

Philosophy 2500: Symbolic Logic
Autumn 2015

Last updated: 24 August 2015 (8 PM)

General information

Class

Time: T Th 11:30 AM – 12:25 PM
Location: Scott Lab N050

Recitation 1

Time: F 10:20 AM – 11:15 AM
Location: Scott Lab E245

Recitation 2

Time: F 11:30 AM – 12:25 PM
Location: Dreese Lab 317

Instructor Ben Caplan

Office: 372 University Hall
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Teaching assistant Eric de Araujo

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Course description

We will study sentential and predicate logic. We will learn how to do three things: *(i)* symbolize natural-language arguments in various formal languages, *(ii)* interpret those formal languages in various ways, and *(iii)* do proofs in those formal languages.

Required text

Terence Parsons's *An Introduction to Symbolic Logic* is available online here: <http://www.philosophy.ucla.edu/people/faculty/tparsons/Logic%20Text/>. (A copy is also available on Carmen.)

Software

I'm not sure yet how much we'll use it, but there is software—Logic 2010—that accompanies Parsons's textbook. A demo version of the software can be downloaded here: <https://logiclx.humnet.ucla.edu>.

Course requirements

With four exceptions (to be explained below), the grading scheme for the course is as follows.

Homework assignments	10%
Four mini-tests	40% (10% each)
Midterm exam	25%
Final exam	25%

The mini-tests and the midterm exam will be held in class. The dates for the mini-tests and the midterm exam will be announced at least one week ahead of time. When the mini-tests and the midterm exam are held will depend on when we cover the relevant material in class. (The final exam will be on Monday, 14 December 2015 from 2:00 PM to 3:45 PM. The location will be Scott Lab N050 unless specified otherwise.)

The first mini-test will cover symbolization in sentential logic; the second mini-test will cover truth-tables. The midterm exam will be cumulative: it will cover symbolization in sentential logic, truth-tables, *and* derivations in sentential logic. This material can be found in the Introduction and in Chapters 1 and 2.

The third mini-test will cover symbolization in predicate logic; the fourth mini-test will cover models. The final exam will be cumulative: it will cover symbolization in sentential and predicate logic; truth-tables and models; and derivations in sentential and predicate logic. This material can be found in Chapters 1-5.

Exceptions

- (1) If you score higher on the midterm exam than you do on the first two mini-tests, then the midterm exam will be worth 45% (and the first two mini-tests will be worth 0%).
- (2) If you score higher on the final exam than you do on the previous mini-tests and the midterm exam (i.e. on the four mini-tests and the midterm exam or, if exception (1) applies, on the midterm exam and the third and fourth mini-tests) *but not* higher than you do on the

homework assignments, then the final exam will be worth 90% (and the previous mini-tests and the midterm exam will be worth 0%).

- (3) If you score higher on the final exam than you do on the previous mini-tests and the midterm exam (i.e. on the four mini-tests and the midterm exam or, if exception (1) applies, on the midterm exam and the third and fourth mini-tests) *and* on the homework assignments, then the final exam will be worth 100% (and the previous mini-tests, the midterm exam, and the homework assignments will be worth 0%).
- (4) If your average on the four mini-tests, the midterm exam, and the homework assignments (or, if exception (1) applies, on the midterm exam, the third and fourth mini-tests, and the homework assignments) is higher than 95%, then you don't have to take the final exam and you will automatically receive an A for the course.

Details about the homework assignments will be announced in class. (The details depend in part on whether we'll use the software.) Late homework assignments will not be accepted under any circumstances.

Schedule

A detailed and updated schedule will be posted on Carmen. We will cover the Introduction and Chapters 1-5. Please note that we will cover the material in a slightly different order than the text.

There is no class on Thursday, 15 October 2015 (Autumn Break) and on Thursday, 25 November 2015 (Thanksgiving Day¹).

The final exam will be on **Monday, 14 December 2015 from 2:00 PM to 3:45 PM**. (The location will be Scott Lab N050 unless specified otherwise.)

Disabilities

Students with disabilities that have been certified by Disability Services will be appropriately accommodated and should inform me as soon as possible of their needs. Further information can be found at www.ods.ohio-state.edu.

Academic misconduct

Academic misconduct is a serious offense. You are expected to know what counts as academic misconduct. You are also expected not to commit it. In accordance with Faculty Rule 3335-5-487, all suspected cases of academic misconduct will be reported to the university's Committee on Academic

¹ Not applicable in Canada.

Misconduct. For further details, see the Code of Student Conduct at studentaffairs.osu.edu/resource_csc.asp.

General Education Goals and Expected Learning Outcomes

This course satisfies the Quantitative Reasoning—Mathematical or Logical Analysis requirement.

Goals: Students develop skills in quantitative literacy and logical reasoning, including the ability to identify valid arguments, and use mathematical models.

Expected Learning Outcomes: Students comprehend mathematical concepts and methods adequate to construct valid arguments, understand inductive and deductive reasoning, and increase their general problem solving skills.

In this course, students will develop their skills in logical reasoning, including the ability to identify valid arguments, in part by translating sentences about Rory and Paris into various formal languages. Students will comprehend logical (rather than mathematical) concepts adequate to construct valid arguments and understand deductive reasoning; some (but not all) of those arguments, and some of that reasoning, might involve sentences about Michel and Kirk.