



INTRODUCTION TO LOGIC — PHIL 1250

A. Course Description

- **Credits:** 3.00
- **Lecture Hours/Week:** 3.00
- **Lab Hours/Week:** 0.00
- **OJT Hours/Week:** 0
- **Prerequisites:**
 - ENGL 0114: College Reading I
 - MATS 0310: Algebra Skills Lab
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- **Corequisites:** None
- **MnTC Goals:**
 - 04 – Mathematical/Logical Reasoning

Students will learn to identify, analyze, and evaluate arguments in real-world problems using techniques of formal logic. Covered will be inductive and deductive logic, categorical logic, propositional logic, and natural deduction. Prerequisites: Accuplacer score of 78 or higher in Reading Comprehension OR College Reading I, AND Accuplacer score of 51 or higher in Elementary Algebra OR MATS0305 Introduction to Algebra. Meets MnTC Goal 4.

B. Course Effective Dates: 1/13/14 – Present

C. Outline of Major Content Areas

1. Categorical propositions
2. Categorical syllogisms
3. Inductive and deductive logic
4. Natural deduction
5. Propositional Logic

D. Learning Outcomes

1. Evaluate arguments for validity, soundness, strength, and coherence.
2. Evaluate categorical syllogisms for validity using Venn diagrams and rules for categorical syllogisms.
3. Translate ordinary language into categorical propositions and analyze categorical propositions using the square of opposition.

4. Translate ordinary language into statements of propositional logic and analyze propositional statements using truth tables.
5. Write proofs using rules of inference and replacement.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

Goal 04 — Mathematical/Logical Reasoning

1. Illustrate historical and contemporary applications of mathematical/logical systems.
2. Clearly express mathematical/logical ideas in writing.
3. Explain what constitutes a valid mathematical/logical argument(proof).
4. Apply higher-order problem-solving and/or modeling strategies.

F. Learner Outcomes Assessment

As noted on course syllabus

G. Special Information

None noted