

LOGIC, REASONING, AND PERSUASION, SECTION 07

Instructor: Adrian Liu (Contact: ✉ adrian.liu@rutgers.edu)

Course Website: adrianliu.net/lrp

Meeting Time: Mondays and Wednesdays, 5:40pm–7:00pm

Meeting Place: Campbell Hall – General Purpose Classroom 1 (CA-A1)

Office hours: M 4:30–5:30pm, in Campbell Hall; M/W afternoons by appointment in the philosophy department (106 Somerset St, 5th floor) (email me!)

1 | CONTENT OVERVIEW

This course introduces core philosophical ideas about logic, reasoning, and persuasion. In the first half of the course, we will explore these topics by doing a close read of the paper “Should I use ChatGPT to Write My Papers?” We will examine the strategy and structure of their argumentation. What is their argument, what devices of logic and reasoning are they using, how can we engage with it, and are we convinced? Eventually, you will be asked to write a short paper evaluating the authors’ arguments—and it’ll be up to you whether to use AI when writing that paper.

Why talk so much about AI when the course is not itself a course about AI? I have three reasons. First, though the course focuses on reasoning *in general*, it is easier (and far more fun!) to consider it in the context of a particular topic. Second, AI has quickly become so ubiquitous that questions of how to use and interact with AI will probably be ones you will benefit from carefully considering *anyway*. Third, AI tools are now being used as tools of reasoning! So thinking about how AI reasons will help us better understand the nature of reasoning itself.

While the first half of the course deals with *deductive* reasoning, the second half of the course will cover *inductive* reasoning. In inductive reasoning, we talk about what is more or less likely to be true given our evidence. As it turns out, this kind of reasoning underpins the AI advances of the last ten years. So as we learn about good inductive reasoning, we can also ask whether AI can do it properly.

The course will have one main required reading:

- (1) Aylsworth, Timothy, and Clinton Castro. “Should I Use ChatGPT to Write My Papers?” *Philosophy & Technology* 37, no. 4 (December 2024): 117.
<https://doi.org/10.1007/s13347-024-00809-w>.

I will assign some shorter texts, and will also give handouts with further materials. In general, I will try to keep the amount of reading small—it’s more important to me that you read *carefully* than that you read *a lot*.

Learning Goals

1. Be able to identify and analyze cases of reasoning and persuasion in the wild.
2. Be able to understand, identify, and apply deductive and inductive reasoning.
3. Develop a considered opinion on how you want to interact with AI during your academic career, and perhaps in your life more broadly.

This class satisfies an **Arts and Humanities (AH(o)) Core Requirement**: “Examine critically philosophical and other theoretical issues concerning the nature of reality, human experience, knowledge, value, and/or cultural production.”

2 | PROVISIONAL SCHEDULE

as of August 26th. See website for the latest, detailed schedule!

WEEK 1: INTRODUCTION

- 0.1 Week 1 (Sep 01, Sep 03): *No class Sep 01*, Introduction Sep 03!

WEEKS 2–8: DEDUCTIVE REASONING

- 1.1 Week 2 (Sep 08, Sep 10): How to figure out what an argument is doing
- 1.2 Week 3 (Sep 15, Sep 17): Identifying different types of argument forms
- 1.3 Week 4 (Sep 22, Sep 24): Evaluating the strength of an argument
- 1.4 Week 5 (Sep 29, Oct 01): Making objections to arguments
→ **Problem Set 1 due Wed Oct 01**
- 1.5 Week 6 (Oct 06, Oct 08): Making arguments of your own
→ **Writing Assignment Part 1 Due Wed Oct 08**
- 1.6 Week 7 (Oct 13, Oct 15): Deciding how to engage with an argument
- 1.C Week 8 (Oct 20, Oct 22): **Midterm 1 Mon Oct 20** // wrap-up Oct 22.

WEEKS 9–15: INDUCTIVE REASONING

- 2.1 Week 9 (Oct 27, Oct 29): How to be uncertain
- 2.2 Week 10 (Nov 03, Nov 05): Reasoning about evidence
→ **Writing Assignment Part 2 Due Nov 05**
- 2.3 Week 11 (Nov 10, Nov 12): Reasoning about data (which is a type of evidence!)
- 2.4 Week 12 (Nov 17, Nov 19): Do GPT models reason?
→ **Problem Set 2 due Wed Nov 19**
- 2.5 Week 13 (Nov 24, Nov 26) Catch-up day Nov 24, *no class Nov 26th*
- 2.6 Week 14 (Dec 01, Dec 03): What to pay attention to
- 2.C Week 15 (Dec 08, Dec 10): **Midterm 2 Mon Dec 08** // wrap-up Dec 10

There are fifteen weeks, two classes a week, two days where there are no classes, and two in-class exams. This means that there are 26 classes total $((15 \times 2) - 2 - 2)$.

3 | COURSE POLICIES ON COLLABORATION AND TECHNOLOGY

Co-Working

- Working with others is a great way to learn. You are allowed to discuss assignments with each other and even do homework together. If you work with others, **please write your collaborators' names on your submission**. However, everyone should write up and submit their work individually. It's important for learning that you are able to understand and explain material on your own, even if you got to that point by collaborating with others.

Technology

- 1. *In Class*: Use of computers, tablets, phones, e-Readers, and other devices is prohibited during class and in-class tests/assignments. Exceptions will be made for students with accessibility accommodations. If you do not have an official accommodation but need to use technology during class for accessibility reasons, please talk to me about it. I have this policy in place because a lot of

research shows that student who use technology in class have worse learning outcomes and create distractions for those seated nearby.

2. *For Assignments:* You may use the internet and AI tools for the problem sets and written assignment (but not the midterms). If you get help online or from AI tools, **you must specify exactly how you used the tool and for what portions of the assignment.** I will always grade assignments *as if* you did it without any help. This means you *are allowed to* feed an entire assignment into a GPT chatbot and give it to me, as long as you tell me that you did so. Part of the point is for you to think about whether you *should* do that.

4 | ASSIGNMENTS AND GRADING

Grading will be based on four components, weighted equally:

- 25% – **Exit Slips.** I'll do low-stakes exit questions for the material at the end of each class to gauge comprehension; you'll get half a point for completing it and another half a point for a correct answer, for 25 points total over the term. Your lowest score on this will be dropped.
- 25% – **Problem Sets.** One in the middle of the first half, and one in the middle of the second half. Grading: The problem set you do better on will be weighted at 15%, the one you do worse on weighted at 10%.
- 25% – **Exams.** One exam at the end of each module, lasting the full 80 minutes but designed to take only 60 minutes. The first one will be about deductive reasoning, the second about inductive reasoning. The second exam is *not* cumulative. Grading: The exam you do better on will be weighted at 15%, the one you do worse on weighted at 10%.
- 25% – **Written Assignment.** One writing assignment in two parts. In part 1, you outline and reconstruct an argument. In part 2, you make a considered criticism of it. Grading: by satisfactory completion:
 - First part progress: 5%. First part complete: 10%
 - Second part progress: 15%. Second part complete: 25%

I will return your submissions to you on the Monday following each submission, with the designation *not much progress* / *progress* / *complete*. If you do not get a “complete” grade, you can resubmit the assignment on any Wednesday before the next part is due. You can resubmit three times total across both parts. The first part must be “complete” before you can attempt the second part. Don't expect to complete a part on the first try, but I will give enough feedback that you can complete it on the *second* try.

Translation to Letter grading:

| Score | < 60 | 60+ | 70+ | 75+ | 80+ | 85+ | 90+ |
|--------|------|-----|-----|-----|-----|-----|-----|
| Letter | F | D | C | C+ | B | B+ | A |
| GPA | 0.0 | 1.0 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 |

The class will **not** be curved down: everyone can get an A if we cooperate and understand the material.

More below ↓

5 | OTHER COURSE POLICIES

1. **Late Work:** Because I will release assignments well in advance, I generally will not accept late work. If you have extenuating circumstances, please let me know *before the due date* of an assignment and we can figure something out. Work will only be accepted after December 3rd in exceptional circumstances.
2. **Incompletes:** Incompletes can be arranged if there are extenuating circumstances. Please know that it is generally more work overall to take an incomplete and finish work later than it is to just do your best during the term. I will be understanding about obstacles to getting work done.
3. **Resources for students:** You should come to my office hours, but you should also avail yourself of other resources at Rutgers for students who want to improve their writing capacities, such as the writing center. Here is the link where you can sign up to receive tutoring: <https://writingctr.rutgers.edu>.
4. **Accommodations:** I'm committed to supporting you and doing what I can to help you succeed. If there's anything acting as an obstacle to your fully engaging with the course, reach out to me and we can discuss alternative arrangements to make sure you're getting the most you can out of this class. For accommodations on assignments and exams, I will follow any accommodations granted by the Office of Disability Services. <https://ods.rutgers.edu/>.
5. **Academic Integrity:** We are all subject to the [Rutgers Academic Integrity Policy](#). It's pretty standard, but you should still review it. For potential violations, I'll always try to engage in discussion before getting the Office of Student Conduct involved. Cheating violates the Academic Integrity Policy. For this class, cheating counts as (1) using technology to help you complete in-class assignments and exams and (2) misrepresenting work. Misrepresenting work means pretending that you authored work when you did not, or failing to specify how and when you received help from outside resources (e.g., peers, ChatGPT).
6. **Mandatory Reporting:** I am a mandatory reporter under Title IX. Under this law I'm required to report certain information about alleged sexual misconduct to the University. If needed, I can direct you to resources that are confidential and do not need to report. See [this link](#) as well for more resources.