Queens College Spring 2004 Powdermaker 152 philosophy@thatmarcusfamily.org

#### Syllabus

Text: Patrick Hurley. A Concise Introduction to Logic, 8th edition. Wadsworth.

### Topics to be Covered:

Basic Concepts. Chapter 1. §§1, 4 (pp. 43-47, 51-52, only) Propositional Logic. Chapter 6. §§1, 2, 3, 4, 5 Deductions in Propositional Logic. Chapter 7. All sections. Predicate Logic. Chapter 8. All sections.

## **Requirements**:

Attendance Homework, for each class (see below) Two mid-term tests (60%, 30% each) Note: All exams are mandatory. There are *no* make-up exams. Final Exam (40%)

## Schedule:

Date	Topic Name	Homework to do for next class (see below for explanatory notes)
Feb 4	Arguments; Validity and Soundness; Translation using Propositional Logic	<b>§1.1: I</b> .1, 2, 5, 8, 11, 13, 14, 20 <b>§1.4: I</b> . 1, 3, 4, 7, 9, 10, 12, 14 <b>§6.1: I</b> .1-9, 11, 13-16, 19-23, 26, 29, 30, 33, 38, 39, 44, 46, 49; <b>II</b> .3- 5, 7-10, 15-18
Feb 11	Wffs Truth Functions	<b>§6.1: III</b> .1-10 <b>§6.2: I</b> .1-4, 9, 10; <b>II</b> .1-3, 6-9, 12; <b>III</b> .1-3, 6-10, 13, 15, 18, 23, 24; <b>IV</b> .1-8, 11, 12, 14
Feb 25	Truth Tables; Propositions; TT's for Arguments	<b>§6.3: I</b> .1, 2, 3, 6, 9, 11, 12, 14; <b>II</b> .1-5, 8, 11; <b>III</b> .2, 4, 7, 8, 10 <b>§6.4: II</b> .1, 3, 5, 6, 14, 15, 18; <b>I</b> .1, 4, 5, 8
Mar 3	Invalidity; Inconsistency; Rules of Implication	<b>§6.5: I.</b> 3, 6, 7, 10, 12, 15; <b>II</b> .2, 3, 5, 9 Review for Test
Mar 10	Test 1: Chapters 1 and 6	<b>§7.1: III</b> .1-6, 8-11, 14, 15, 18, 20; <b>IV</b> .1, 4, 8 <b>§7.2: III</b> .1-4, 7-9, 11, 12, 16, 17; <b>IV</b> .1, 3, 5, 9 Note: If you struggle with the exercises in III, in §7.1 and §7.2, try doing some problems in I and II, first.
Mar 17	Rules of Replacement	<b>§7.3: III</b> .3-10. 17, 20, 21, 24, 27, 29; <b>IV</b> .1, 3, 4, 9 <b>§7.4: III</b> .2, 5, 11-14, 19, 24-27; <b>IV</b> .1-3, 5, 8, 10 Note: If you struggle with the exercises in III, in §7.3 and §7.4, try doing some problems in I and II, first.

Date	Topic Name	Homework to do for next class (see below for explanatory notes)
Mar 24	Conditional Proof; Indirect Proof; Logical Truths	<b>§7.5: I</b> .1, 3, 5, 7, 10-12, 14, 17, 18; <b>II</b> .1-3 <b>§7.6: I</b> .1-4, 7, 9-12, 16, 17, 19; <b>II</b> .2, 4 <b>§7.7:</b> 1-3, 9, 12, 16, 17
Mar 31	Test 2: Chapter 7	
Apr 14	Translation to Predicate Logic	<b>§8.1</b> : 1-11, 20, 26, 30-34, 38, 40-45, 49-53, 57-60
Apr 21	Quantifier Introduction and Elimination; Changing Quantifiers	<b>§8.2: I</b> .1-5, 7-10, 12, 14; <b>II</b> .1, 3-7, 10 <b>§8.3: I</b> .1-8, 10, 11, 13, 15; <b>II</b> .1, 3, 5-7
Apr 28	Conditional and Indirect Proof, Predicate Versions; Invalidity	<b>§8.4: I</b> .1-3, 6-8, 10, 12, 15, 19, 21; <b>II</b> .1-4, 6, 9 <b>§8.5: II</b> .1, 2, 4, 6, 9; <b>III</b> . 2, 4, 5
May 5	Relational Predicates, Translation and Derivation	<b>§8.6: I.</b> 1-4, 7-10, 13, 14, 17, 19, 20, 23, 24, 27, 28, 30; <b>II.</b> 1-4, 7-9, 13-15, 19 'Translating to English' Handout
May 12	Identity, Translation	<b>§8.7: I</b> . 2, 3, 6, 7, 9, 10, 13, 14, 17, 20, 21, 24-27, 29, 31, 33, 34, 35, 37, 39, 40, 42, 43, 45, 46
May 19	Identity, Derivations	<b>§8.7: II</b> :2, 3, 4, 6, 11, 13, 16, 18, 20; <b>III</b> .1, 6, 8, 10, 14, 16 Review for Final

# Final: May 26

Notes on Homework:

Chapter and Chapter Section Numbers (e.g. §6.3) and Exercise Section Numbers (Roman Numerals) appear in bold. Specific exercise numbers appear in normal font.

These HW problems are assigned to help you master the material. If you need more work, do more problems. I strongly encourage you to use the text as a reference guide. The chapter sections include excellent examples, and solutions. Read on a need-to-know basis: when you have difficulty with specific problems, read the relevant sections of the chapter.