COURSE SYLLABUS

LAST REVIEW	02/2013		
COURSE TITLE	Logic		
COURSE NUMBER	PHIL 0105		
DIVISION	Arts, Communications, a	and Humanities	
DEPARTMENT	PHIL		
CIP CODE	24.0101		
CREDIT HOURS	3		
CONTACT HOURS/WEEK	Class: 3	Lab: X	Clinical: X
PREREQUISITES	None		

COURSE PLACEMENT Students must meet the correct placement measure for this course. Information may be found at: <u>https://www.kckcc.edu/admissions/information/mandatory-</u>evaluation-placement.html

COURSE DESCRIPTION

Logic is studied in order to develop standards of critical thinking in any area of knowledge that employs inference and argument. Wherever conclusions are supposed to be supported by evidence, logic attempts to distinguish correct from incorrect forms of reasoning. Logic provides guidance for the examination of controversial issues confronting thoughtful people in the late 20th (early 21st) century.

KANSAS SYSTEMWIDE TRANSFER: PHIL0105

The learning outcomes and competencies detailed in this course outline or syllabus meet or exceed the learning outcomes and competencies specified by the Kansas Core Outcomes Groups project for this course as approved by the Kansas Board of Regents.

PROGRAM ALIGNMENT

This course is part of a program aligned through the Kansas Board of Regents and Technical Education Authority. For more information, please visit: https://kansasregents.org/workforce_development/program-alignment

General Education Learning Outcome

- Basic Skills for Communication
- Mathematics
- ____ Humanities
- Natural and Physical Sciences
- Social and Behavioral Sciences

Institutional Learning Outcomes

- Communication
- Computation and Financial Literacy
- Critical Reasoning
-] Technology and Information Literacy
- Community and Civic Responsibility
- Personal and Interpersonal Skills

TEXTBOOKS

http://kckccbookstore.com/

METHODS OF INSTRUCTION

A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE

- I. The Problem Areas in Philosophy
 - A. Epistemology ("to know")
 - B. Metaphysics ("to be")
 - C. Axiology ("the good")
 - D. Logic ("good reasoning")
- II. Basic Concepts
 - A. Validity and Soundness
 - B. Forms and Counterexamples
 - C. Some "Famous" Forms
- III. Identifying Arguments
 - A. Arguments and Non-arguments
 - B. Well-Crafted Arguments
- IV. Logic and Language
 - A. Logic, Meaning, and Emotive Force
 - B. Definitions

- C. Using Definitions to Evaluate Arguments
- V. Informal Fallacies
 - A. Fallacies Involving Irrelevant Premises
 - B. Fallacies Involving Ambiguity
 - C. Fallacies Involving Unwarranted Assumptions
- VI. Categorical Logic: Syllogisms
 - A. Standard Form, Mood, and Figure
 - B. The Traditional and the Modern Square of Opposition
 - C. Rules for Evaluating Syllogisms
- VIII. Statement Logic: Truth Tables
 - A. Symbolizing English Arguments
 - B. Truth Tables
 - C. Using Truth Tables to Evaluate Arguments
 - D. Abbreviated Truth Tables
- IX. Induction
 - A. Inductive and Deductive Logic: Contrasts and Clarifications
 - B. Arguments from Authority and Induction by Enumeration
 - C. Mill's Methods and Scientific Reasoning
 - D. Arguments from Analogy
- XII. Probability
 - A. Three Theories of Probability
 - B. The Rules of Probability
 - C. Bayes's Theorem

COURSE LEARNING OUTCOMES AND COMPETENCIES

Upon successful completion of this course, the student will:

The student will be able to define the major problem areas of the academic discipline of philosophy.

- 1. The student will be able to discuss a problem in the meaning of "to know."
- 2. The student will be able to discuss a problem in the meaning of "to be."
- 3. The student will be able to discuss a problem in the meaning of "the good."
- 4. The student will be able to discuss a problem in the art of logical reasoning.

The student will be able to recognize and discuss basic concepts of logical discourse.

- 5. The student will be able to determine the validity and soundness of deductive arguments.
- 6. The student will be able to recognize argument forms and construct counterexamples.
- 7. The student will be able to recognize some "famous" argument forms.

The student will be able to distinguish between arguments and non-arguments.

- 8. The student will be able to distinguish between an argument and an explanation, report, or illustration.
- 9. The student will be able to identify the premises and the conclusion of an argument.
- 10. The student will be able to construct a well-crafted argument.

The student will be able to explain the relationship between logic and language.

- 11. The student will be able to relate logic, meaning, and emotive force.
- 12. The student will be able to distinguish between various types of definitions.
- 13. The student will be able to use definitions to evaluate arguments.

The student will be able to recognize various types of informal fallacies (errors in reasoning).

- 14. The student will be able to recognize and define fallacies involving irrelevant premises.
- 15. The student will be able to recognize and define fallacies involving ambiguity.
- 16. The student will be able to recognize and define fallacies involving unwarranted assumptions.

The student will be able to recognize and evaluate categorical syllogisms.

- 17. The student will be able to recognize the standard form, mood, and figure of categorical syllogisms.
- 18. The student will be able to use the traditional and the modern square of opposition as well as Aristotelian rules to evaluate the validity/invalidity of categorical syllogisms.

The student will be able to demonstrate an understanding of statement logic and truth tables as a method for evaluating arguments.

- 19 The student will be able to symbolize English arguments in statement logic.
- 20. The student will be able to construct truth tables for arguments in statement logic.
- 21. The student will be able to use truth tables to evaluate the validity/invalidity of arguments in statement logic.
- 22. The students will be able to use abbreviated truth tables to evaluate the validity/invalidity of arguments in statement logic.

The student will be able to demonstrate an understanding of, and the ability to evaluate, inductive arguments.

- 23. The student will be able to explain the differences between deductive and inductive logic.
- 24. The student will be able to evaluate the strength/weakness and cogency/uncogency of arguments from authority and induction by enumeration.
- 25. The student will be able to demonstrate and understanding of Mill's Methods.
- 26. The student will be able to evaluate scientific reasoning and arguments from analogy.

The student will be able to demonstrate an understanding of probability arguments.

- 27. The student will be able to explain three theories of probability.
- 28. The student will be able to use the rules of probability.
- 29. The student will be able to explain and use Bayes's Theorem in evaluating philosophical arguments.

Course Competencies:

The student will be able to define the major problem areas of philosophy as an academic discipline of philosophy.

- 19. The student will be able to discuss a problem in the meaning of "to know."
- 20. The student will be able to discuss a problem in the meaning of "to be."
- 21. The student will be able to discuss a problem in the meaning of "the good."
- 22. The student will be able to discuss a problem in the art of logical reasoning.

The student will be able to recognize and discuss basic concepts of logical discourse.

- 23. The student will be able determine the validity and soundness of deductive arguments.
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- 11. The student will be able to construct a well-crafted argument.

The student will be able to explain the relationship between logic and language.

- 12. The student will be able to relate logic, meaning, and emotive force.
- 13. The student will be able to distinguish between various types of definitions.
- 14. The student will be able to use definitions to evaluate arguments.

The student will be able to recognize various types of informal fallacies (errors in reasoning).

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29. The student will be able to use the rules of probability.

30. The student will be able to explain and use Bayes's Theorem in evaluating philosophical arguments.

ASSESSMENT OF COURSE LEARNING OUTCOMES AND COMPETENCIES

Student progress is evaluated through both formative and summative assessment methods. Specific details may be found in the instructor's course information document.

COLLEGE POLICIES AND PROCEDURES

Student Handbook https://www.kckcc.edu/files/docs/student-resources/student-handbook-and-code-ofconduct.pdf College Catalog https://www.kckcc.edu/academics/catalog/index.html

College Policies and Statements

https://www.kckcc.edu/about/policies-statements/index.html

Accessibility and Accommodations

https://www.kckcc.edu/academics/resources/student-accessibility-supportservices/index.html.