PHIL 131 - Introduction to Logic and Critical Thinking Course Outline

Approval Date: 12/08/2017
Effective Date: 06/01/2018

SECTION A

Unique ID Number	CCC000535823
Discipline(s)	Philosophy
Division	Arts and Humanities
Subject Area	Philosophy
Subject Code	PHIL
Course Number	131
Course Title	Introduction to Logic and Critical Thinking
TOP Code/SAM Code	1509.00 - Philosophy / E - Non-Occupational
Rationale for adding this course to the curriculum	Updates to course content, catalog description, course objectives, methods of evaluation, SLOs, and textbook.
Units	3
Cross List	*N/A*
Typical Course Weeks	18

Total Instructional Hours

	Contact Hours
Lecture	54.00
Lab	0.00
Activity	0.00
Work Experience	0.00
Outside of Class Hours	108.00

Total Contact Hours	54
Total Student Hours	162
Open Entry/Open Exit	No
Maximum Enrollment	25
Grading Option	Letter Grade or P/NP
Distance Education Mode of Instruction	

SECTION B

General Education Information:

SECTION C

Course Description

Repeatability May be repeated 0 times

Catalog Description Develops skills in the use of deductive and inductive inferences; propositional and sentential logic; logical fallacies; and various syllogistic arguments for evaluating formal and informal arguments. Includes analytical and argumentative reading and writing exercises.

Schedule Description Offered at least once a year.

SECTION D

Condition on Enrollment

1a. Prerequisite(s): *None*

1b. Corequisite(s): *None*

1c. Recommended: *None*

1d. Limitation on Enrollment: *None*

SECTION E

Course Outline Information

1. Student Learning Outcomes:

A. 1.) Recognize, identify, create and apply various logical structures and elements (and/or lack of them in the form of logical fallacies) for analyzing the logical efficacy of different written arguments and claims. 2.) Demonstrate competent English composition skills on a variety of topics by writing logically cogent disquisitions using the reasoning skills listed above.

2. Course Objectives: Upon completion of this course, the student will be able to:

A. A. Demonstrate an understanding of proof method (natural deduction) in sentential logic as well as competence in methods of formal logic. B. Identify the relation between language and logic. C. Distinguish fact from opinion and knowledge from belief. D. Identify and critique deductive and inductive arguments in contemporary oral and written arguments. E. Apply deductive and inductive argument in essay form. F. Construct well organized written arguments advocating ideas and positions using logical tools as a foundation. A minimum of 6,000 words.

B.

3. Course Content

A. Critical Thinking - Arguments
    a. Distinguishing arguments from non-arguments
    b. Breaking-down and analyzing arguments according to reasons and conclusions
    c. Identifying assumptions and implications
    d. Distinguishing between deductive and inductive arguments
    e. Translating deductive arguments into logical form
        a. Implications of natural deduction
    f. Constructing categorical propositions with Venn diagrams
    g. Identifying sentential logic
        a. Syntax and formation rules
        b. Truth-functions and Truth-tables
            a. Rules of Validity for Proofs

b. Rules of Inference
c. Identifying and creating categorical syllogisms
    a. Square of Opposition
    b. Existential/Venn Opposition
d. Identifying and creating inductive arguments
    a. Analogies
    b. Generalizations
    c. Causation and thescientific method
e. Evaluating Arguments
    a. Assessment of structure and form of propositions and arguments
    b. Exposing formal and informal fallacies
f. Critiquing content of arguments
    a. Are the reasons relevant to the thesis statement?
    b. Are the reasons true? Adequate? Clear? Unbiased?
        a. Clarifying meaning:
            a. Ambiguity/Equivocation
            b. Vagueness
            c. Bias/Slanting
            d. Definition
            e. Connotation/Denotation

B. Critical Writing - Composition
    a. Developing an adequate thesis statement
    b. Supporting a thesis with logic, reasons, evidence
    c. Drawing inferences from different sources (examples: statistics, authority, examples, testimony, judicial case rulings, etc.)
    d. Clarifying meaning and avoiding vague, indefinite and slanted sentences
    e. Supporting positions using various forms of deductive and inductive arguments
    f. Constructing a progression of substantial compositions that demonstrate the following:
        a. Evaluation of works written by others by assessing structure and content
        b. Advocation of one's own ideas in written form providing logical and empirical support for the claims and refuting the position of opponents while avoiding logical fallacies
        c.

4. Methods of Instruction:

Activity: Students will occasionally solve problems from the textbook in small groups during class.
Discussion: LECTURE/DISCUSSION from textbook chapters.
Lecture: Presentations of Irving Copi's book INTRODUCTION TO LOGIC with problem-solving exercises.
Other: YouTube clips of speeches by contemporary luminaries to be analyzed with respect to their logical efficacy and empirically verifiable information.

5. Methods of Evaluation: Describe the general types of evaluations for this course and provide at least two, specific examples.

Typical classroom assessment techniques

Exams/Tests -- 3 section tests and a final exam. Section tests will consist of tasks such as the following: Sample One: Translate each of the following into symbolic form. 1.) It is not the case that either Downtown Joe's serves alcohol or the Girl Scouts and the Honor Society serve lemonade. 2.) If Spike Lee writes a movie, then if Denzel Washington stars in it, then Paramount and MGM will compete for it. Sample Two: Indicate the validity or invalidity of

each of the following arguments using Truth Tables. Use the long truth table for all even-numbered items and the short truth table for all odd- numbered items. 1.) If Billy the Kid shot the sheriff, but he didn't shoot the deputy, then he's guilty of only one crime. But it's not true that he shot the sheriff, but didn't shoot the deputy. Therefore, it's not the case that he's guilty of only one crime. 2.) If the first disjunct of a disjunction is true, the disjunction as a whole is true. Therefore, if both the first and second disjuncts of the disjunction are true, then the disjunction as a whole is true.
Papers -- 3 papers containing a minimum of 6,000 words total due by the end of the semester, including the final essay. Sample Essay Assignments: Identify an issue you care about and defend your point of view using logical and empirical evidence to support your claims. Identify a controversial social issue and write an essay defending one point of view, then write a second essay defending the counter view.
Class Work -- Problem-solving exercises similar to those listed in Exams/Tests Section. Students will work in small groups, then after solving the problems, the class as a whole will analyze the problems with instructor.
Home Work -- Reading the text, completing the exercises in the text and writing papers.
Standardized instrument objectively measuring student knowledge -- 3 standardized tests each based on 100 percentage points. Tests will be drawn from the Copi textbook and/or other objective test samples available from past logic tests in the field. The test banks are voluminous. 3 essay exams each worth 100 percentage points. 1 final exam essay worth 200 percentage points. A student may earn a total of 800 percentage points. The final grade will be calculated by dividing the sum of the percentage points by 8 to yield the final percentage. 90 - 100 = A 80 - 89 = B 70 - 79 = C 60 - 69 = D 59 and below = F
Class Performance -- 3 standardized tests each based on 100 percentage points. Tests will be drawn from the Copi textbook and/or other objective test samples available from past logic tests in the field. The test banks are voluminous. 3 essay exams each worth 100 percentage points. 1 final exam essay worth 200 percentage points. A student may earn a total of 800 percentage points. The final grade will be calculated by dividing the sum of the percentage points by 8 to yield the final percentage. 90 - 100 = A 80 - 89 = B 70 - 79 = C 60 - 69 = D 59 and below = F
Final Class Performance -- The targeted goal: Overall percentage for the entire class will be 70%.
Final Exam -- Essay for the Final Exam: Write an in-class essay of 1,200 - 1,500 words analyzing and evaluating the article provided you by the professor. Identify reasoning errors and biased language, then rewrite the essay using good logical form and empirical examples.

Letter Grade or P/NP

6. Assignments: State the general types of assignments for this course under the following categories and provide at least two specific examples for each section.

A. Reading Assignments
   Read each chapter in the textbook sequentially keeping abreast of the lecture presentations.

   Read all pertinent current material on given topics, which will vary semester to semester. Handouts of and/or links to the most recent magazine articles, academic papers, blogs, disquisitions, etc. will be provided.
B. Writing Assignments
   3 essays containing a minimum of 6,000 words total, typed, double-spaced and handed in on the date instructor advises.

A final exam essay delineated in the section titled "Methods of Evaluation".

C. Other Assignments

D.

7. Required Materials

A. EXAMPLES of typical college-level textbooks (for degree-applicable courses) or other print materials.

Book #1:

Author:	Copi, I. and Cohen, C.
Title:	Introduction to Logic
Publisher:	Routledge
Date of Publication:	2016
Edition:	14th

B. Other required materials/supplies.