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# PHIL 125: LOGIC

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## Course Description

### **BASIC COURSE INFO**

Instructor: Aidan Kestigian, Ph.D.

Email: [kestigian\\_aidan@wheatoncollege.edu](mailto:kestigian_aidan@wheatoncollege.edu)

Office Hours: M 5:00-6:00 p.m., and by appointment

Office: Knapton 121

Tutor: Olivia James

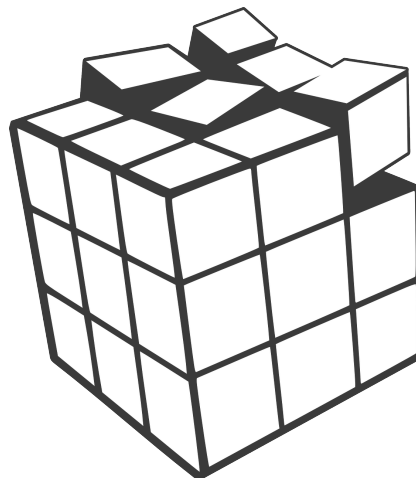
Course time: M, W 3:30-4:50 p.m.

Course location: Meneely 301

This course will introduce students to theoretical and practical tools for constructing and analyzing arguments. Using categorical and propositional logic, we'll evaluate contemporary arguments from public media, science, politics, and other disciplines. This course will be of interest to students looking to pursue other courses and degrees in philosophy, law, and other argument-based disciplines, as well as those who are interested in how logical or mathematical tools are used outside of the sciences.

## What to Expect

Philosophical inquiry is pursued via writing, speaking, and reading. Throughout this course, students will be asked to read texts, complete problem sets, and participate in classroom problem-solving sessions. No philosophical background is required for this class. However, if you are having difficulty with the readings or assignments, please make an appointment to meet with the instructor.



Textbook: Hurley's *A Concise Introduction to Logic*.

## Learning Outcomes

By the end of this course, students should be able to:

- Translate natural language arguments into propositional and categorical statements.
- Complete deduction proofs using propositional and categorical rules.
- Assess the soundness and validity of deductive arguments.
- Identify informal fallacies.
- Diagram the underlying structure of popular media texts.
- Work collaboratively, and independently, on problem sets.

## Assignments & Grading

Attendance & Participation	25%
Daily Reading Questions	10%
Nightly Homework	15%
Problem sets	25%
Exams	25%

## Academic Integrity & Course Policies

**Honor Code:** I take academic integrity and the Wheaton College Honor Code very seriously. While you will work with peers on problem sets in class, I expect all work that is handed in to be your own. If you hand in work that is not your own, you sacrifice the trust of your peers, as well as the benefits afforded to us all under the Honor Code. Furthermore, assignments are designed to build on each other. If you don't do all of the assignments yourself, you will not do well in this course. **All work that is handed in should include the honor pledge “I have abided by the Wheaton College Honor Code in this work”, followed by your signature.**

**Accessibility:** Wheaton is committed to ensuring equitable access to programs and services and to prohibit discrimination in the recruitment, admission, and education of students with disabilities. Individuals with disabilities requiring accommodations or information on accessibility should contact Autumn Grant - Associate Director for Accessibility Services at the Filene Center for Academic Advising and Career Services. ~ [accessibility@wheatoncollege.edu](mailto:accessibility@wheatoncollege.edu) or [\(508\) 286-8215](tel:5082868215)

**Attendance:** Attendance and participation in in-class problem-solving sessions is required for this course and will be taken at each class meeting. You may miss 2 class meetings for any reason. Every absence beyond the first two will result in a 5 point deduction from your final grade.

**Assignments:** Outside of class, you're asked to read the course textbook, answer brief multiple-choice questions about the reading, and complete nightly homework assignments and more comprehensive problem sets. Assignments will be made available on the OnCourse site.

**Technology:** Research shows that laptops and tablets in the classroom are a distraction to users, and a distraction to other students around them. Please leave these devices at home and bring paper, pencil or pen, and your textbook to each class meeting. If you plan to rent the textbook in digital form, you may bring your laptop or tablet (but not a cellphone) to use during class, but only for viewing the book when we are doing problem-solving sessions that require the book (and not for typing). No matter what, you should bring a pen or pencil and paper.

## Daily Schedule

WEEKS 1 & 2: INTRODUCTION TO COURSE SKILLS		
DATE	TOPIC	ASSIGNMENT
W. August 28	Introductions	Read "What is the Argument?" Chapter 1 by Harrell
T. September 3	Basic Terminology	Read textbook parts 1.1 & 1.2 Reading Questions Due 8:00 a.m.
W. September 4	Deduction, Induction, and Validity	Read textbook parts 1.3-1.5 Reading Questions Due 8:00 a.m.
WEEKS 3-9: PROPOSITIONAL & CATEGORICAL LOGICS		
DATE	TOPIC	ASSIGNMENT
M. September 9	Categorical Logic	Read textbook parts 4.1-4.3 Reading Questions Due 8:00 a.m.
W. September 11	Operations and Venn diagrams	Read textbook parts 4.4-4.6 Reading Questions Due 8:00 a.m. <b>All outstanding nightly homework due Problem set 1 handed out</b>
M. September 16	Syllogisms	Read textbook parts 5.1 & 5.2 Reading Questions Due 8:00 a.m.
W. September 18	Syllogisms	<b>Problem set 1 due at beginning of class</b> Read textbook parts 5.3-5.5
M. September 23	Review & starting Propositional Logic	Read textbook part 6.1 Reading Questions Due 8:00 a.m.
W. September 25		<b>Exam 1 (Chapters 1, 4, and 5)</b>
M. September 30	Truth Tables	Read textbook part 6.2 Reading Questions Due 8:00 a.m.
W. October 2	Propositions & Fallacies	Read textbook part 6.3 & 6.4 Reading Questions Due 8:00 a.m.
M. October 7	Implication	Read textbook part 6.5 & 6.6 Reading Questions Due 8:00 a.m.
W. October 9	Replacement	Read textbook part 7.1 & 7.2 Reading Questions Due 8:00 a.m. <b>All outstanding nightly homework due Problem set 2 handed out</b>
M. October 14		[College Holiday]
W. October 16	Replacement	<b>Problem set 2 due at beginning of class</b> Read textbook part 7.3 Reading Questions Due 8:00 a.m.

WEEKS 3-9: PROPOSITIONAL & CATEGORICAL LOGICS		
DATE	TOPIC	ASSIGNMENT
M. October 21	Wrapping up propositional logic	Read textbook part 7.4 Reading Questions Due 8:00 a.m.
W. October 23		<b>Exam 2 (Chapters 6 and 7)</b>
WEEK 10: INFORMAL FALLACIES		
DATE	TOPIC	ASSIGNMENT
M. October 28	Fallacies	Read textbook parts 3.1-3.3 Reading Questions due 8:00 a.m.
W. October 30	Presumption	Read textbook part 3.4 Reading Questions due 8:00 a.m.
WEEKS 11 & 12: INDUCTION & APPLICATIONS		
DATE	TOPIC	ASSIGNMENT
M. November 4	Ordinary Language Fallacies	Read textbook part 3.5 Reading Questions due 8:00 a.m.
W. November 6	Moral & Legal Reasoning	Read textbook parts 9.1-9.3 Reading Questions due 8:00 a.m.
M. November 11	Probability	Read textbooks parts 11.1 & 11.2 Reading Questions due 8:00 a.m.
W. November 13	Science	Read textbook parts 13.1-13.3 Reading questions due 8:00 a.m. <b>All outstanding nightly homework due Problem set 3 handed out</b>
WEEKS 13-15: LEVELING UP & REVIEW		
DATE	TOPIC	ASSIGNMENT
M. November 18	Software Intro	Sign up for MindMup account
W. November 20	Argument Diagramming	<b>Problem set 3 due at beginning of class</b> OnCourse reading
M. November 25	Argument Diagramming	OnCourse reading
W. November 27		[Thanksgiving break: No class]
M. December 2	Argument Diagramming	OnCourse reading
W. December 4		<b>Review for Final</b>
T. December 10		<b>Final Exam, 9 a.m.-12 p.m.</b>