

PHIL 1500: INTRODUCTION TO LOGIC

Summer 2024
The Ohio State University

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| Instructor | Jason DeWitt |
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| Office Hours | virtually by appointment |
| Class Time | asynchronous |
| Class Location | online |

Description Welcome! I'm very excited to do logic with you all.

Humans are always trying to convince each other (and themselves) of many things. For example, we often encounter people saying that we should buy some product, or that we should vote for some candidate, or that we should believe in some philosophy/religion, or that we shouldn't (or should) eat meat. In other words, we are constantly faced with what logicians call "arguments." These arguments come in many forms and in many media: newspapers, ads, movies, conversations, etc. Logic is the study of arguments and what makes them good or bad.

In this class, we'll talk about what arguments are and what separates the good ones from the bad ones. As we do so, we will cover very different sorts of arguments: deductive arguments, inductive arguments, scientific arguments, statistical arguments, moral arguments, legal arguments, abductive arguments, etc. We'll also take a quick look at the history of logic and examine how systems, like African and Buddhist logic, are a bit different from the classical Greek logic most people use in Western philosophy and mathematics. This course should enrich your ability to think critically about any topic, and to develop good reasons and arguments of your own.

General Education Information This course partially fulfills your legacy GE requirements by being part of the *Quantitative Reasoning* category of the old General Education curriculum. The goals of *Quantitative Reasoning* GE courses are the following: Students develop skills in quantitative literacy and logical reasoning, including the ability to identify valid arguments, and use mathematical models.

Expected Learning Outcomes:
BASIC COMPUTATION

- Students demonstrate computational skills and familiarity with algebra and geometry.
- Students apply these skills to practical problems.

MATHEMATICAL OR LOGICAL ANALYSIS

- Students comprehend mathematical concepts and methods adequate to construct valid arguments.

- Students comprehend mathematical concepts and methods adequate to understand inductive and deductive reasoning.
- Students comprehend mathematical concepts and methods adequate to increase their general problem solving skills.

How this course attains these goals and outcomes: In this course, you will develop your capacities to create and critically evaluate both inductive and deductive forms of argument.

This course also partially satisfies your new GE requirements by being part of the *Quantitative and Mathematical Reasoning (or Data Analysis)* category of the new General Education curriculum. The goals of *Quantitative and Mathematical Reasoning (or Data Analysis)* GE courses are the following: Successful students will be able to apply quantitative or logical reasoning and/or mathematical/statistical methods to understand and solve problems and will be able to communicate their results.

Expected Learning Outcomes:

- Use logical, mathematical, and/or statistical concepts and methods to represent real-world situations.
- Use diverse logical, mathematical, and/or statistical approaches, technologies, and tools to communicate about data symbolically, visually, numerically, and verbally.
- Draw appropriate inferences from data based on quantitative analysis and/or logical reasoning.
- Make and evaluate important assumptions in estimation, modeling, and logical argumentation and/or data analysis.
- Evaluate social and ethical implications in mathematical and quantitative reasoning.

How this course attains these goals and outcomes: In this course, you will develop your capacities to draw appropriate inferences, evaluate assumptions, and use mathematical models in the logical analysis of arguments that model real-world (sometimes social and ethical) situations.

Carmen All course content such as announcements, slides, assignments, grades and required readings (or videos) will be made available on Carmen (or be made available via an Internet link on Carmen). You are expected to do the readings *before* watching the lecture for which the reading is assigned. Check Carmen regularly. What is assigned on Carmen takes precedence over the assignments/readings detailed on the syllabus. Contact me via *email*, *instead* of via the Carmen messaging.

Materials All of the assigned reading/watching/listening material will be available for free on Carmen or available free through the Internet via a link on Carmen. There are no required textbooks for the class.

Requirements and Grading Your overall course grade will be assigned based on the following components (with the corresponding percentage of overall grade for the assignment given in parenthesis):

- Weekly discussion (**20%**).
- Weekly quizzes (**30%**).

- External research project (**10%**).
- Final exam (**40%**).

Detailed assignment sheets for the research project will be distributed closer to the time of assignment, though some minimal detail for each portion of your grade can be found in the next section of this syllabus. Tentative due dates will be given below. There will be no extra credit in this class.

Descriptions of Major Course Assignments

There will be a **weekly discussion board** with each Carmen module. You're expected to contribute to the discussion board every week. I will have a question of the week related to that week's material. It will be more open-ended than the quiz questions and allow for discussion. Your contributions should be substantial, just saying things like "I agree" will not count. You should make (i) an original post in the discussion thread and (ii) at least one reply to someone else's comment. I expect the posts to be at least a few sentences long, but if you want to write more than a paragraph, then that is okay. The point of this is to get people to interact as much as we can in an asynchronous environment and to have more wide-scoped philosophical discussions about logic. As long as you make *substantial* and *thoughtful* contributions to the discussion board each week, you will be fully meeting this requirement.

There will be **weekly quizzes** testing your knowledge of that week's material. The quiz questions will be based on concepts and skills drawn from that week's readings and from the corresponding weekly lecture videos. The quizzes will be timed, but they will also be open book. You're welcome to re-watch the videos or re-read the readings during the quiz if it helps, but be prepared to manage your quiz time.

There will be a low-stakes **external research project** due at the end of the fourth week of our term. This will take the form of a short research paper. You will have various options as to what to do it on: (i) a famous logician, (ii) an area or system of logic, or (iii) a dissection of an argument you've come across in your everyday life. I'll have more detailed instructions about this assignment available on Carmen, but for options (i) and (ii), there will be a pre-approved list of topics to choose from.

We'll conclude the class with a **final exam** on Carmen. It, like the quizzes, will also be timed and open-book. It will be cumulative and cover topics from across the course.

Late Assignments Extensions will only be granted in extraordinary circumstances (or, of course, if you have an accommodation from SDLS which involves an extension). That being said, please email me ASAP if you need an extension because of some emergency. Late submissions of assignments will lose 5 points per day. No credit will be given after 5 days.

Instructor Feedback and Response Time For every assignment, I will have grades returned to the students within 14 days of submission. If you need to contact me out of class, please email me at dewitt.197@osu.edu directly. I have technical difficulties getting Carmen messages, so if you message me via Carmen do not expect me to receive your message. I will respond to emails within about 24 hours on weekdays and around 48 hours on weekends.

Grading Scale We will use the OSU Standard Grade Scheme:

- 93-100: A
- 90-92.9: A-

- 87-89.9: B+
- 83-86.9: B
- 80-82.9: B-
- 77-79.9: C+
- 73-76.9: C
- 70-72.9: C-
- 67-69.9: D+
- 60-66.9: D
- Below 60: E

Disability Services The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Academic Misconduct Academic misconduct is a serious offense. *You are responsible for knowing what counts as academic misconduct.* You are also expected not to commit it. In accordance with Faculty Rule 3335-5-487, all suspected cases of academic misconduct will be reported to the university's Committee on Academic Misconduct who will then be responsible for investigating or establishing procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.

We will discuss what and how to cite sources for philosophical writing as we go through our first set of writing assignments. We will also discuss which online resources are the most reliable sources for writing philosophy.

Commitment to a diverse and inclusive learning environment The Ohio State University arms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

Your Mental Health As a student you may experience a range of issues that can cause barriers to learn, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. No matter where you are engaged in distance learning, The Ohio State University's Student Life Counseling and Consultation Service (CCS) is here to support you. If you find yourself feeling isolated, anxious or overwhelmed, on-demand resources are available at go.osu.edu/ccsondemand. You can reach an on-call counselor when CCS is closed at 614-292-5766, and 24-hour emergency help is also available through the 24/7 National Prevention Hotline at 1-800-273-TALK or at suicidepreventionlifeline.org. The Ohio State Wellness app is also a great resource available at go.osu.edu/wellnessapp.

Religious Accommodations Ohio State has had a longstanding practice of making reasonable academic accommodations for students' religious beliefs and practices in accordance with applicable law. In 2023, Ohio State updated its practice to align with new state legislation. Under this new provision, students must be in early communication with their instructors regarding any known accommodation requests for religious beliefs and practices, providing notice of specific dates for which they request alternative accommodations within 14 days after the first instructional day of the course. Instructors in turn shall not question the sincerity of a student's religious or spiritual belief system in reviewing such requests and shall keep requests for accommodations confidential.

With sufficient notice, instructors will provide students with reasonable alternative accommodations with regard to examinations and other academic requirements with respect to students' sincerely held religious beliefs and practices by allowing up to three absences each semester for the student to attend or participate in religious activities. Examples of religious accommodations can include, but are not limited to, rescheduling an exam, altering the time of a student's presentation, allowing make-up assignments to substitute for missed class work, or flexibility in due dates or research responsibilities. If concerns arise about a requested accommodation, instructors are to consult their tenure initiating unit head for assistance.

A student's request for time off shall be provided if the student's sincerely held religious belief or practice severely affects the student's ability to take an exam or meet an academic requirement and the student has notified their instructor, in writing during the first 14 days after the course begins, of the date of each absence. Although students are required to provide notice within the first 14 days after a course begins, instructors are strongly encouraged to work with the student to provide a reasonable accommodation if a request is made outside the notice period. A student may not be penalized for an absence approved under this policy.

If students have questions or disputes related to academic accommodations, they should contact their course instructor, and then their department or college office. For questions or to report discrimination or harassment based on religion, individuals should contact the Office of Institutional Equity.

Tentative Course Schedule

The schedule below is tentative. Any unexpected changes to the schedule will be announced on Carmen as the course proceeds.

Within each week, there will be two sets of readings (corresponding to the two lecture videos), two videos, a quiz, and a discussion board. The quizzes will always be due by the end-of-date on the Sunday at the end of the week. Your original discussion board post (your first main comment) will be due every week by end-of-date on Friday. Your reply (remember you have

to do an original post *and* a reply everytime) will be due by end-of-date on Sunday too. As long as you complete your assignments by their due-dates, when you do the readings and watch the lectures is up to you, but I will post them as belonging to specific days just for organizational purposes.

Week One

May 7th Introduction
 | Read the Syllabus. Watch Lecture 1.
 May 9th Argument Identification
 | Reading on arguments and their identification. Watch Lecture 2.
 May 10th Introduction
 | Week 1 discussion post due.
 May 12th Introduction
 | Quiz 1 due. Week 1 discussion reply due.

Week Two

May 14th Deductive vs. Inductive
 | Reading on deductive and inductive arguments. Watch Lecture 3.
 May 16th Introduction
 | Reading on “The Logical Toolkit.” Watch Lecture 4.
 May 17th Introduction
 | Week 2 discussion post due.
 May 19th Introduction
 | Quiz 2 due. Week 2 discussion reply due.

Week Three

May 21st Language and Definitions
 | Reading on meaning and definition. Watch Lecture 5.
 May 23rd History of Logic
 | Listen to podcast episode on the history of logic. Watch Lecture 6.
 May 24th Language and History
 | Week 3 discussion post due.
 May 26th Language and History
 | Quiz 3 due. Week 3 discussion reply due.

Week Four

May 28th Fallacies
 | Reading on informal fallacies. Watch Lecture 7.
 May 30th Fallacies
 | Reading on fallacies. Watch Lecture 8.
 May 31st Fallacies
 | Week 4 discussion post due.
 June 2nd Fallacies
 | **External research project** due. Quiz 4 due. Week 4 discussion reply due.

Week Five

June 4th Analogical Arguments

| Reading on analogical arguments. Watch Lecture 9.
 June 6th Legal Arguments
 | Reading on legal arguments. Watch lecture 10.
 June 7th Analogical and Legal Arguments
 | Week 5 discussion post due.
 June 9th Analogical and Legal Arguments
 | Quiz 5 due. Week 5 discussion reply due.

Week Six

June 11th Moral Arguments
 | Reading on moral arguments. Watch Lecture 11.
 June 13th Statistical Arguments
 | Reading on statistical arguments. Watch Lecture 12.
 June 14th Moral and Statistical Arguments
 | Week 6 discussion post due.
 June 16th Moral and Statistical Arguments
 | Quiz 6 due. Week 6 discussion reply due.

Week Seven

June 18th Probability
 | Reading on probabilistic reasoning. Watch Lecture 13.
 June 20th Causation and IBE
 | Reading on causation and abductive reasoning. Watch Lecture 14.
 June 21st Probability, Causation, and IBE
 | Week 7 discussion post due.
 June 23rd Probability, Causation, and IBE
 | Quiz 7 due. Week 7 discussion reply due.

Week Eight

June 25th Scientific Method
 | Reading on scientific method. Watch Lecture 15.
 June 27th Hint of the REST of Logic
 | Watch Lecture 16.
 June 28th Scientific Method
 | Week 8 discussion post due.
 June 30th Scientific Method
 | **Final exam due.** Quiz 8 due. Week 8 discussion reply due.

Important Assignment Dates (Also Tentative!) Remember your quizzes and discussion post assignments happen every week with the same due times (even on weeks when these two assignments are due too). 8-week courses require condensed coursework. But here are the two non-recurring deadlines you need to know.

Short research project..... June 2nd at 11:59pm

Final exam June 30th at 11:59pm