PL150 INTRODUCTION TO SYMBOLIC LOGIC

Seminar Leader: Robert Martin
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Class meetings: Wednesdays and Fridays, 9:00-10:30
Office Hours: Wed. and Fr. 1-2

Course Description

An introduction to logic, requiring no prior knowledge of philosophy or mathematics. This course aims mainly at imparting the ability to recognize and construct correct formal deductions and refutations. Our text (available on-line free of charge) covers the first order predicate calculus with identity; we will cover as much of that as feasible in one semester. There is software for the course, called Logic 2010, developed by Robert Martin and David Kaplan at UCLA in the 1990s and subsequently rewritten for the internet, that will assist students by providing feedback on exercises

This course fulfills the mathematics and science requirement for humanities students.

Requirements

Homework assignments will be done at **Logic 2010**, available for downloading at **www.logic2010**. Once you have downloaded the program to your own computer you will be asked to select an institution (BCB), a term (Fall 2019) and a course (PL150). **When you register, please use your BCB ID and type your name carefully**. It's very inconvenient to have to make a correction.

The homework assignments can be found at the menu of the logic program, and need to be submitted (electronically) **by the posted time** in order to count toward your grade. Although the program will check your homework even if it is completed late, no credit will be given for it. This policy is meant to encourage you to do the homework on time – **without doubt the most important determinant of your success in the course.** Experience has shown that practice in doing the problems is crucial to mastering the techniques.

Academic Integrity
Bard College Berlin maintains the staunchest regard for academic integrity and expects good academic practice from students in their studies. Instances in which students fail to meet the expected standards of academic integrity will be dealt with under the Code of Student Conduct, Section III Academic Misconduct.

Attendance
Attendance at ALL classes is expected. Please consult the Student Handbook for regulations governing periods of illness or leaves of absence.

Assessment

See below.

Writing Assignments

There are no writing assignments for the course.

Grade Breakdown

The grading structure for the course is designed to respond to the fact that students work and learn in different ways and at different paces. It allows you to improve your course grade by eliminating low scores by doing additional work of sufficient quality. In order to pass the course, you must complete 1000 units of work, which are distributed as follows:

Items	Number	Units for each	Possible Units
Homework	16	20	320
Midterms	2	300	600
Final	1	300	300
Bonus Problems	6	25	150
		TOTAL	1370

Your course grade will be calculated on the 1000 units of work on which you receive your best grades. The grade points are A (4.00), A- (3.67), B+ (3.3), B (3.00), B- (2.67), C+ (2.33), C (2.00), C- (1.67), D (1.00), F (0.00). Your GPA in the course is a weighted average – the sum of the products of your grade on each assignment times the units of work for each assignment, divided by the total units.

You will notice that you can accumulate 1000 units by doing all the homework, both midterm exams, and four of the bonus problems – that is, without taking the final exam. However, if you are not satisfied with your grade as calculated on that basis, you can take the final exam and complete additional bonus problems in order to improve your grade. That can be done by replacing units of work on which you received your lowest grades by units of work on which you receive higher grades. You can't hurt your grade by taking the final or doing the other bonus problems, but you can improve it by doing better than on earlier work.

You are encouraged to work together. You are not competing against each other: helping another person to succeed can help you to grasp the material better. Experience in teaching this class has shown that working together can help you to complete the course in the most

efficient, enjoyable, and rewarding manner.[1]

Schedule

Fall 2019 classes start on Monday, August 31 and run until Friday, December 18 with fall break planned from Monday, October 19 – Sunday, October 23. Completion week is from December 14-18. Students are required to be on campus during completion week.

Class meets on Wednesdays and Fridays from 9:00 to 10:34.

There are 16 homework assignments spread over the 15 weeks of the semester, each consisting of reading and problems. The readings are all from the course text (included at no charge in the software), *An Exposition of Symbolic Logic with Kalish-Montague Derivations*, by Terence Parsons (2006-13). The problems are all listed in the software under various headings: Parsing, Symbolizing, Recognizing Rules of Inference, Derivations, and Truth-Tables. Assignments and dates are roughly as follows, depending on the pace at which the class moves:

Sept 4	HW1	Read Ch 1.1	Pars 1.001-1.020
Sept 9	HW2	Read Ch 1.2-3	Symb 1.002-1.026 (selections)
Sept 16	HW3	Read Ch 1.4	Recog 1.001-1.020
Sept 23	HW4	Read Ch 1 5-12	Deriv 1.004-1.122 (selections)
Sept 25	HW5	Read Ch 2.1	Pars 2.001-2.020
Oct 2	HW6	Read Ch 2.2-3	Symb 2.034-2.080 (selections)
Oct 9	HW7	Read Ch 2.4	Recog 2.004-2023
Oct 14	HW8	Read Ch 2.5-9	Deriv 2.00a-2.066 (selections)
Oct 16	MIDTERM I		
Oct 30	HW9	Read Ch 2.10-11	Truth-Tables 2.004-2.030 (selections)
Nov 6	HW10	Read Ch 3.1-3	Pars 3.002-3.030 (selections)
Nov 13	HW11	Read Ch 3.6	Recog 3.001-3.033 (selections)
Nov 18	HW12	Read Ch 3.4-5	Symb 3.005-3.216
Nov 25	HW13	Read Ch 3.7-9	Deriv 3.006-3.216
Nov 27	MIDTERM II		
Dec 4	HW14	Read Ch 4.1	Pars 4.001- 4.005
Dec 9	HW15	Read Ch 4.2	Symb 4.006-4.017 (selections)
Dec 11	HW 16	Read Ch 4.3	Deriv 4.005-4.269 (selections)
Dec 18	FINAL EXAM		

Library and Book Purchase Policies

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[1] The ideas for the grading system are borrowed from a fellow philosopher at SUNY/ Stony Brook, Professor Gary Mar.

Text: *An Introduction to Symbolic Logic*, by Terence Parsons. The text is available on-line. After you install Logic 2010 (see above), select "Assignments" at main menu, then select "Program Documents."   It is important to read the text as we go, to supplement the explanations given in class. The text contains its own exercises, distinct from the ones I have assigned (to be done at the computer).   It's a good idea to do at least some of these exercises to be sure you understand the text. Answers are provided at the ends of the chapters.