

PHIL 120: SYMBOLIC LOGIC I

Fall 2011

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Course Description and Course Objectives

In this course, we will learn how to determine, of any proposed argument that may be represented in first-order predicate logic, whether or not it is deductively valid. To this end, we will learn how to symbolize arguments formulated in English by learning how to symbolize the English sentences that constitute the premises and conclusions of these arguments; we will learn the rules of a natural deduction system and learn how to apply those rules to determine the logical status of any argument symbolized in accordance with those rules; and we will also learn semantic methods for determining validity and invalidity. Those who acquire the knowledge and skills taught in this course will be able to distinguish between good and bad reasoning in the most rigorous way possible.

[Note: If you are a philosophy major, PHIL 10 is a prerequisite for this course. If you are *not* a philosophy major and you have *not* taken PHIL 10, you need to speak with me *ASAP*.]

Required Text

Terence Parsons, *An Introduction to Symbolic Logic*. The text is available through the Logic 2010 computer program (see below) in *Logic 2010 Documents*, which may be accessed from the *Assignments* Module in the Main Menu of *Logic 2010: A Workbook*. It is also available independently at the following websites:

Chapter 0: <http://logic2k.humnet.ucla.edu/UPLOAD/CORE/Text0.pdf>

Chapter 1: <http://logic2k.humnet.ucla.edu/UPLOAD/CORE/Logic-Text-Sep10-Chapter-1.pdf>

Chapter 2: <http://logic2k.humnet.ucla.edu/UPLOAD/CORE/Logic-Text-Sep10-Chapter-2.pdf>

Chapter 3: <http://logic2k.humnet.ucla.edu/UPLOAD/CORE/Logic-Text-Sep10-Chapter-3.pdf>

Chapter 4: <http://logic2k.humnet.ucla.edu/UPLOAD/CORE/Text4.pdf>

Course Units and Reading Assignments

Note: This is the *order* in which we will be covering the relevant material. The unit numbers do *not* correspond to the lectures.

1. Symbolization in the Language of Chapter I
Reading: TerryText, Introduction and Chapter 1, Sections 1-3
2. Derivations in the System of Chapter I
Reading: TerryText, Chapter 1, Sections 4-10
3. Symbolization in the Language of Chapter II
Reading: TerryText, Chapter 2, Sections 1-3
4. Derivations in the System of Chapter II
Reading: TerryText, Chapter 2, Sections 2-5 and 8-9
5. Truth-Value Analysis of Sentences and Arguments
Reading: TerryText, Chapter 2, Sections 10-11
6. Symbolization in the Language of Chapter III
Reading: TerryText, Chapter 3, Sections 1-2 and 4-5
7. Bondage and Freedom
Reading: TerryText, Chapter 3, Section 3
8. Derivations in the System of Chapter III
Reading: TerryText, Chapter 3, Sections 6-9
9. Invalidity: Counterexamples
Reading: TerryText, Chapter 3, Section 10
10. Symbolization in the Language of Chapter IV
Reading: TerryText, Chapter 4, Sections 1-2
11. Derivations in the System of Chapter IV
Reading: TerryText, Chapter 4, Section 3
12. Invalidity: Counterexamples
Reading: TerryText, Chapter 4, Section 9

Course Requirements

- * Homework: 20% [for details, see below]
- * Mid-Term: 30% [in class, open book, Monday, October 31]
- * Final: 50% [Tuesday, December 6, 11:30am-2:30pm]

Homework

There will be two homework assignments per week on average, due ten minutes before lecture.

Late assignments will not be accepted unless a valid excuse is communicated to me (if possible) substantially before the assignment is due. [For how to access the homework assignments and submit your answers for credit, see Computer Program: Logic2010 below.]

Computer Lab

SOLIS 105, open 24 hours, door code required evenings and nights (door code: TBA). Avoid times when lab has been reserved for another course. Lab information is available at:

<http://acs.ucsd.edu/student/>

[Simply click on *Computer Labs*, then *View All Labs*, and look for Solis 105.]

To log on to a lab computer, type in your UCSD e-mail user name and password. If your password is longer than eight characters, type in the first eight characters. [If you don't know your UCSD email *password*, find a computer that gives you access to the internet without requiring a password—e.g., at the library—and go to <http://acs.ucsd.edu> and click on “Need a Password?”. With the help of your PAC number, you will be able to reset your email password.]

Computer Program: Logic 2010

There is a computer program, Logic 2010, associated with the course. It is installed on the server at the computer lab in SOLIS 105. It is *also* available for remote use. In order to use the program remotely, you need to download, install, and run Logic 2010 on a Windows PC or Mac that has access to the internet. Instructions for downloading, installing, and running Logic2K are available at:

<http://logic2k.humnet.ucla.edu/download2010.html>

(Make sure you follow ALL the instructions. You need to know your UCSD Student ID number and pick a Logic Password in order to register as a user. DO NOT FORGET YOUR LOGIC PASSWORD.)

Homework assignments are accessible through the program (by clicking on “Assignments” on the Main Menu) or by going to:

<http://logic2k.humnet.ucla.edu/logicstudent.cfm>

[Note that when you authenticate, you will be asked to Select the Course. Please select: UCSD – Philosophy 120 2011F]

[Note also that you must register as a user either at the lab or by downloading the program to your computer in order to gain access to the Homework Assignments webpage.]

Homework assignments MUST be submitted OVER THE INTERNET to the Logic 2010 database directly. [So make sure that your computer is connected to the internet before you submit your homework to the database.] Your work will be automatically recorded in the database.

Instructions for using the program and for submitting homework to the database are available once you start running the program. Please read the relevant *Logic 2010 Documents* (see notes on Required Text above).

Printing at the Computer Lab

There is a per page charge for using the lab laserprinter. To use the laserprinter, you must learn about your laserprinting account (info at AP&M 2113) and put down a deposit.

Blue Books

You will need to bring blue books to the mid-term and final examinations. The exams are open-note, open-book. (But good luck to you if you don’t memorize and understand how to apply the relevant rules and strategies.)

Important Notes

* The Academic Honor Code must be observed in this course. Anyone caught cheating will receive an automatic F in the course, and will be referred to the Council of Deans for the heaviest possible penalty.

* **Laptops and other electronic devices may be used in class as a means of accessing the Logic 2010 computer program and as a means of taking notes on the lecture, but may not be used for any other purpose.**

* If accommodations are needed for a disability, please notify me as soon as possible.

* If any course requirement conflicts with a religious requirement or university-related obligation, please notify me as soon as possible.