PHI 321 Formal Logic
Hanover College, Winter 2010
12:00-12:50pm, MWF, SCC 112

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Winter 2010 Office Hours: 1-2 MWF, 11-12 R, and by appointment
http://vault.hanover.edu/~bates/logic/

Course Description
Logic is the study of arguments. In this course, we will learn to transcribe natural language arguments into a symbolic language that reveals their logical structure. From there we will learn to demonstrate the validity of valid arguments using purely formal rules; and using other methods we will learn to invalidate invalid arguments. The goal of this course, then, is to cultivate skill in recognizing the logical structure of arguments and skill in demonstrating their validity or invalidity.

Text
Bergmann, Moor, and Nelson, *The logic book*, 5th ed. (McGraw-Hill, 2009).

Course Requirements & Grading
There will be ten homework assignments (worth 25 pts apiece) throughout the semester. Generally, an assignment will be made on a Wednesday and due in class the following Monday. *Late assignments cannot earn a grade*. There will also be two in-class exams (worth 100 pts apiece) and a final exam (worth 150 pts). The first in-class exam will be Friday, 19 Feb, and the second will be Friday, 2 Apr. The final exam will be scheduled for the week of 19 Apr; specific time and date to be announced.

NB: (i) The format for this class (mostly in-class exercises) presupposes that you have worked through the assigned reading and some practice exercises on your own at least once before coming to class. The more of us who come to class prepared, the more richly rewarding our class will be for all of us and the more you will learn in it. I promise to do my part in this, so I expect you to do your part as well. (ii) Your attendance is not graded in this course. But attendance does *contribute* to the grade you receive. Poor grades are a natural consequence of poor attendance. And while good grades are not a natural consequence of good attendance (i.e., it is possible to have good attendance and not-so-good grades), still very good attendance does typically *help* your grade. Grades will be weighted and calculated as follows:

Point Distributions	
10 homework sets, 25ea:	250
2 in-class exams, 100ea:	200
Final exam:	150
Total:	**600**

Letter Grade Distribution			
A 560-600	B+ 520-539	C+ 460-479	D+ 400-419
	B 500-519	C 440-459	D 380-399
A- 540-559	B- 480-499	C- 420-439	D- 360-379
			F 0-359

Objectives of the Abstraction and Formal Reasoning (AFR) LADR:
(1) To understand the nature of symbolic language, formal reasoning, and the process of solving problems by means of abstract modeling.
(2) To identify the essential qualities of these tools, qualities that underlie their effectiveness in the solution of real-world problems.
(3) To explain the limitations of these formal systems of reasoning.

Special Information

- Americans with Disabilities Act: If you have any special needs as addressed by the Americans with Disabilities Act and need course materials or tests in alternative formats, notify me immediately. All reasonable efforts will be made to accommodate your special needs.
- Academic Dishonesty: Academic honesty is essential to the intellectual life of the College. Thus, academic dishonesty, such as cheating and plagiarism, is a basis for disciplinary action. No suspected case of academic dishonesty will be taken lightly; all will be handled in accordance with the student conduct code.
- Dropping this course: The deadline for discretionary withdrawal from any class is 5:00pm, Friday, 12 Mar.
- Degree Requirements: This course satisfies the Abstraction and Formal Reasoning LADR and is an upper-level elective in the Philosophy major or minor.
- Pass/Fail Option: If you are taking this course P/F, you must have a C- or better going into the final exam AND get a C- or better on the final exam in order to pass.

Reading Schedule

Date	Readings	Topic
Jan 11	Chapter 1	Course introduction / Basic concepts
18	Chapter 2	Syntax for SL / Symbolizations
25	Chapter 3	Semantics for SL
Feb 1	Chapter 5: 5.1-5.3	Proofs in SD
8	Chapter 5: 5.4-5.5	Proofs in SD
15	--	Review & first exam (Exam 19 Feb)
22	Chapter 7: 7.1-7.8	Syntax for PL / Symbolizations
Mar 1	--	Winter Break
8	Chapter 7: 7.9	Syntax for PL and PLE / Symbolizations
15	Chapter 8: 8.1-8.4	Semantics for PL
22	Chapter 8: 8.6-8.7	Semantics for PL and PLE
29	--	Review & second exam (Exam 2 Apr)
Apr 5	Chapter 10: 10.1-10.3	Proofs in PD
12	Chapter 10: 10.4-10.6	Proofs in PD and PDE

NB: The reading schedule lists each week of the semester by Monday's date. (Readings cover the entire week.) You are expected to have both completed the readings and attempted some of the practice exercises by class time on Monday. This schedule is subject to change.