Introduction to Logic
730:201, sections 03 and 06, Spring 2015

Instructor: Erik Hoversten
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Office: 106 Somerset St, Room 534, CAC
Office Hrs: MW 2:00p-3:30p, and by appt.[1]

Meeting Place: Cook/Douglass Lecture Hall (CDL), Room 109, D/C
Meeting Times: MW 3:55p-5:15p (sect. 06), MW 5:35p-6:55p (sect. 03)

Textbook: Language, Proof, and Logic, 2nd edition, by Dave Barker-Plummer, Jon Barwise and John Etchemendy
Lecture notes and additional readings available on the course website
Course website: Sakai: Phil-intro-logic-s15

Course overview

This course is an introduction to *symbolic* logic. We will learn how to develop systems of logic within *formal languages*, examine the properties of these systems, and use the systems to analyze philosophical arguments.

Core Curriculum Learning Goal: This course meets goal 'o': 'Examine critically philosophical and other theoretical issues concerning the nature of reality, human experience, knowledge, value, and/or cultural production.' Assessment will be by an SAS generic rubric embedded in the evaluation criteria laid out in this syllabus.

Assessment

Student grades will be determined based on performance on **three in class exams**, **five homework assignments**, and **attendance and participation** in class discussion. Course grades will be based on the standard Rutgers grade scale, and are determined by points accumulated.

Assignment	Due date and time	Point value
Homework	Various (see schedule)	5 @ 40pts = 200pts
Midterm exam 1	Feb 18 in class	100pts
Midterm exam 2	Apr 1 in class	100pts
Final exam	May 8, 4-7p (sect. 03)	100pts
	May 13, 12-3p (sect. 06)	
	Total:	500pts

Course grade	Points
A	> 449
B+	$425 - 449$
B	$400 - 424$
C+	$375 - 399$
C	$350 - 374$
D	$300 - 349$
F	< 300

Homework

The homework portion of your overall grade will be based 5 homework assignments. There will be 6 assignments given, and I will drop your lowest homework grade. Assignments will be made available on the course website one week prior to the scheduled due date. They are due at **noon** on the posted due date (see the schedule below).

Homework assignments for this class will be completed using the online Grade Grinder software that is provided with your textbook. In order to use this software, you must purchase a copy of the **2nd edition** of the textbook. So, if you want to

[1] Office hours will not be held in my actual office. You can find me in the Chang Science Library (in Foran Hall) next to our class building on Cook campus.

receive credit for the homework section of this class (40% of your overall grade), you must purchase the textbook. You are advised to familiarize yourself with the software before the first due date to ensure that you have no issues submitting your assignment.

Assignments submitted after the due date will incur a **5 point deduction** for every day that they are past due. If you know that you will be late in submitting an assignment for any reason, you must inform me before the due date if you wish to avoid the late submission penalty.

Exams

There will be two midterm exams and one final exam in this class. Each exam will emphasize material covered since the previous exam, and each exam is weighted equally in your overall course grade. Midterm exams will take place during class time in our normal classroom. The final exam will take place during the normally scheduled final exam date for your section.

The exam format will depend in part on the material covered for that exam. You will be expected to perform such logical tasks as constructing truth tables, prove theorems, and determine validity of arguments. There will be short answer, fill in the blank, and multiple choice type questions, but no essay length responses will be required.

Makeup exams will be given only in the case of extreme extenuating circumstances, and provided that the student informs me of their need to miss the originally scheduled exam ahead of time.

Attendance

Students are expected to attend all classes. While attendance and participation are not formally used in calculating the final grade, students still have many reasons to attend class meetings. These include:

- The content of the exams will draw heavily on the lecture material
- In the event that a student's grade is on the borderline between two letter grades, strong attendance and participation will be seen as a reason to choose the higher of the two grades.
- One of the best ways to develop an understanding of the material is to actively engage in class discussion.

If you expect to miss one or two classes, please use the University's Absence Reporting Website to indicate the date and reason for your absence. An email is automatically sent to me.

If you miss class, you are expected to catch up on the material on your own. Resources to help you with this are the textbook, online lecture notes, your fellow classmates, and your instructor's office hours.

Academic integrity

You must abide by the University's Academic Integrity Policy. The basic guideline is that credit should be given where credit is due. If you have any uncertainty regarding an issue of academic integrity please contact me about it.

Course schedule The following is a tentative schedule for the course; adjustments will likely take place as the semester progresses.

Monday	Wednesday
Jan 19th	**Jan 21st** Class #1 Introduction, syllabus, and online resources
Jan 26th Class #2 Ch 1: Atomic sentences	**Jan 28th** Class #3 Ch 2: The logic of atomic sentences
Feb 2nd Class #4 Ch 2 (cont.) Homework 1 due	**Feb 4th** Class #5 Ch 3: The Boolean connectives
Feb 9th Class #6 Ch 4: The logic of Boolean connectives	**Feb 11th** Class #7 Ch 4 (cont.)
Feb 16th Class #8 Review session Homework 2 due	**Feb 18th** Class #9 Midterm exam 1
Feb 23rd Class #10 Ch 5: Methods of proof for Boolean logic	**Feb 25th** Class #11 Ch 6: Formal proofs and Boolean logic
Mar 2nd Class #12 Ch 6 (cont.) Homework 3 due	**Mar 4th** Class #13 Ch 7: Conditionals
Mar 9th Class #14 Ch 8: The logic of conditionals	**Mar 11th** Class #15 Ch 8 (cont.)
Mar 16th Spring break: no class	**Mar 18th** Spring break: no class
Mar 23rd Class #16 Ch 9: Introduction to quantification Homework 4 due	**Mar 25th** Class #17 Ch 9 (cont.)
Mar 30th Class #18 Review session	**Apr 1st** Class #19 Midterm exam 2
Apr 6th Class #20 Ch 10: The logic of quantifiers	**Apr 8th** Class #21 Ch 10 (cont.)
Apr 13th Class #22 Ch 11: Multiple quantifiers Homework 5 due	**Apr 15th** Class #23 Ch 12: Methods of proof for quantifiers
Apr 20th Class #24 Ch 13: Formal proofs and quantifiers	**Apr 22nd** Class #25 Ch 13 (cont.)
Apr 27th Class #26 Ch 15: First-order set theory Homework 6 due	**Apr 29th** Class #27 Ch 15 (cont.)
May 4th Class #28 Review session	**May 6th**