| 01:730:101 | Logic, Reasoning, and Persuasion | Fall 2020 |

Carolina Flores

> *Zoom Link:* [removed]
> *Office Hours:* Mondays 4-5; or by appointment (e-mail me).
> *Email:* carolina.flores@rutgers.edu

Required Texts

All readings, handouts, assignments, and announcements will be posted on Canvas. Links to online resources are also on the syllabus.

Course Description

Both persuading others and figuring out what to believe are hard. This class will help you do both— even in the face of bullshit, bad arguments, and manipulation.

In module 1, you will learn about how to extract—and then criticize—arguments, and how to construct clear, rigorous arguments. In module 2, you will learn about following evidence to its conclusion, and how to update your beliefs about the world in a way that matches the evidence you have. We will also discuss how to be on guard against common misuses of evidence and statistics. These two modules will involve learning some basic concepts in logic and probability, with an eye to how they can be practically useful in engaging with arguments and information.

In modules 3 and 4, we move from how we should reason to why it can be so hard to reason well, and how to do it in the real world. In module 3, our focus is on our own cognitive limitations, and how they lead us to logical mistakes, to respond to evidence in biased ways, and to dismiss other people (or ourselves). In module 4, we will think about how we should collect information, who we should trust, and what we should question—especially in the face of echo chambers, filter bubbles, medical skepticism, fake news, and conspiracy theories. This will give you more opportunities to apply the tools we will develop in the first part of the semester, and a taste for what doing philosophy is like.

This class is synchronous, which means you are expected to show up on Zoom twice a week at the scheduled times. Our Zoom sessions will be friendly to short attention spans, and focus on games, debates, collective problem-solving, and applying the skills of the course to real-world examples.

Course Goals

At the end of this class, you will be able to:

- Construct your own (and reconstruct others') arguments in a way that manifests their logical structure.
- Use basic concepts in logic and probability theory to assess arguments.
- Criticize arguments by offering focused objections and respond to others' objections.
- Identify and avoid common reasoning heuristics and biases in your own and others' reasoning.
- Detect and critically expound social structures that make reasoning well harder; and engage with media in a way that is sensitive to those difficulties.
- Engage in more productive truth-seeking conversations about difficult topics.

- Independently identify, describe, analyze, and criticize a range of belief-forming practices.

In short: you will learn to assess and criticize arguments—and argue—better; to avoid common reasoning mistakes and attempts at manipulation; and to have better conversations.

Schedule of Topics and Readings

All classes meet at 1:10-2:30pm over Zoom. This schedule is subject to revision.

Zoom link: https://rutgers.zoom.us/j/92018968681?pwd=Mmk1NUNJeldBekQ3TlR1VHJFRHJrZz09

Date	Topic	Readings/videos/ podcasts	For-credit assignment
Module 0.			
Sep 2	Having good discussions	Syllabus Examining Ethics podcast: The Art of Listening	
Sep 7	Can we argue over opinions?	Take the Pew Research Center facts vs. opinions quiz. McBrayer's "Why our Children don't Think there are Moral Facts"	Fill in "Commitments for the semester" sheet.
Module 1. How to reason in a watertight way.			
Sep 8 (Monday schedule)	What are the main kinds of arguments?	Wi-Phi videos: - Introduction to Critical Thinking - Deductive Arguments - Abductive Arguments Reasoning for the Digital Age: Arguments, Premises, and Conclusions	
Sep 14	How do I identify an argument and its parts?	Wi-Phi: Implicit premise Argument Visualization: The Basics This American Life podcast: Kid Logic	
Sep 16	When is a deductive argument good?	Wi-Phi videos: - Validity - Truth and Validity - Soundness	Problem set 1

Sep 21	Necessary vs. sufficient conditions	Wi-Phi videos: - [Necessary and Sufficient Conditions 1](#) - [Necessary and Sufficient Conditions 2](#)	
Sep 23	What are some common good argument forms?	Reasoning for the Digital Age: - [Dependent/Linked Premises](#) - [Conditional Reasoning](#)	Problem set 2
Sep 28	How do I apply all this to evaluate complex arguments?	[Argument Visualization: Handy Hints for Making Arguments Valid](#) Each group: bring in at least one argument to evaluate.	
Module 2. How to follow the evidence where it leads.			
Sep 30	What makes for good inductive arguments?	Reasoning for the Digital Age, [4.1](#), [4.2](#)	Problem set 3
Oct 5	How do we evaluate inductive arguments?	This American Life, [Fear and Loathing in Rockville](#)	
Oct 7	How should we update our beliefs when we get new information?	Manley, *Reason Better*, chs. 5.1 ([What is evidence?](#)), and 8 ([Updating](#)) [An Intuitive (and Short) Explanation of Bayes' Theorem](#)	Problem set 4; or come to office hours with a draft of the first assignment!
Oct 12	How can we avoid bad updating?	Gigerenzer et al., "Helping doctors and patients make sense of health statistics", sections 1-2, 4-5	PAPER 1 DUE
Oct 14	How can statistics mislead?	[10 Lessons from *How to Lie with Statistics*](#) [Simpson's paradox](#)	Problem set 5
Oct 19	In what ways can graphs and diagrams mislead?	Bergstorm & West, *Calling Bullshit*, ch. 7: Data Visualization	
Module 3. How to avoid common reasoning mistakes.			
Oct 21	Are we built to be rational?	Kahneman, Thinking Fast and Slow, chs. 1-3	

Oct 26	What are some common cognitive biases?	No reading!	Short writing task 1
Oct 28		Lau, *An Introduction to Critical Thinking and Creativity*, ch. 20: Cognitive Biases Group work: prepare to present on one cognitive bias of your choice (list here).	
Nov 2	Do we just believe what makes us feel good?	Fine, *A Mind Of Its Own*, ch. 1: The Vain Brain Aronson and Tavris, "The role of cognitive dissonance in the pandemic"	Short writing task 2
Nov 4	How can we avoid biased reasoning?	Manley, *Reason Better*, ch. 2: Mindset (available here) Wi-Phi video: The G.I. Joe Fallacy	
Nov 9	How do implicit biases affect our reasoning?	Take two of the IAT tests here Gendler, "The Epistemic Costs of Implicit Bias", sections 3-5 (selections)	Short writing task 3
Nov 11	How do implicit biases affect *who* we believe?	Fricker, "Testimonial Injustice"	
Unit 4. How to form beliefs "in the wild".			
Nov 16	Are we all living in echo chambers?	Nguyen, "Escape the Echo Chamber"	Short writing task 4
Nov 18	Should we question everything?	Hausman, "What explains the enduring myth of medical skepticism"	
Nov 23	How do we identify misinformation?	The real 'fake news': how to stop misinformation and disinformation online Factcheck.org: How to spot fake news	Short writing task 5
Nov 25	NO CLASS – FRIDAY SCHEDULE		
Nov 30	What should our news diet be?	Rini, "Fake News and Partisan Epistemology"	Short writing task 6

Dec 2	Why shouldn't we believe conspiracy theories?	ReplyAll podcast on QAnon	
Dec 7	How do we avoid conspiracy theories?	Sunstein & Vermule, "Conspiracy Theories: Causes and Cures"	Short writing task 7
Dec 9	Recap. Writing a philosophy paper.	Jim Pryor's guidelines on writing a philosophy paper	
Dec 22			PAPER 2 DUE

Course Requirements

- Attendance and participation (10%)
- 10 short for-credit assignments, worth 5% each (50%)
- Paper 1: argument reconstruction (15%). 3-4 pages.
- Paper 2: conspiracy theory debunking (25%). 6-7 pages.

Page counts are for font 12, double-spaced.

Attendance and participation

This class will be taught *synchronously*, meaning that I expect that you will attend the class. The activities we will do in class, and the vibrancy of the class discussion, are paramount for you to get the most out of this class. However, I know that life happens and right now is an especially complicated and chaotic time. You can miss class up to 4 times with no penalty on explanation. Beyond that, please email me in advance to let me know you will be missing class and why you need to miss class.

This class is meant to help you develop and sharpen your reasoning and persuasion skills. Our Zoom sessions will mostly be an opportunity to *practice* those skills with others, often through open discussion and disagreement, which are encouraged in this class. I expect you to show up having done the work for that session, and to actively and respectfully engage in discussion and collaborative thinking with your peers.

Homework assignments

There will be one for-credit task a week (so a total of 14 over the semester), with each being worth 5%. You need to hand in 10 of these throughout the semester; it's up to you which ones you want to complete. These assignments will vary: short problem sets, quizzes on the reading, discussion posts on specific prompts I will post in advance, and short reports on in-the-world activities. Problem sets will be graded for correctness on a point scale; see the rubric below for how short writing assignments will be graded. The full schedule is listed in the schedule of topics and readings above. All homework assignments are due at **10am** the day listed on the syllabus.

Papers

Papers should be submitted with no identifying information and submitted as .pdfs with the last four digits of your RUID as the title through Canvas by the due date. Except in extreme conditions, extensions must be granted well before the due date; late papers will be downgraded 1/3 grade per day. The first paper will be an argument reconstruction, and the second paper will involve debunking a conspiracy theory.

Other Expectations

I expect you to be familiar with and to abide by RU's policy on academic and intellectual integrity: academicintegrity.rutgers.edu/academic-integrity-policy. Violations of this policy include cheating, fabrication, plagiarism, denying others access to information or material, and facilitating violations of academic integrity.

I also expect you to abide by the department's norms for discourse (philosophy.rutgers.edu/about-us/discourse). In particular, I expect all participants to observe basic norms of civility and respect. This means stating your own views directly and substantively: focusing on reasons, assumptions and consequences rather than on who is offering them, or how. And it means engaging other's views in the same terms. No topic or claim is too obvious or controversial to be discussed; but claims and opinions have a place in the discussion only when they are presented in a respectful, collegial, and constructive way.

If you need to be absent for religious observances, let me know in advance. It is University policy to excuse without penalty students who are absent from class because of religious observance, and to allow the make-up of work missed because of such absence.

If you need special accommodations because of a learning disability or any other reason, please have the Office of Disability Services (ods.rutgers.edu) get in touch with me.

Grading Rubric

Below is roughly what each letter grade means. Note that '+' grades will be assigned for fine-tuning.

A

Papers: Fully answers the question in a concise and convincing manner. Provides a strong argument, with a clearly stated, relevant thesis, a transparent argument structure, and compelling premises. Considers objections and makes a persuasive effort to address them. Writes clearly, in plain language, and uses terminology in a precise manner. Shows insight by going beyond examples, views or objections discussed in class.

Discussion posts/short writing assignments: Relevant to the topic, concise, clearly written, and specific. Articulates a question or objection which reveals engagement with the text, and which contributes to class discussion.

Attendance and participation: At most 4 unexcused absences. Comes to class fully prepared, with relevant questions or insightful comments on the reading. Regularly participates in in-class discussion in ways that contribute to others' understanding and are relevant. Is always respectful and considerate of others and does not take up excessive time.

B

Papers: Answers most of the question. Provides a solid argument, with a clear thesis, mostly transparent argument structure, and relevant premises, though the argument may have some significant gaps. Displays understanding of the topic by considering other views, though perhaps without articulating points independently or while showing confusion about some significant point. Writes mostly in a clear manner, though there might be inaccuracies that compromise the points made.

Discussion posts/short writing assignments: Mostly relevant to the topic, but some points may be poorly articulated or insufficiently articulated.

Attendance and participation: Five to eight unexcused absences. Or: Shows evidence of having done the work for each session, but in many cases in an uncritical or rushed manner. Participates in in-class discussion in more-or-less relevant ways. Is respectful of others.

C

Papers: More-or-less off-topic and unclear. Fails to provide an argument and shows significant confusion about major points.

Discussion posts/short writing assignments: More-or-less off-topic and unclear. Fails to provide an argument and shows significant confusion about major points.

Attendance and participation: Eight to ten unexcused absences. Or: In many classes, does not appear to have prepared for class. Fails to participate in relevant ways. The tone of participation is sometimes not fully respectful of others.

D and below: scarce evidence of effort or understanding along all dimensions.

F: dishonest work.

Student-Wellness Services

Just in Case Web App

http://codu.co/cee05e

Access helpful mental health information and resources for yourself or a friend in a mental health crisis on your smartphone or tablet and easily contact CAPS or RUPD.

Counseling, ADAP & Psychiatric Services (CAPS)

(848) 932-7884 / 17 Senior Street, New Brunswick, NJ 08901/ www.rhscaps.rutgers.edu/

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

Violence Prevention & Victim Assistance (VPVA)

(848) 932-1181 / 3 Bartlett Street, New Brunswick, NJ 08901 / www.vpva.rutgers.edu/

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

Disability Services

(848) 445-6800 / Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854 / https://ods.rutgers.edu/

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: 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. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: https://ods.rutgers.edu/students/registration-form.

Scarlet Listeners

(732) 247-5555 / http://www.scarletlisteners.com/

Free and confidential peer counseling and referral hotline, providing a comforting and supportive safe space.