

Principles of Logic

Philosophy 150 – Fall Term 2011 – Purdue University

Instructor: Daniel Kelly

Syllabus for both Sections 25248 & 23998

1. Course Description

There are two goals of this course. The first is to introduce the fundamental concepts and techniques of modern formal logic. These include concepts such argument form, deductive validity, soundness, identity, and the idea of a formal language. We will focus on these ideas as we explore the workings of sentential logic, predicate logic, quantification theory, and various proof methods associated with each. The second, more practical goal is to teach students to use these concepts and techniques to help sharpen their own thinking, and develop their ability to evaluate their own and others' arguments. We will therefore emphasize the ability to move back and forth between formal and natural languages, so that students can learn to put the precise tools of modern logic to their own uses.

2. Class Meetings

25248	001	MWF	9:30 – 10:20a	BRNG 1268	KELLY, D.
23998	002	MWF	11:30a -12:20p	BRNG 1268	KELLY, D.

3. Office Hours and Contact Information

Office: 7126 Beering Hall
Office phone: 765-494-4290 (4-4290)
Email: drkelly@purdue.edu
Office Hours: Tuesday 11:00-1:00pm, or by appointment.

4. Course Requirements, Policies, and Grading

Grades on papers and exams will be given on the standard 0-100 point grading scale:

100-98:	A+
97-93:	A
92-90:	A-
89-87:	B+
86-83:	B
82-80:	B-
79-77:	C+
76-73:	C
72-70:	C-
69-60:	D
59-0:	F

Final grades will be determined by 6 problem sets, a midterm, and a final exam. They will be weighted as follows:

Problem sets	40%
Midterm	20%
Final Exam	40%

There will be 1 problem set due every 2 weeks or so, with exact dates to be announced in class. I will grade select problems from each homework assignment and distribute solutions afterwards. Homework must be printed on paper, and in my hand by the end of the class the day they are due, or they are late. Electronic or emailed submissions will not be accepted without special permission, i.e. talk to me ahead of time if you have an impending conflict. Since solutions to problem sets will be distributed soon after they are due, **late homework will not be accepted.**

5. Course Policies

Class sessions: I will try to begin on time, and will usually go right up until the end of the class session. Please come on time. Do not pack up your materials until class has been dismissed. Talking out of turn during lectures will not be tolerated. Repeat offenders will be asked to leave.

There is no attendance policy for this course – though problem sets need to be in my hand by the end of class sessions that they are due. I would not recommend trying it, but if you can get through the semester without attending class, more power to you. That said, there is always a strong correlation between getting a good grade and regular attendance. Moreover, if you are not regularly making the effort to attend class, do not expect any favors or lenience from me, especially come end of the semester crunch time.

We will frequently be working through examples and problems from the book during class, so **BRING YOUR TEXTBOOK TO CLASS WITH YOU.**

Laptops, tablets, and cell phones: I would prefer that you exercise enough self-restraint to keep from texting for the 50 minutes that class is in session, but since a formal prohibition would be too difficult to enforce, this remains a preference. If I see you consistently texting or listening to your iPod during class, I will happily commandeer it for the remainder of that class. Use of laptop computers and tablets during class will not be allowed, however.

Emergencies: In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances. Information about emergencies changes in the course can be gotten by contacting either instructor via email or phone, or by consulting the course website. Purdue's Emergency Procedures Handbook and other important emergency planning information is available online at

http://www.purdue.edu/emergency_preparedness/

Plagiarism: There will be no papers for this course, so plagiarism in the normal sense will not be an issue. As far as I am concerned, you are free to work on problem sets with other students, or in groups. That said, make sure you can solve those kinds of logic problems on your own, because you will be taking the exams all by your lonesome. If you can't do the problems by yourself, when it comes time for the midterm and final, you will be hosed.

For the official Purdue University policy on plagiarism, see the following websites:

http://www.purdue.edu/univregs/pages/stu_conduct/stu_regulations.html

<http://www.purdue.edu/odos/osrr/academicintegritybrochure.php>

6. Texts

Logic and Philosophy: A Modern Introduction, by Alan Hausman, Howard Kahane and Paul Tidman 11th Edition. We will work almost exclusively from this book, so be sure you have your own copy, and bring it to class.

7. Course Website

Information and comments will often be posted on the website, which can be reached via my homepage:

<http://web.ics.purdue.edu/~drkelly/>

To go directly to this course's website, the address is:

<http://web.ics.purdue.edu/~drkelly/KellyLogicFall2011.html>

You should check it fairly regularly. Also, if there is ever a problem with the website, information will be distributed via the course listserv, which you are automatically included on if you are officially signed up for the course.

8. Topics and Readings

Below is a *very* tentative schedule; the only things set in stone are the subject matter and the sequence in which we will tackle it. Adjustments will be made depending on how fast or slow we are going, and will be announced in class and/or on the course website.

At the very least, we will cover (most of) chapters 1-10 of the Hausman et al book. The 6 problem sets will come from these chapters, and weekly readings will be assigned as we go. Below is a rough timeline of what's coming, and in what order. If we have extra time, we will look at chapter 13 on identity and the notions of soundness and completeness.

A note on the problem sets: this will be slightly different from other philosophy courses, in that most of what you learn will not come from listening to lectures or just reading through the book chapters, but from actually doing the problems and proofs. That is why so much time will be spent working through examples in class. Moreover, it is absolutely crucial that you do all of the problem sets. Not only is important that you do them, but that you do them carefully and on time. Logic is cumulative, and each chapter builds on the one before, so you can't afford to fall behind.

1. Week of August 22nd
 - Course Overview

2. Week of August 29th
 - Introduction and basic concepts
3. Week of September 5th
 - Sentential logic, symbolization and truth functions
 - **Problem Set #1**
 - **NO CLASS: Monday September 5th – Labor Day**
4. Week of September 12th
 - Sentential logic, symbolization and truth functions
5. Week of September 19th
 - Truth Tables
 - **Problem Set #2**
6. Week of September 26th
 - Sentential logic proofs
7. Week of October 3rd
 - More sentential logic proofs
 - **Problem Set #3**
8. Week of October 10th
 - **NO CLASS: Monday & Tuesday October 10 & 11 – Fall break**
9. Week of October 17th
 - Conditional and indirect proofs
 - October 17th: **MIDTERM EXAM**
10. Week of October 24th
 - Conditional and indirect proofs
11. Week of October 31st
 - Predicate logic, symbolization and quantifiers
 - **Problem Set #4**
12. Week of November 7th
 - Predicate logic, symbolization and quantifiers
13. Week of November 14th
 - Predicate logic proofs
 - **Problem Set #5**
14. Week of November 21st
 - More predicate logic proofs
 - **NO CLASS: Wednesday – Friday November 23 - 25 Thanksgiving break**
15. Week of November 28th
 - Relational predicate logic
16. Week of December 5th
 - Metatheory and Review
 - **Problem Set #6**
 - December 10: Last day of class
 - **NO CLASS: Friday Dec 9th**
17. Week of December 12th
 - **Final Exam TBA**