

# North Hennepin Community College

## PHIL 1050: Introduction to Logic

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: \*.\*

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: Goal 04 - Mathematical/Logical Reasoning

Investigation of the principles of deductive and inductive reasoning. The course includes Aristotelian logic, propositional and symbolic logic, validity, invalidity, and proofs. Since this course can be taken to fulfill the Mathematical-Logical Reasoning general education requirement, students should expect a Math-like course, with exercises, and exams.

**B. COURSE EFFECTIVE DATES:** 09/10/1997 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Analysis and evaluation of ordinary language sentences and arguments
2. Analysis and evaluation of traditional Aristotelian categorical statements and syllogisms
3. Modern symbolic propositional and quantificational logic proof construction

### D. LEARNING OUTCOMES (General)

1. Demonstrate knowledge of the historical and contemporary applications of mathematical/logical systems. (MnTC G4, comp. a; NHCC ELOs 1, 2)
2. Clearly express mathematical/logical ideas in writing. (MnTC G4, comp. b; NHCC ELOs 1, 2, 3)
3. Explain what constitutes a valid mathematical/logical argument (proof). (MnTC G4, comp. c; NHCC ELOs 1, 2)
4. Apply higher-order problem-solving and/or modeling strategies. (MnTC G4, comp. d; NHCC ELOs 1, 2, 3)
5. Demonstrate mastery of principles of introductory Logic. (MnTC G2, comps. a, b, c, d; MnTC G4, comps. a, b, c, d; NHCC ELOs 1, 2, 4)

### 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**

1. Knowledge of Human Cultures and the Physical and Natural World--Through study in the sciences, mathematics, social sciences, humanities, histories, languages, the arts, technology and professions.
2. Intellectual and Practical Skills--Including: Inquiry and analysis; Critical and creative thinking; Written and oral communication; Quantitative literacy; Information literacy; Teamwork and problem solving.
3. Personal and Social Responsibility and Engagement--Including: Civic knowledge and involvement--campus, local and global; Intercultural knowledge and competence; Ethical reasoning and action; Foundations and skills for lifelong learning.
4. Integrative and Applied Learning--Including: Synthesis and advanced accomplishment across general education, liberal studies, specialized studies and activities in the broader campus community.