

REVISED - Philosophy 201: Introduction to Logic - REVISED

Autumn 2010
Morton Hall [room TBA]
MWF 1:50 - 2:45

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Course Description

This course is an introduction to the methodology of formal and informal logic, examining the applicability of logic to mathematical, scientific, and everyday reasoning. The course develops a system of natural deduction and applies this system to understanding common sense moral reasoning, hypothesis testing in science, Sudoku puzzles, and test-taking skills for graduate-level entrance examinations. The course also surveys the traditional canon of inductive logic, logical and rhetorical fallacies, and rational decision theory.

There are no prerequisites.

Course Aims

- to help the student develop into a person who is intellectually active, critical, and curious, capable of resisting blind concessions to authority and peer pressure
- to help the student make connections between ideas and everyday life, understanding ideas as meaningful to real-world actions rather than mere ineffectual and irrelevant abstractions
- to help the student develop analytic and imaginative skills to make good sense of facts from other disciplines, as a bulwark against unscrupulous manipulation of those facts
- to cultivate in the student an ability to use logical methods for enhancing their everyday reasoning and decision-making skills

Course Texts

- Pospesel, *Introduction to Propositional Logic*, 3rd Edition or 3rd Edition Revised (Prentice Hall)
- Wesley Salmon, *Logic* (Prentice Hall): <<http://www.ditext.com/salmon/logic.html>>

Use of the Texts: The readings should be used as a preparation for lecture, as a supplemental aid in understanding the material covered in lecture, and as a stimulus for class discussion. Each lecture presumes everyone's familiarity with the relevant reading.

Lecture, Reading, and Assessment Schedule (*Tentative*)

08.16	What is Logic?		
08.18	Logical Goodness	Read Pospesel Ch.1 & Salmon Sec.4	
08.20	Deduction in Mathematics & Science		Receive Quiz 1
08.23	The Idea of a Logical System	Read Pospesel Chapter 2.1-2.2	
08.25	<i>Modus Ponens</i>	Read Pospesel Chapter 2.3	Quiz 1 Due
08.27	AND	Read Pospesel Chapter 3	Receive Quiz 2
08.30	Proof Day		
09.01	IF	Read Pospesel Chapter 4	Quiz 2 Due
09.03	NOT	Read Pospesel Chapter 5	Receive Quiz 3
09.06	No Class - Labor Day		
09.08	Proof Day		
09.10	OR	Read Pospesel Chapter 7	Quiz 3 Due
09.13	Derived Rules 1	Read Pospesel Chapter 9.1	Receive Quiz 4
09.15	Sudoku Day		
09.17	Derived Rules 2	Read Pospesel Chapter 9.2	
09.20	Hypothesis Testing	Read Salmon Sec. 30, "Hypotheses"	Quiz 4 Due
09.22	Proof Day		Receive Exam 1
09.24	Proofs & Counterexamples		
09.27	Truth Tables 1	Read Pospesel Ch. 10 & Salmon Sec.10	
09.29	Truth Tables 2	Continue above reading	Exam 1 Due
10.01	Truth Tables 3	Continue above reading	Receive Quiz 5
10.04	Truth Tables 4	Finish above reading	
10.06	Logical Statements	Read Pospesel Ch.12 & Salmon Sec.12	(Guest Lecturer)
10.08	No Class - Fall Break		
10.11	No Class - Work Day		
10.13	Logical Relations	Read Pospesel Ch.13 & Salmon Sec.11	Quiz 5 Due
10.15	GRE Day		Receive Exam 2
10.18	Common Sense Moral Reasoning	Read Jones Chapter 4.2 (via email)	
10.20	Enthymemes		
10.22	Arguments from Analogy	Read Salmon Section 26	Exam 2 Due / Receive Quiz 6
10.25	Criticizing Common Sense		
10.27	Rhetorical Fallacies	Read Salmon Section 25	
10.29	Induction by Enumeration	Read Salmon Section 20	Quiz 6 Due

11.01	Insufficient & Biased Statistics	Read Salmon Sections 21-22	
11.03	Statistical Syllogism	Read Salmon Section 23	Receive Quiz 7
11.05	Proof Day		
11.08	Rational Choice Theory: Decision-Making under Certainty		
11.10	Rational Choice Theory: Basic Principles 1		
11.12	LSAT Day		Quiz 7 Due
11.15	Rational Choice Theory: Basic Principles 2		
11.17	Rational Choice Theory: Decision-Making under Uncertainty / Course Evaluations		
11.19	Roth IRAs		
11.22	Final Review		
12.03	Final Exam 3:00-5:30	Comprehensive. In class. Open note.	

Student Expectations

Abide by the UAH Code of Student Conduct.

In Class

Attend class regularly. Without doing this, success in the course is unlikely.

Arrive at class in a timely fashion: lateness is disruptive.

Ask questions and share thoughts, especially if something is not understood.

Participate courteously in class discussions.

Treat other people's questions as opportunities for learning rather than distractions from lecture.

Outside of Class

Keep up with the material.

Carefully read the selections assigned for each class, and formulate questions to ask in lecture.

Seek help from the instructor (or other students) as often as needed.

Devote, on average, about nine hours of work per week to this class.

Academic Honesty

UAH is committed to the fundamental values of preserving academic honesty as defined in the *Student Handbook*, Chapter 7, Article III, Part C, Section 1. The instructor reserves the right to impose academic sanctions, in lieu of or in addition to those imposed by the Vice President for Student Affairs, upon any student who commits any form of academic misconduct during the course. Students have the right to discuss such sanctions with the instructor before they are imposed, and to protest sanctions to the Vice President for Student Affairs.

Assessment

There are **seven take-home quizzes**, each worth 5% of the final grade.

There are **two take-home examinations**, each worth 20% of the final grade.

There is **one in-class comprehensive final**, worth 25% of the final grade.

Assessments and final grades are assigned according to the following measure:

>90% = A 80-89% = B 70-79% = C 60-69% = D <60% = F or NC (as appropriate)

- Only dire circumstances merit an incomplete.
- Cheating is unacceptable. You shouldn't cheat. Don't cheat. Seriously.
- *Retain a copy of all graded work*, in order to resolve grade disputes.
- The instructor is not responsible for "lost" material.

The instructor reserves the right to augment the final grades of students who demonstrate superior class performance, and to lower the grades of students who demonstrate a dereliction of their work or contribute to a classroom environment that is not conducive to learning.

Miscellany

Philosophy is not easy. You must make a serious effort to understand and articulate the material. Technology can help here. Barring technical problems, I endeavor to make available all course lectures on Angel. You should not use this as a substitute for attending class. Instead, use it as an opportunity to take less detailed notes and to focus your main efforts on discussing ideas during class time. You can hear the lecture again, using the audio recording of the lecture, on your own time, where you can take more thoughtful notes.

This course is not primarily about mastering a fixed body of knowledge (although there is some of that going on). Let your mind wander over what you find interesting outside of the classroom. Also, don't be shy about discussing ideas with others, especially people not in the class. The best way to understand something is to explain it to someone else.

I encourage a free and tolerant atmosphere in class. I encourage and expect questions and challenges at appropriate times during class. I welcome visits to my office. *I am here to help you learn.* If at any time you would like to discuss the issues covered in this course or philosophy in general, feel free to visit during office hours or to arrange a meeting.

If at any time you are having problems with the subject matter or the manner of its presentation, do not hesitate to bring this to my attention (in person, via email or anonymous note, etc). It is your responsibility to bring any course-related concerns to my attention.

Any student who feels that accommodations based on the impact of a disability are required should contact me privately to discuss specific needs. Please also contact the Disability Support Services at 113 University Center (256.824.6203); they coordinate reasonable accommodations for students with documented disabilities.

Any student who feels that their life is overwhelming or unmanageable is encouraged to contact the Counseling Center at 113 University Center (256.824.6203) for free and confidential appointments. It is normal to use counseling services: no problems are too big or too small.

I reserve all federal and state copyrights over my lectures and course materials.

I reserve the right to alter any or all portions of this syllabus, at my sole discretion, at any time.