

Department of Philosophy, University of Toronto

## MODERN SYMBOLIC LOGIC (PHL245)

Summer 2010 — P. Serchuk

### Course Outline

Instructor: Phil Serchuk  
Office Hours: TR 6-7pm, (stay late after class), or by appointment  
E-mail: phil.serchuk@utoronto.ca  
Lectures: TR 3-6pm, SS2102  
Optional tutorial: W 3-4pm, LM152  
Course website: <http://portal.utoronto.ca>

## 1 Course Description

Philosophical and mathematical logic underlies much important work in a variety of disciplines, including philosophy, mathematics, engineering and computer science. This course is an introduction to logic. It requires no knowledge of philosophy or mathematics, though a mathematical background is helpful. We will learn how to recognize arguments and fallacies in English, and how to translate ordinary English sentences and arguments into formal logic. We will then learn how to prove sentences in logic using rules of inference. At the end of the course we will use what we've learned to see how several logical paradoxes can be constructed.

## 2 Required Texts

You will not be required to purchase a textbook. Readings will be made available on the course website ([portal.utoronto.ca](http://portal.utoronto.ca)).

## 3 Requirements and Evaluation

You will be assessed on the basis of two term tests and a final exam. The first term test is July 22<sup>nd</sup> at 3:10pm, and is worth 20%. The second term test is August 5<sup>th</sup> at 3:10pm, and is worth 35%. There will be one make-up

test available at the end of the course for students who miss a term test with valid documentation. The remaining 45% of the grade will be determined by a registrar-scheduled final exam. An additional 5% in bonus marks is also available. Homework problems will be provided each day. By default they have no weight, however students who attempt to answer each question on a particular day's homework set and submit it by 3:10pm in the following class will receive up to an additional 2% on their final grade. Late homework submissions are not accepted. The homework is not graded. For example, if you submit homework in half of the classes and your weighted grade at the end of the term is 69%, your final grade will be recorded as a 70%. Students who submit **every** homework assignment will receive an additional 1% bonus for a total of 3%. For example, if you submit homework in every class and your weighted grade at the end of the term is 73%, your final grade will be recorded as 76%. Be sure to put your name and student number on all submitted homework. You are allowed (and encouraged) to work in groups (maximum size: 6), however each student must submit their own solutions. If you work in a group you **must** include the name of each group member on your submission. A discussion forum has been created for students to post questions and answers. You are welcome to discuss the concepts discussed in lecture and those required to do the homework, to go through examples and help each other however you like, however you are not permitted to post the complete answers to the homework problems. You are encouraged to help your classmates get the answers on their own. The most helpful students (i.e., those who help their classmates on the forums) will receive an additional 2% to their final grade. Later virtue will be allowed to redeem earlier sin. Students who do poorly on the *first* term test can have its weight reduced to 10% if and only if they score higher on their second term test *and* the final exam; in this case, the second term test will be worth 40% and the final exam worth 50%.

### Summary

Exam	Weight	Due
Term Test 1	20%	3:10pm on Tuesday, July 22 <sup>nd</sup>
Term Test 2	35%	3:10pm on Thursday, August 5 <sup>th</sup>
Final Exam	45%	TBA
Homework	Up to +3%	Each class at 3:10pm
Discussion Forum	Up to +2%	All semester

## 4 Plagiarism

Plagiarism is a serious offense. All cases of plagiarism will be referred to the Dean's Office. If you have any questions about plagiarism you should speak with the instructor. You should also consult the following websites: Margaret Procter's *How Not to Plagiarize* (U of T Writing Support), available at <http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize>, and Niko Scharer's *Plagiarism & How to Avoid It* (U of T Philosophy), available at: <http://www.chass.utoronto.ca/~nscharer/plagmain.htm>.

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### Summer 2010 Course Schedule

Date	Topics	Reading
Tues July 6	Introduction, arguments	Unit 1
Thurs July 8	Symbolizations in SL <b>No office hours</b>	Unit 2
Tues July 13	Truth-tables	Unit 3
Wed July 14	Optional tutorial	
Thurs July 15	Derivations in SL	Unit 4
Tues July 20	Derivations in SL	Unit 4
Wed July 21	Optional tutorial	
Thurs July 22	<b>Test 1</b> , introduction to PL	Unit 5
Tues July 27	Symbolizations in PL	Unit 5
Wed July 28	Optional tutorial	
Thurs July 29	Derivations in PL	Unit 6
Tues August 3	Derivations in PL	Unit 6
Wed August 4	Optional tutorial	
Thurs August 5	<b>Test 2</b> , semantics	Unit 7
Tues August 10	Semantics	Unit 7
Wed August 11	Optional tutorial	
Thurs August 12	Paradoxes	Unit 8