



MASTER COURSE OUTLINE

Prepared By: Dennis Knepp

Date: September 2017

COURSE TITLE

Symbolic Logic

GENERAL COURSE INFORMATION

Dept.: PHIL&

Course Num: 120

(Formerly: PHIL 106)

CIP Code: 38.0101

Intent Code: 11

Program Code: N/A

Credits: 5

Total Contact Hrs Per Qtr.: 55

Lecture Hrs: 55

Lab Hrs: 0

Other Hrs: 0

Distribution Designation: Humanities HU

COURSE DESCRIPTION (as it will appear in the catalog)

This course is a study of the methods and principles used to distinguish correct from incorrect reasoning. Students are expected to prove their understanding of formal deductive symbolic logic by completing logic proofs in categorical, propositional, and predicate logic.

PREREQUISITES

MATH 098 or above

TEXTBOOK GUIDELINES

Appropriate college level text(s) as chosen by instructor

COURSE LEARNING OUTCOMES

Upon successful completion of the course, students should be able to demonstrate the following knowledge or skills:

1. Evaluate read world arguments using informal fallacies by collecting, labeling, and describing ten examples in an assignment.
2. Prove validity or invalidity using truth tables.
3. Prove validity using predicate logic.

INSTITUTIONAL OUTCOMES

IO2 Quantitative Reasoning: Students will be able to reason mathematically.

COURSE CONTENT OUTLINE

1. Basic logic terms such as premises, conclusions, validity, and soundness
2. At least 15 Informal Fallacies with emphasis on real world applications
3. Venn Diagrams or Aristotle's Categorical Logic
4. Translation into Formal Notation using Boolean Operators
5. Truth Tables or Truth Trees used to evaluate validity or consistency
6. Logic Proofs using Propositional Logic
7. Translation into Predicate Logic

8. Logic Proofs using Predicate Logic

DEPARTMENTAL GUIDELINES (*optional*)

Students will be evaluated with an appropriate combination of exams, assignments, quizzes and / or comprehensive final as determined by the department.

PO5 should be assessed: Students will be able to solve problems by gathering, interpreting, combining and/or applying information from multiple sources.

DIVISION CHAIR APPROVAL

DATE