PHI 2250  Basic Logic                          HC W6  Mon/Tues/Thurs  3:30 – 4:20pm

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Office Hours:  Monday, Tuesday, Thursday 2:30-3:30 p.m., and by appointment


Course Description:  A two term study of sentential and predicate logic, the course trains
students in the use of procedures and systems (trees, counterexamples, natural deduction,
axiomatic systems) to determine logical properties and relations.  Students will gain a basic
understanding of some metatheoretical concepts including soundness and completeness.

Course Goals and Methods:  Through lectures, readings, and exercises, students will learn how
to construct formal systems of propositional and predicate logic.  They will be able to prove
some metatheorems about such systems, and will understand how to make and evaluate natural
deduction and tree proofs for propositional and quantified schemata.

Grading:  1. Four homework assignments @ 5%.  2. Six quizzes @10%  (Best five scores
chosen).  3. Final test 30%.

NB:  Late homework will be penalized 2% per day absent a documented medical excuse.

Week       Term I Topics

1-2        Introduction to logic:  Basic notions
2-3        Ch. 1-2:  Truth functional connectives
4-5        Ch. 2-3:  Semantics for S, truth tables, validity, HW 1 (Sept. 25), Quiz 1 (Oct.2)
7-8        Ch 3-4:  Truth trees for sentence logic, Quiz 2 (Oct. 22)  (Wk 6:  Break)
9-12       Ch 4 :  Natural Deduction, Quiz 3  (Nov. 15)
13-14      Ch 5:  Intro to quantificational logic HW 2  (Dec. 6)

   Term II Topics

1-3        Ch 5:  Quantificational logic, symbolization and syntax
4-5        Ch 6:  Semantics for quantificational logic  HW 3 (Jan. 21), Quiz 4 (Jan 24)
6-8        Ch 7:  Derivations for predicate logic Quiz 5 (Feb. 12),  (Wk 7:  Break)
9-11       Ch 8:  Basic set theory  Quiz 6 (Mar. 14)
12-14      Ch 9:  Modal logic HW 4 (April 4)
The Appendix to Course Outlines is posted on the OWL course site.