Philosophy 120: Symbolic Logic I
UCSD Spring Quarter 2012

Instructor:	Adam Streed
Office Hours:	Tues 3–4pm (Sequoyah 142), Thurs 3–4pm (HSS 7055)
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Course Description and Objectives. This course will introduce you to the first-order predicate calculus, one of the major pieces of contemporary philosophical equipment. We will cover the elements of the formal language, translation into this language from English, proof methods in a natural deduction system, and semantic methods for determining validity. If you master this material, you will be proficient in one part of todays philosophical lingua franca, and prepared for further study in logic and philosophy.

[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, please speak to me after our first class meeting.]

Required Text. Our text is *An Introduction to Symbolic Logic* (a.k.a. "the TerryText") by Terence Parsons. It is available as a free .pdf from the course website (details below). I *strongly recommend* that you download the entire text as soon as possible. Printing a hard copy is also a very good idea. (Note: Parsons's book is based on the system of Donald Kalish, Richard Montague, and Gary Mar, *Logic: Techniques of Formal Reasoning*, which is not required for the course, but which can still be used as a helpful reference tool and source of logic problems.)

Software. There is a computer program associated with the course: Logic 2010. It is installed on the computers in Sequoyah 142 (see below). It is also available for download at `https://logiclx.humnet.ucla.edu/Logic/Download`. Make sure you follow all the instructions! You will need to know your UCSD Student ID number and pick a Logic Password when you register with the system. In order to access the homework assignments, you must first register as a user of Logic 2010 by running the program and signing in.

Computer Lab. Sequoyah 142, open 24 hours, door code required nights. Try to avoid times when the lab has been reserved for another course. Lab information is available at `http://micros.ucsd.edu/softwareLookup/index.php?action=lab&id=274`.

Course Websites. There are two main websites for the course. The first is the Logic 2010 student page, found at `https://logiclx.humnet.ucla.edu/Logic/Student/Course`, where you will find the homework assignments, the textbook .pdfs, and a number of helpful documents concerning Logic 2010. The other website is a UCSD Ted page created for this course, which you can find by logging in at `ted.ucsd.edu`. The Ted page will be used mainly for announcements about the course and the occasional posting of files. There is also

a discussion board that can be used for e.g. setting up study groups, and you can find links to the other course resources there.

Format. The class consists of lectures, homework assignments, a midterm exam, and a final exam. Your total score will be determined by the following breakdown:

- homework: 20% (details below)
- midterm exam: 30% (in class, date TBA)
- final exam: 50% (Thursday, June 14, 7–10pm)

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.

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.

Exams. There will be one midterm and one final exam. The exams are open-note and open-book, but *dont fail to memorize the proof rules and strategies*! Chances are very good that you wont finish the exams if you havent mastered the rules and strategies, so treat your notes and book as a resource, not a crutch. Also, remember to bring blue books to the exams.

Computers in Class. Laptops and other such devices are permitted in class, but should be used only for taking notes, consulting course documents, and working with Logic 2010. If you simply cannot help checking Facebook, shopping online, watching sports highlights, or what have you, please sit in the back row so as not to distract other, more attentive students.

Talking in Class. Asking questions is strongly encouraged—you should always feel free to raise any question you have, even on a minor point of clarification. However, don't hold any side conversations, even about the class material. It is vital that every student is given the opportunity to hear a speaker (whether the lecturer or another student) without being distracted by their neighbors. Any students who hold side conversations after being given a warning will be asked to leave the classroom.

Academic Honesty. Students are expected to do their own work, as outlined in the UCSD Policy on Integrity of Scholarship published in the UCSD General Catalog. Academic misconduct includes but is not limited to:

- *Cheating*, such as using "crib notes" or copying answers from another student during an exam, modifying a graded exam and returning it for a new grade, or submitting the same paper or assignment for two or more different courses unless authorized by the instructors concerned.
- *Plagiarism*, such as using the writings or ideas of another person, either in whole or in part, without proper attribution to the author of the source.
- *Collusion*, such as engaging in unauthorized collaboration on homework assignments or take home exams, completing for another student any part or the whole of an assignment or exam, or procuring, providing or accepting materials that contain questions or answers to an exam or assignment to be given at a subsequent time.

The General Catalog can be found at http://www.ucsd.edu/catalog/. More helpful information can be found at http://academicintegrity.ucsd.edu. It is your responsibility to understand the Policy; if you have any questions about what constitutes acceptable work, please contact me or your TA.

Schedule. This is the *order* in which we will be covering the relevant material; the unit numbers do not correspond to the lectures. All chapter and section references are to the Parsons textbook.

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