PHIL A155: INTRODUCTION TO LOGIC

Item	Value
Curriculum Committee Approval Date	10/07/2020
Top Code	150900 - Philosophy
Units	3 Total Units
Hours	54 Total Hours (Lecture Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Open Entry/Open Exit	No
Grading Policy	Standard Letter (S), • Pass/No Pass (B)
Associate Arts Local General Education (GE)	• Area 1B Communication and Analytical Thinking (OA2)
Associate Science Local General Education (GE)	• Area 1B Communication and Analytical Thinking (OAS2)
California State University General Education Breadth (CSU GE-Breadth)	• CSU A3 Critical Thinking (A3)

Course Description

An introductory general education course focusing on the use of argumentation in both ordinary and academic discourse, with a particular focus on deductive logic. Emphasis on the role of formal and informal logic in the basic skills of oral communication (speech/listening) and written communication (reading/writing). Various deductive and inductive reasoning techniques will be identified, distinguished and evaluated for logical correctness and logical mistakes. Recommended for all humanities, social science, business and natural science majors, and for those planning to transfer to four-year colleges or universities. ADVISORY: Eligibility for ENGL C1000. Transfer Credit: CSU. C-ID: PHIL 110.**C-ID:** PHIL 110.

Course Level Student Learning Outcome(s)

1. Students will be able to critically evaluate, assess and present types and properties of arguments and use logical techniques to determine and justify their structural features and claims.

Course Objectives

- 1. Extract arguments from ordinary-language passages.
- 2. Distinguish between various types of inductive and deductive arguments and their properties.
- 3. Determine the validity or invalidity of categorical syllogisms using Venn diagrams.
- 4. Determine the validity or invalidity of arguments in truth-functional logic using truth tables and natural-deduction proofs

Lecture Content

Arguments in Ordinary Language Identifying premises, conclusions and assumptions Distinguishing deductive from inductive arguments Deduction - Traditional Logic Categorical propositions Immediate inferences: the square of opposition, conversion, obversion, and contraposition Syllogisms, validity, and Venn diagrams Deduction - Truth-Functional Logic Translation, syntax, semantics Truth tables for individual statements - tautologies, self-contradictory statements, and contingent statements Comparing statements for consistency, logical equivalence, and contradiction Truth tables for arguments Natural deduction proofs

Method(s) of Instruction

- Lecture (02)
- DE Online Lecture (02X)

Instructional Techniques

Lecture, discussion, written homework, peer evaluation

Reading Assignments

Students will spend approximately two hours per week on readings assigned from textbook(s)

Writing Assignments

Students will spend approxiamtely two hours per week on the following: Written assignments that analyze and critically evaluate various types of arguments Tests include writing out truth tables and various types of proofs

Out-of-class Assignments

Students will spend approxiamtely two hours per week on homework including textbook exercises, arguments and Venn diagrams, truth tables and various types of proofs

Demonstration of Critical Thinking

Comparison of student achievement with minimum standards on quizzes, tests, written assignments and final exam.

Required Writing, Problem Solving, Skills Demonstration

Assessment of argument analyses, diagrams, truth tables, and proofs, in order to evaluate the students' problem-solving and critical-thinking abilities

Eligible Disciplines

Philosophy: Master's degree in philosophy OR bachelor's degree in philosophy AND master's degree in humanities or religious studies, OR the equivalent. Master's degree required.

Textbooks Resources

1. Required Hurley, P.J.,. A Concise Introduction to Logic, 13th ed. Stamford: Cengage Learning, 2018 2. Required Copi, I.M., Cohen, C., and McMahon, K.. Introduction to Logic, 14th ed. Upper Saddle River, N.J.: Pearson Education, 2011