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PHL 233.01: Introduction to Logic - Deduction

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Recommended Citation

Clarke, Bridget, "PHL 233.01: Introduction to Logic - Deduction" (2015). *University of Montana Course Syllabi*. 3682.

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Fall 2015
MW 11:10-12:30
SS 254

Philosophy 233 Introduction to Logic: Deduction

A deduction is an argument in which, certain things being laid down, something other than these necessarily comes about through them. —Aristotle, *Topics* 100a25

Whatever has at any time been concluded justly, whatever knowledge has been acquired otherwise than by immediate intuition, depended on the observance of the laws which it is the province of logic to investigate. If the conclusions are just, and the knowledge real, those laws, whether known or not, have been observed.
—John Stuart Mill, *A System of Logic*

It ain't necessarily so. —Ira Gershwin

Text: Virginia Klenk, *Understanding Symbolic Logic*, 5th edition. This text is required and available at the University Bookstore in the UC. There is also a copy on 2-hour reserve at the library.

Course Description

This is an introductory course in logic. The objective is to provide you with a basic understanding of deductive logic and to prepare you for more advanced logic and philosophy courses. Most meetings will consist of a brief lecture followed by question and answer sessions and lots of cooperative problem solving.

We will be studying *artificial* languages that operate according to very strict rules. These languages are much simpler than 'natural' languages such as English (so-called because their acquisition is a universal part of human development) but they throw light on the reasoning we do in our day-to-day lives and help to refine that reasoning. Specifically, we will learn how to translate from English into the languages of sentential and predicate logic and how to determine the validity of arguments in each of these languages.

The principal aim of the course is to help you to acquire certain intellectual skills. Whether or not you acquire these skills depends, mostly, on whether you dedicate enough time to the course *outside of the classroom*. You will need to do the homework assignments in order to master the material. (Attending class is not enough!) *Doing the exercises is indispensable*. You cannot learn how to do logic by watching. You learn it mostly by doing—much the way you learn to ride a bike.

Friendly advice: Don't fall behind in the course. The material is cumulative, with each lesson building on preceding lessons. Since the only way to learn is by doing problems, cramming won't help you much in this course. There are no extra credit opportunities apart from credit for attendance—see next paragraph.

Evaluation and Course Requirements

Your grade will be based on 3 exams worth, respectively, 20%, 40% and 40% of your final grade. Regular attendance (at most two absences) will up your final grade by one interval (e.g. from "B+" to "A-" or from "C" to "C+"). You may retake (or make up) either your first or your second exam on November 23rd. This is your one and only opportunity to retake or make up an exam.

Grading Scale

| | |
|----|----------|
| A | 95 – 100 |
| A- | 90 – 94 |
| B+ | 87 – 89 |
| B | 83 – 86 |
| B- | 80 – 82 |
| C+ | 77 – 79 |
| C | 73 – 76 |
| C- | 70 – 72 |

| | |
|----|----------|
| D+ | 67 – 69 |
| D | 63 – 65 |
| D- | 60 – 62 |
| F | Below 60 |

Note that (a) you must receive a final grade of 'C-' or higher if the course is to count toward the fulfillment of the requirements for a major or minor in philosophy and (b) you must receive a final grade of 'C-' or higher to pass the course if you take the Pass/Fail option.

Quizzes: There will be a quiz some weeks; it may be unannounced. Quizzes will be graded by *you* and will not affect your final grade. The point of the quizzes is to enable you to see how well you have grasped that week's material; if you do poorly on the quiz, you'll know you need to turn things around quickly in order to succeed on the exam.

Homework: You should read each unit we cover in class and do the problem sets at the end of the corresponding unit *before* we discuss the material in class. **You will get much more out of our meetings if you do the assigned reading and exercises first.** The problem sets consist of a number of starred and unstarred exercises. We will go over some of the unstarred exercises in class; the answers for the starred exercises are in the back of the book, so you can check these yourself, as you go. Remember: *you have to do the exercises to master the material.* This means you will need to be doing homework continuously throughout the term.

Mansfield Library Reserve and Moodle: I have placed a copy of the text, the syllabus, and answers to the unstarred exercises on two-hour reserve at the library. You can also find the syllabus and unstarred answers on the Moodle page for this course. Go to: umt.moodle.edu.

Seeing Me: If you have trouble with any of the material, come see me. Don't wait. Come to my office hours. If you can't make these, let me know and we can set up another time to meet. Bring problems you have started to our meeting. I can best help you by seeing your attempts.

Notes

September 21: Last day to make various changes to your enrollment status.

Please let me know if you have a disability so we can make accommodations.

Course Schedule

Please note that the exam dates are subject to change in order to accommodate our specific needs. It is your job to keep on top of any changes.

Week 1 (Aug. 31; Sept. 2): Introduction and Units 1-2

Week 2 (Sept. 9): Units 2-3 **No Class Monday, September 7 (Labor Day)**

Week 3 (Sept. 14 and 16): Unit 4

Week 4 (Sept. 21 and 23): Units 5-6

Week 5 (Sept. 28 and 30): Review 1-6; Exam 1

***Exam 1 Units 1-6* Wednesday, Sept. 30**

Week 6 (Oct. 5 and 7): Unit 7

Week 7 (Oct. 12 and 14): Units 7-8

Week 8 (Oct. 19 and 21): Units 8-9

Week 9 (Oct. 26 and 28): Review 7-9; Exam 2

***Exam 2 Units 7-9* Wednesday, October 28**

Week 10 (Nov. 2 and 4): Units 10-11

Week 11 (Nov. 9): Units 12-13 **No class Wednesday, November 11 (Veteran's Day)**

Week 12 (Nov. 16 and 18): Units 12-13, Unit 15

Week 13 (Nov. 23): Exam Redo (optional); **No class Weds., November 25 (Travel Day)**

Week 14 (Nov. 30 and Dec. 2): Unit 15

Week 15 (Dec. 7 and 9): Unit 15; Review 10-15

***Exam 3 Units 10-15* Thursday, December 17, 8:00a-10:00a in SS 254 (same room)**