

Prepared by the Department of Social Sciences, Behavioral Sciences, and Human Services

Date of Departmental Approval: April 11, 2011

Date Approved by Curriculum and Programs: September 28, 2011

Effective: Fall 2011

1. Course Number: PHI131
Course Title: Logic

2. Description: This course is an introduction to the principles of logic. It is designed for students who wish to develop their habits of thinking clearly and logically in the everyday world as well as in specialized areas such as science and technology. Although there is some coverage of informal logic, the thrust of the course is on formal logic including the following topics: deduction and syllogistic logic, symbolic logic, and induction and scientific method.

3. Student Learning Outcomes (instructional objectives, intellectual skills):

Upon successful completion of this course, students are able to do the following.

- Explain and interpret a wide variety of logical argument forms, both inductive and deductive
- Analyze logical arguments for validity
- Recognize the distinction between informal argument and formal scientific arguments
- Interpret the mathematical basis of symbolic logic
- Use truth tables and charts to illustrate symbolic logic problems
- Use computers to set up truth tables in logical analysis and develop spread-sheet type formats to develop complex tables in symbolic logic

4. Credits: Three credits

5. Satisfies a General Education Requirement: Humanities and Fine Arts (or) Behavioral or Social Sciences

6. Prerequisite: ENL101 or PHI130

7. Semester(s) Offered: Varies

8. Suggested General Guidelines for Evaluation: Evaluation of student performance includes quizzes and written exams.

9. General Topical Outline (Optional):

- Logical Concepts
- Solving Problems Using Logic
- Fallacies
- Categorical Propositions
- Categorical Syllogisms
- Symbolic Logic
- Rules of Inference
- Analogy and Probable Inference
- Scientific Method