

Philosophy 2200: Deductive Logic
Fall 2009
Huenemann

Description. This course will cover recognizing arguments, identifying premises and conclusions, validity, counterexamples, translations into propositional and predicate logic, truth tables, and natural deduction proofs. Special attention will be paid to applying lessons of logic to written arguments. We will also devote some time to working through graduate-level admissions test exercises.

Instructor. Charlie Huenemann, Main 208, 797-0254, charlie.huenemann@usu.edu.
Office hours: T 2-3, W 9-10, and by appointment.

Class webpage: go to <http://usuphilosophy.com>, click on "Schedule & Course info," scroll down to Phil 2200, and click on it.

Book:

Required: Hurley, *A Concise Introduction to Logic* (Wadsworth).

Assignments: Ten homework assignments will be collected and graded through the term. The eight highest scores on these assignments, combined, contribute 40 % to the final grade. There will be three tests, each contributing 20% to the final grade.

No late homework assignments will be accepted. Tests can be taken at alternative times, if arrangements are made in advance.

Philosophy 2200 projected schedule:

8/25: Introduction. Assign: read 1.2, and complete these exercises: part I: 7, 9, 13, 15, 21, 25, 31; part III: 1, 4, 10

8/27: Conditionals, necessary & sufficient conditions. Assign: **all** exercises in 1.2, part VI; read 1.4

9/1: Validity. Assign: odd-numbered exercises in 1.4, part I. Read 1.5.

9/3: Counterexamples. Assign: exercises 1-5 in 1.5, part II. Read 1.6

9/8: Extended arguments. Assign: **all** exercises in 1.6, part II.

9/17: Go through extended arguments. Assign: Read 6.1, complete exercises 1-11 in 1.6, part I.

9/22: Translations into propositional logic. Assign: Read 6.1 again, complete **all** exercises in parts II and III of 6.1.

9/24: Test #1. Assign: Read 6.2, complete **all** exercises in 6.2, part I.

9/29: Truth tables. Assign: complete **all** exercises in part II of 6.2; read 6.3, complete odd-numbered exercises in part I of 6.3.

10/1: Truth tables. Assign: exercises 6-10 of 6.3, part III. Read 6.4.

10/6: Truth tables for arguments. Assign: even-numbered exercises in 6.4, part II.

10/8: Indirect truth tables. Assign: exercises 9-15 of 6.5, part I, and exercises 6-10 of 6.5, part II. Read 6.6.

10/13: Introduction of argument forms. Assign: exercises 1-10 of 6.6, part II.

10/20: Test #2. Assign: read 7.1, and do odd-numbered exercises in 7.1, part I.

10/22: Natural deduction. Assign: exercises 10-15 of 7.1, part III. Read 7.2.

10/27: Natural deduction. Assign: exercises 10-20 of 7.2, part III. Read 7.3 and 7.4.

10/29: Natural deduction. Assign: exercises 1-5 of 7.3, part IV, and 1-5 of 7.4, part IV. Read 7.5.

11/3: Conditional proof. Assign: exercises 7-14 in 7.5, part I; write out the arguments. Read 7.6.

11/5: Indirect proof. Assign: exercises 7-14 in 7.6, part I; write out the arguments. Read 8.1.

11/10: Predicate logic. Assign: exercises 20-30 and 50-55 of 8.1. Read 8.2.

11/12: Natural Deduction in predicate logic. Assign: exercises 6-9 of 8.2, part II; write out the arguments. Read 8.3.

11/17: Natural Deduction in predicate logic. Assign: exercises 6-9 of 8.3, part II; write out the arguments. Read 8.4

11/24: Conditional proof and indirect proof. Assign: exercises 6-10 of 8.4, part II; write out the arguments.

12/1: Appendix.

12/3: Appendix.

12/9: Test #3, 9:30-10:45