revision)

INTRODUCTION

5 Sept.	*The mark of the mental vs. the mark of the mechanical*	

UNIT #1 FROM DUALISM AND BEHAVIORISM TO COMMONSENSE FUNCTIONALISM

9 Sept.	*Dualism*	B-M and J, "The Flight from Dualism", pp. 3-19
12 Sept.	*Physicalism*	B-M and J, "The Flight from Dualism", pp. 19-35
16 Sept.	*Behaviorism*	B-M and J, "Behaviorism and Beyond"
19 Sept.	*Commonsense functionalism*	B-M and J, "Common-sense Functionalism"

UNIT #2 RIVALS AND OBJECTIONS TO COMMONSENSE FUNCTIONALISM

23 Sept.	*Empirical functionalism*	B-M and J, "Theory of Reference" and "Empirical Functionalisms"
26 Sept.	*The identity theory*	B-M and J, "The Identity Theory"
30 Sept.	*Computation and classical AI*	Crane, "Computation and Representation" and "Can a Computer Think?" (pp. 77-82)
3 Oct.	**SLACK DAY /// IN-CLASS PEER REVIEW OF RESPONSE PAPER #1**	
7 Oct.	*Turing's thesis*	Turing, "Computing Machinery and Intelligence"

10 Oct.	*Leibniz's mill and the Chinese room*	Leibniz, §17 of *Monadology* and Searle, "Minds, Brains, and Programs", **RESPONSE PAPER #1 DUE**
14 Oct.	*More time in the Chinese room*	B-M and J, "Four Challenges to Functionalism", pp. 107-114 and Boden, "Escaping the Chinese Room"
17 Oct.	*Dreyfus's critique of classical AI*	Dreyfus, "From Micro-worlds to Knowledge Representation: AI at an Impasse"
21 Oct.	*Qualia and consciousness*	B-M and J, "Four Challenges to Functionalism", pp. 123-127 and "Phenomenal Qualities and Consciousness"
24 Oct.	*Mental causation and psychological explanation*	B-M and J, "Psychological Explanation and Common-sense Functionalism"
28 Oct.	**MIDTERM**	

UNIT #3 MENTAL REPRESENTATION AND ITS ROLE IN AI RESEARCH

31 Oct.	*The structure of mental representations*	B-M and J, "The Language of Thought"
4 Nov.	*How do mental states represent?*	B-M and J, "Content"
7 Nov.	**SLACK DAY /// IN-CLASS PEER REVIEW OF RESPONSE PAPER #2**	
11 Nov.	*Connectionism*	Rumelhardt, "The Architecture of Mind: A Connectionist Approach" and Walmsley, "Connectionism", pp. 88-94
14 Nov.	*Connectionism*	B-M and J, "Connectionism" **RESPONSE PAPER #2 DUE**
18 Nov.	*Broad vs. narrow content*	B-M and J, "Broad and Narrow Content"
21 Nov.	*Situated robotics and dynamical systems*	Brooks, "Intelligence without Representation" and van Gelder, "Dynamics and Cognition" (pp. 421-429)
25 Nov.	*Situated robotics and dynamical systems*	van Gelder, "Dynamics and Cognition" (pp. 429-450) and Clark and Toribio, "Doing without Representing?"

UNIT #4 MERGING MIND WITH MACHINE

2 Dec.	*The extended mind hypothesis*	Clark and Chalmers, "The Extended Mind" and Adams and Aizawa, "The Bounds of Cognition"
5 Dec.	*The singularity hypothesis and uploading*	Chalmers, "The Singularity: A Philosophical Analysis"
9 Dec.	**SLACK DAY /// IN-CLASS PEER REVIEW OF RESPONSE PAPER #3**	
16 Dec.	**RESPONSE PAPER #3 DUE**	
23 Dec.	**FINAL EXAM at 8:00 AM – 11:00 AM**	

Electronics policy

Unless provided with a Letter of Accommodations by the Office of Disability Services (see below), all laptops, cell phones, tablets, personal gaming systems, digital pets, drones, … must remain stored away and silent during sessions.

Attendance policy

Although there is no formal attendance requirement, there *is* a requirement that you submit discussion questions when you arrive for each session—which of course you cannot do on days that you do not attend. If you must be absent due to a University-approved reason, and wish to receive credit for the session's discussion questions, you must formally report your absence on the Self-Reporting Absence Application (https://sims.rutgers/edu/ssra), as well as complete a short two-question at-home exam on the required reading.

Academic integrity policy

Cheating, plagiarism, and other forms of academic malfeasance come in many forms—if you haven't already, I would recommend familiarizing yourself with the Academic Integrity Policy (http://academicintegrity.rutgers.edu/academic-integrity-policy/) for a list of examples. Any suspected violation—and I am quite talented at detecting these—will be automatically referred to the Office of Judicial Affairs, and can carry penalties up to and including a failing grade in the course or expulsion from the university. Note: ignorance about what counts as academic malfeasance, or carelessness in acting in accordance with this policy, is *not* a defense. Thus, if you have any questions about whether you are toeing the line, please do not hesitate to consult with me *before* you submit your work.

University disability statement

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation. For more info, visit https://ods.rutgers.edu/students/documentation-guidelines. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please register at https://webapps.rutgers.edu/student-ods/forms/registration.