**Phil 329: Minds, Machines, and Persons**

**Spring 2022**

**Section 03**

Instructor: David Sorensen

Email: dss170@scarletmail.rutgers.edu
Office hours: Regular (Zoom) meetings every Wednesday 11-12 am (walk-in)

You may also schedule some other time slot to meet by appointment

Meeting time: 3:50-5:10 TTH
Meeting place: Hardenbergh Hall, Room A7 (CAC)

In this course, we will study competing philosophical theories about the nature of the mind and mental phenomena—intentionality, mental representations, and consciousness—and what these theories tell us about the possibility of creating machines with minds like ours. We will begin with some of the most foundational metaphysical issues in the philosophy of mind. Then, we will examine the foundations of computational cognitive science and artificial intelligence research. Next, we will look at attempts to understand and explain mental representations *naturalistically*. Lastly, we will discuss the metaphysical and ethical issues surrounding the possibility of mind uploading, mind extension, and the creation of super-intelligent AI.

Here are some of the questions that we will raise and try to answer:

* What distinguishes mental phenomena from nonmental phenomena?
* What is the metaphysical relation between the mind and brain?
* Can intentionality be naturalized?
* What is consciousness? Is consciousness just a complex state of the brain or is it something more than that (e.g. a *nonphysical* entity or property)?
* Is it possible to build machines (e.g. digital computers) that have minds like ours?
* Are our smartphones and laptops (literally) extensions of our minds?
* In the future, will it be possible to “upload” our minds to a cloud server? Will the uploads be *us* or just a clone of us? Is there a relevant difference between these two options?

**Course Requirements**

**1.** Course readings:

**(a)** Textbooks:

1) *The Mechanical Mind* by Tim Crane (**3rd** edition)

2) *Artificial You: AI and the Future of Your Mind* by Susan Schneider

**(b)** Supplementary readings available on Canvas (go to “pages” and then “readings and homework”, or visit the “Files” section)

 **1)** You are expected to read the assigned articles and chapters **before** the class session the readings are scheduled for. However, I recommend doing the readings both before and after the class session, as the material may at times be difficult, or unclear the first time reading it. After lecture and in-class discussions, the material should be much easier to understand. But it’s important to know in advance that not everything will be covered in lecture. There will be quiz questions based on supplementary readings, videos, podcasts, etc. If they are not covered in lecture and you do not understand them, please send me an email or schedule an appointment with me during office hours.

**(c)** Powerpoints will be made available on Canvas (typically) the day before class. I recommend skimming the slides before class and carefully reviewing them before exams.

**2.** Course evaluation:

 **(a)** Exams: There will be two short essay-based exams (midterm and final). Study guides with topics and a sample question (which will appear on the exam) will be made available 2 weeks before each exam.

**(b)** Homework assignments: argument map submissions, discussion posts, and short writing assignments based on the reading(s)

**(c)** Canvas quizzes (based on lectures, readings, and videos/podcasts), ranging from 3 to 5 questions (MC, MA, T/F, Matching),

 Quizzes: There will be a Canvas quiz posted in a module every week that will be due Sunday by 11:59 pm. Quizzes can still be submitted late up until 3 days after the due date, but with an automatic deduction of 2 points (out of 10). Thus, the highest score you can get on a late quiz will be a B-. Quizzes will not be accepted after the 3-day late submission window as the answers for the quiz will be revealed the fourth day after the deadline.

 **(d)** Paper: There will be one (10-15 page double-spaced) paper due at the end of the semester. The paper will be an argumentative essay where you will defend and/or criticize a specific thesis related to AI, cognitive science and/or philosophy of mind. A prompt will be provided with a list of readings and topics for you to choose from. Special permission will be required **only if** you decide to choose a topic that is not on the list. A peer review session will be held in class on November 10th. The paper will be due November 24th.

**Grade breakdown:**
Homework assignments: 15%

Weekly quizzes: 15%
Midterm: 20%
Paper: 25%

Final exam: 25%

**Expectations of students:**

Students are expected to carefully read the syllabus, regularly attend class, do the readings, keep notes, and complete all course assignments. Students should also regularly check your email (every day), and log onto Canvas to check for course updates or revised deadlines. If any problems arise, you should contact me ASAP.

**Assignment deadlines**: Each week, there will be two modules posted (one on Tuesday and the other on Thursday). Unless stated otherwise, all of the module assignments for a given week are due at the end of that same week (Sunday, by 11:59 pm).

**Grading and feedback:** You will receive some form of feedback for most of the assignments in this course. Problem sets, which are aut0-graded will contain explanatory notes if a question is answered incorrectly.

**How to do well in the course:**

1. **Take the readings seriously:** There will be lots of readings assigned in this course, some of which will be quite difficult. It is best to complete all the readings *before* attending the lecture for which they are assigned. Reading philosophy can be difficult, requiring much more time and focus than readings in other fields and genres. As a philosopher, you are also not just aiming to understand what the author is saying, but whether their claims are true. Thus, a special kind of *active* reading is required to get the most out of the assigned readings. I’ve provided a Canvas module with some tips and articles on active reading (in general) and also how to read philosophical papers.
2. **Be prepared with questions and comments**
3. **Regularly check Canvas** (at least once every 48 hours) for course updates, assignments, and newly added powerpoints
4. **Attend office hours:** If questions remain after class, or some questions were not adequately addressed, office hours allow students to have continued and more focused conversations about the course content. You do not even have to come to office hours prepared with a list of questions or comments about the course. I am happy to talk with you about any topics of interest in philosophy or science.

**Detailed schedule of topics/readings (tentative)**

**R: Required Supplementary Readings**

**P: Podcast**

**V: Video**

**O: Optional Readings**

**\*: Difficult reading**

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| Date | **Topic** | **Readings/Homework** |
| 1/18 | Course introduction | Syllabus |
| 1/20 | Philosophical Methods, Reading/Writing Philosophy | Complete “Philosophy 101” Module |
| 1/25 | The Mechanical World Picture | **Crane Ch. 1****Dawson Sec 2.1** |
| 1/27 | The Puzzle of Representation | **Crane Ch. 2**P: Godfrey-Smith on Mental RepresentationR: Of Rats And Men (NPR)  |
| 2/1 | Intentionality  | **Crane Ch. 3,** R: Brentano, *Psychology from an empirical standpoint* (excerpt) |
| 2/3 | Minds and their place in nature | Crane Ch. 4, Sec 1R: Kim, “Mind as Immaterial Substance” R: Chomsky, Mental Representations (excerpt)  |
| 2/8 | Minds and their place in nature: part 2  | Crane Ch. 4, Sec 2-4R: Brandon-Mitchell, *David Lewis, David Armstrong, and the Causal Theory of Mind* |
| 2/10 | Minds and their place in nature: part 3Functionalist approaches | R: Fodor, *The Mind-Body Problem*R: Anderson, *Introduction to Functionalism* |
| 2/15 | Folk Psychology and Modern Science | Crane Ch. 5.1 and 5.2V: Patricia Churchland on Eliminative MaterialismR: Horgan and Woodward, *Folk Psychology is here to say*  |
| 2/17 | Theory-Theory and Simulation Theory | Crane 5.3R: Gopnik and Wellman, *Why the Child’s Theory of Mind Really is a Theory*R: Heal, *Replication and Functionalism*  |
| 2/22 | **Midterm Exam** |  |
| 2/24 | The Nature of Computation and Computing Machines | **Crane Ch. 6** |
| 3/1 | Thinking Machines and AI | **Crane Ch. 7 (Sec 1-3)**R: Dennett, *Cognitive Wheels: The Frame Problem of AI* |
| 3/3 | The Chinese Room  | Crane Ch. 7 (Sec 4)R: Searle, *Minds, Machines, and Programs* |
| 3/8 | Responses to the Chinese Room | R: Boden, *Escaping the Chinese Room*P: Dennett on the Chinese Room |
| 3/10 | Mechanisms of Thought:Classical Computationalism | **Crane Ch. 8 (sec 1 and 2)**R: Excerpt from How the Mind Works *Steven Pinker* |
| 3/22 | Varieties of Computationalism  | **Crane Ch. 8 (sec 3 and 4)**O: Neural Representation and Neural Computation *Churchland and Sejnowski* |
| 3/24 | Explaining Mental Representation | R: Dretske, *A Recipe for Thought*O: Fodor, *Psychosemantics, Ch. 4* |
| 3/29 | Explaining Mental Representation II: Teleological Theories | **Excerpt from Crane Ch. 9**Neander, *Teleological Theories of Mental Content: Can Darwin**Solve the Problem of Intentionality?* |
| 3/31 | Skepticism about Mental RepresentationGuest Speaker: Mike DeVivo | R: How to Think About Mental Content *Frances Egan* |
| 4/5 | The extended mind | **Crane Ch. 11 (secs 1-3)**R: Chalmers and Clark, *The Extended Mind*V: What is the Extended Mind? (Closer to Truth mini doc)  |
| 4/7 | AsynchronousThe extended mind part 2:Guest Speaker |Dan Weiskopf (GSU) | R: Weiskopf, *Patrolling the Mind’s Boundaries* |
| 4/12 | Consciousness and the Mechanical Mind | 13.1 and 13.2 R: Nagel, *What is it like to be a bat?* V: Chalmers, “How do you explain consciousness?”  |
| 4/14 | Consciousness and Physicalism | Crane 13.3Crane 13.4R: Jackson, *Epiphenomenal Qualia*P: Goff on Galileo and Consciousness |
| 4/19 | Superintelligence  | **Schneider, Introduction and Chapter 1** R: Bostrom, *Superintelligence Ch. 1 and Ch. 2* |
| 4/21 | Consciousness Engineering | **Schneider, Chapters 2, 3, and 4**R: Chalmers, The Singularity (excerpt) |
| 4/26 | Guest Speaker: Brian McLaughlin on Robot Minds | McLaughlin and Rose 2020 |
| 4/28 | Mind Uploading: Part 1 | **Schneider, Chapters 5, 6, and 7**O: Chalmers, *The Singularity* **Paper Due** |
| Asych | Mind Uploading: Part 2 | Schneider, Chapter 8 |

**COVID-related policies:**

***Effective immediately, as an important protective measure, face masks are required in all Rutgers buildings.***

***In the event that the college closes temporarily or permanently due to COVID or some other emergency, we will shift to a remote synchronous format. The lectures will take place during the same time as the in-person sessions. Additionally, exams will be taken remotely rather than in person.***

**Unexplained absences and missing assignments:**

Under most circumstances, if you do not report to me, in advance, that you will be absent or unable to submit an assignment on time, then you will not receive full credit. Assignments and problem sets that are not complete by May 4th will receive zeros.

**Rutgers Academic Integrity Policy**: *Principles of academic integrity require that every Rutgers University student:*

* *properly acknowledge and cite all use of the ideas, results, or words of others*
* *properly acknowledge all contributors to a given piece of work*
* *make sure that all work submitted as his or her own in a course or other academic activity is produced without the aid of unsanctioned materials or unsanctioned collaboration*
* *obtain all data or results by ethical means and report them accurately without suppressing any results inconsistent with his or her interpretation or conclusions*
* *treat all other students in an ethical manner, respecting their integrity and right to pursue their educational goals without interference. This requires that a student neither facilitate academic dishonesty by others nor obstruct their academic progress*
* *uphold the canons of the ethical or professional code of the profession for which he or she is preparing.*

*Adherence to these principles is necessary in order to insure that:*

* *everyone is given proper credit for his or her ideas, words, results, and other scholarly accomplishments*
* *all student work is fairly evaluated and no student has an inappropriate advantage over others*
* *the academic and ethical development of all students is fostered*
* *the reputation of the University for integrity in its teaching, research, and scholarship is maintained and enhanced.*

*Failure to uphold these principles of academic integrity threatens both the reputation of the University and the value of the degrees awarded to its students. Every member of the University community therefore bears a responsibility for ensuring that the highest standards of academic integrity are upheld.*

**Disability services:** The Office of Disability Services works with students with a documented disability to determine the eligibility of reasonable accommodations, facilitates and coordinates those accommodations when applicable, and lastly engages with the Rutgers community at large to provide and connect students to appropriate resources (e-mail: https://ods.rutgers.edu/, phone: (848) 445-6800). Students with disabilities requesting accommodations must follow the procedures outlined at https://ods.rutgers.edu/students/applying-for-services. Please give your letter of accommodation to me as soon as possible, and we will coordinate the accommodations privately.