COURSE SYLLABUS

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YEAR COURSE OFFERED: 2012
SEMESTER COURSE OFFERED: Fall
DEPARTMENT: Philosophy
COURSE NUMBER: 2321
NAME OF COURSE: Logic II
NAME OF INSTRUCTOR: Dr. Cameron Buckner

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The information contained in this class syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.

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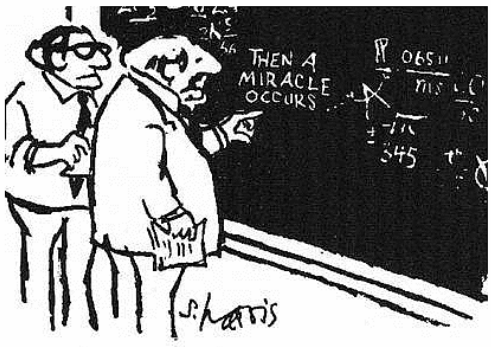
Time and Location: MoWeFr 11:00PM - 12:00PM, AH 106
Office Hours: 12:00-1:00 Mo/We and by appointment 506 AH
Instructor E-mail: cjbuckner@uh.edu

Learning Objectives



'I think you should be more explicit here in step two."

Logic is the science of correct reasoning. Instead of assessing each argument on a case-by-case basis, logicians try to generalize about good and bad forms of reasoning. However, most arguments occur in everyday language in informal contexts, full of vagueness and ambiguity. For this reason, logicians have developed formal symbolic systems of reasoning which attempt to remove these forms of unclarity and render reasoning more precise.

The primary goal of this course is to train you to use one of these formal symbolic systems, predicate logic. (We will begin with a brief review of propositional logic, but students should already have a firm grounding in some form of propositional logic for the course.) We will practice translating informal English sentences into symbolic notation and study formal techniques of reasoning to determine what conclusions logically follow from a set of premises, and whether given arguments are valid or invalid. Because our emphasis is on predicate logic, we will spend a great deal of time practicing translations and proofs that involve quantifiers and

relations. We will also touch on metatheory at the end of the course, demonstrating how to establish important properties possessed by different *systems* of logic.

Major Assignments/Exams

Homework	10%
Quizzes	60%
Final	30%

Homeworks: Typically, a homework will be due every week that there is not a quiz. Homeworks are due on the date listed, and must be ready to hand in to me at the beginning of class. (Note that answers to most homework problems can be checked using the software included with the textbook.)

Final exemption policy: If you have an average course grade of 93.5 or above and are happy with your grade going into the final, you can opt NOT to take the final exam. If you choose this exemption, your course grade would become your pre-final course average from quizzes and homework.

Required Reading

Introduction to Logic: Predicate Logic, 2nd Edition by Howard Pospesel (2003)
(Be sure to get a copy with the CD/software included!)

Recommended Reading

No additional readings.

List of discussion/lecture topics

Week	Topic	Readings & Activities
Week 1 Aug 27	Review of Propositional logic	Appendix 1, 216-219 Homework #1 due Sept 10: Review Handout
Week 2 Sept 3 *Labor day Sept 3*	Review of Propositional Logic	Chapter 1
Week 3 Sept 10	Symbolization in Predicate Logic	Chapter 2, 5-11 Homework #2 Due Sept 17: Ch. 2: 1 2 (all parts)
Week 4 Sept 17	Symbolization in Predicate Logic	Chapter 2, 12-19 **Quiz #1 Sept 21** Homework #3 due Oct 1:

COURSE SYLLABUS

		Ch. 2: 3, 4, 5, 6 (all parts)
Week 5 Sept 24	Proofs and Trees in Predicate Logic	Ch 3 Homework #4 due Oct 8: Ch. 3: 1-6 8-13 do proofs
Week 6 Oct 1	Proofs and Trees in Predicate Logic	Ch4
Week 7 Oct 8	Intermediate symbolization	Ch5 **Oct 12: Quiz 2** Homework #5, due Oct 22: Ch. 4: 10-15 do proofs Ch. 5: 1b, c, d, f, k, l, 2a, b, d, f, g, i, j, m, n, 3a, b, c, 5, 6a, b, c, 8a, b, c, f, i, j, 9b, c, d, j, 10a, b, c, h
Week 8 Oct 15	Intermediate proofs	Ch6 Homework #6, due Oct 29: 1a, b, 2, 3, 4, 7, 9, 13, 17, 18
Week 9 Oct 22	Counterexamples	Ch7
Week 10 Oct 29	Truth trees	Read: Ch8 **Nov 2: Quiz #3** Homework #7, due Nov 12 Ch. 7: 1, 3, (all) 4, 7, 10a, 14, 16a, e, 18 (if using software, print screen or describe results) Ch. 8: 1, 2, (all) , 4a, b, 5, 7, 9, 13
Week 11 Nov 5	Relational Symbolization	Read: Ch10 Homework #8, due Nov 12 Ch. 10: 1, 2, (all), 3a, b, c, f, I, j, 4a, b, f, i, j 5a, b, f, h, j, 7 (all), 10a, b
Week 12 Nov 12	Relational Proofs	Read: Ch11-12 Homework #9, due Nov 19 Ch. 11: 2, 3a, b, e, 4, 5, 6, 8, 9, 12, 14, 17 Ch. 12: 1a, b, c, 2a, b, d, 4
Week 13 Nov 19 *Thanksgiving Nov 21-24*	Relational Refinements	Read: Ch 13.1-13.3

COURSE SYLLABUS

Week 14 Nov 26	Metatheory: Soundness and Completeness	**Nov 26: Quiz 4** Homework #10, due Dec 3 Ch. 13: #1a, b, c, e, f, 3a, b, 8 (all), 9a, b, c, 12 a, b, c, f
Week 15 Dec 3	Review	
Final Exam	**Friday Dec 14 11am–2pm**	**All material**