

# Philosophy of Science Syllabus

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**Virtual Office Hours:** [TBA]

## Course Description

This course will explore selected topics in philosophy of science, including:

- What implications does evolution by natural selection have for our commonsense beliefs?
- Why does the universe appear to be designed for intelligent observers?
- Are we alone in the universe? If not, why haven't we observed other civilizations?
- Can science explain conscious experience?
- Should the psychology of implicit bias lead us to doubt our judgment?
- Are most scientific studies mistaken?
- Will artificial intelligence exceed human intelligence?
- Could your mind be uploaded to a computer?
- How will science shape the future of humanity? How should it?

## Learning Goals

In this course, students will: (1) improve their ability to think carefully and clearly about abstract topics, (2) develop skills in reading and engaging with difficult texts, (3) gain understanding of some problems in philosophy of science, and (4) improve their writing abilities.

## Communication

By default, please send emails to both instructors rather than just one.

You can provide anonymous feedback about the course [here](#).

## Accommodations

Students who are entitled to accommodations and think that they might want to use them are encouraged to contact the instructors about this at the beginning of the semester. We will, of course, keep communication about these matters confidential. Here's a [link](#) to the Disabilities Services website.

## **Mental Health**

We recognize that college is a very stressful time for many students even outside the context of a pandemic and that the pandemic is a source of additional stress and hardship for many of you. We will generally refrain from asking you about your situation. This is not because we don't care. Instead, it's to avoid putting you in a position where you feel pressured to disclose details about your situation that you don't want to share. If you are having issues that you would like to make either of us aware of, you are welcome to do so. While neither of us is a mental health professional, you have access to people who are through Rutgers' [Counseling Services](#)—if you have issues with mental health during this course, we would encourage you to make use of some of these services.

## **Course Materials**

-Reading materials will be provided electronically.

## **Assignments**

- Five (of the eight possible) discussion responses (8% each)
- Four do-at-home problem sets (15% each)
  - Problem sets will be posted at least ten days in advance of when they're due.
  - Because we'll either post answers to these shortly after they're due or discuss them in lecture, late assignments will not be accepted.
  - Students may collaborate in groups of up to (but not more than) three on problem sets. It's also fine to work in groups of two or by yourself.
  - If there is an alternative assignment (e.g. a substantial paper) that you would like to complete instead of a given problem set, seek instructor approval for your proposal as soon as possible and no later than one week before the problem set due date.

## **Academic Dishonesty**

By default, cheating on an assignment will result in a failing grade for that assignment. Further consequences, such as a failing grade for the course, may also ensue. If you're unsure what counts as cheating, it's your responsibility to ask. Students who turn in assignments suspected of plagiarism may be required to discuss the assignment with the instructors.

## **Advice for Reading and Writing Philosophy**

Even excellent, clear philosophical writing is often difficult to read. One reason for this is that the subject matter of philosophy is often inherently difficult. In light of this, you should not expect to fully understand readings for this class in one sitting. We suggest reading each article at least twice, using the first reading to get the gist of the paper and the second to acquire a deeper understanding of the reading.

A word of caution: reliable online resources for philosophy are hard to find. One great one is: <http://plato.stanford.edu/index.html>. If you would like reading recommendations on particular philosophical topics, feel free to ask us.

## Provisional Schedule

- Introduction
- I. Philosophy of Biology
    - Excerpt from “Overview of the Theory of Evolution” (Dewitt)
    - “Color” (Pautz)
    - “Evolutionary Debunking of Moral Realism” (Vavova)
    - Excerpts from “An Evolutionary Argument Against Naturalism” (Plantinga)
    - Excerpts from *Natural Theology* (Paley)
    - Excerpts from *The Blind Watchmaker* (Dawkins)
  
  - II. Philosophy of Cosmology
    - [“Misapprehensions about the Fine-tuning Argument”](#) (Hawthorne & Isaacs)
    - [“Why Does Our Universe Appear Specially Made for Us?”](#) (Maudlin)
    - “What’s So Bad about Boltzmann Brains?” (Carroll)
    - “Atheistic Induction by Boltzmann Brains” (Monton)
    - [“Fermi’s Paradox”](#) 5:50-1:20:00 (podcast; Reid, Webb)
  
  - III. Philosophy and the Mind Sciences
    - Excerpts from “Microphysical Causation and the Case for Physicalism” (Ney)
    - Excerpts from “The Meta-Problem of Consciousness” (Chalmers)
    - [“Scepticism and Implicit Bias”](#) (Saul)
    - [Hackademics](#) (Hi-Phi Nation podcast)
  
  - IV. Science, Philosophy, and the Future
    - Excerpts from [“The Singularity: a Philosophical Analysis”](#) (Chalmers)
    - Excerpt from “Artificial You: AI and the Future of Your Mind” (Schneider)
    - [“Existential Risks”](#) (podcast interview of Toby Ord)
    - First 45 min. of [“Superintelligence”](#) and all of [“On the Simulation Argument”](#), (Bostrom video and podcast)