Philosophy 110 Introduction to Logic

03

MW: 08:30 - 09:45 (64425)

INSTRUCTOR: Ron Loo

OFFICE: Palanakila 144

OFFICE HOURS: MW: 10:00 - 11:00a.m. TTH: 12:55 - 1:55p.m.

(Other times by mutual agreement)

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EFFECTIVE DATE: Spring 2017

# Windward Community College Mission Statement

Windward Community College offers innovative programs in the arts and sciences and opportunities to gain knowledge and understanding of Hawai'i and its unique heritage. With a special commitment to support the access and educational needs of Native Hawaiians, we provide O'ahu's Ko'olau region and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.

## **CATALOGUE DESCRIPTION:**

A study of the foundations and development of rational thought and communication and their applications. Includes analysis of deductive reasoning, formal and informal fallacies, and the use of symbolic systems. WCC: FS

## ACTIVITIES REQUIRED AT OTHER THAN REGULARLY SCHEDULED CLASS TIMES:

Study Sessions: Highly recommended.

# **STUDENT LEARNING OUTCOMES:**

At the completion of this course, you should be able to:

- 1. Recognize fallacies of relevance, presumption, and ambiguity.
- 2. Employ rules of logic in deductive analysis.
- 3. Construct truth tables for deductive analysis.
- 4. Use symbolic systems for deductive analysis.

### COURSE CONTENT:

## Concepts or Topics

- Basic Logical Concepts
   Arguments, Premises, Conclusions
   Deductive and Inductive Arguments
   Validity and Truth
- Analyzing Arguments
   Paraphrasing and Diagramming
   Arguments
   Recognizing Arguments
   Arguments and Explanations
- Fallacies
   Fallacies of Relevance
   Fallacies of Presumption
   Fallacies of Ambiguity
- Symbolic Logic
   Modern Logic and Its Symbolic
   Language
   The Symbols for Conjunction,
   Negation, and Disjunction
   Conditional Statements and
   Material Implication
   Testing Argument Validity on
   Truth Tables
   Statement Forms and Material
   Equivalence
- Methods of Deduction
   Formal Proof of Validity
   The Rules of Inference
   The Rules of Replacement
   Proof of Invalidity

### Skills

- 1. Recognize premises and conclusions.
- 2. Differentiate inductive from deductive arguments.
- 3. Recognize invalid deductive arguments.
- 4. Paraphrase and diagram single arguments.
- 5. Recognize an argument.
- 6. Identify and explain fallacies of relevance, presumption, and ambiguity.
- 7. Construct your own examples of fallacies of relevance, presumption, and ambiguity.
- 8. Symbolize propositions and arguments.
- 9. Use truth tables to determine the validity of arguments.
- 10. Use truth tables to characterize statement forms as tautologous, self contradictory, or contingent.
- 11. Construct formal proofs of validity (by using the rules of inference and the rules of replacement).
- 12. Prove invalidity (by the method of assigning truth values).

### COURSE TASKS:

- 1. Complete all in-class objective quizzes. (These quizzes will require students to recognize and identify fallacies, recognize language functions, symbolize statements and arguments, diagram single arguments, construct truth tables, construct formal proofs of validity, prove invalidity.)
- 2. Complete all assigned homework from the text, <u>The Worksheet</u> covering chapters 1, 3, 6, 8, 9. (These assignments will test the same skills as those tested in quizzes.) See comment on assigned homework in OTHER INFORMATION.
- 3. Complete three (3) in-class exams. (The material in this course will be presented in 3 units. An exam will be given upon completion of a unit of study.

## MODE OF INSTRUCTION:

Because of the nature of the subject, regular class attendance is essential. Instruction will consist of lectures and problem solving.

# **METHOD OF GRADING:**

- 1. Letter grades will be assigned based on the number of points accumulated for the course.
  - A: 450 500
  - B: 399 449
  - C: 348 398
  - D: 297 347
  - F: 246 296
  - W: Formal withdrawal from the course.

### METHOD OF GRADING:

# 2. Weight of tasks:

Homework (or quizzes)  $200 = (10 \times 20)$ 

Exams  $300 = (03 \times 100)$ 

500

### LEARNING RESOURCES AND MATERIALS:

Required: Copi, I.M. and Carl Cohen; <u>Introduction to Logic</u>

MacMillan (custom ed.)

Loo, R.J.K. The Worksheet (2nd ed.)

## **OTHER INFORMATION:**

1. Office hours:

to be announced in class.

### 2. Class attendance:

Regular attendance is expected of all students. Students who are absent often rarely do well in the course. Students who stop attending this class and who do not formally withdraw from the course will receive a failing grade.

### 3. Class preparation:

Students are expected to prepare for each class. This means that students should complete reading and/or writing assignments prior to class.

## 4. Study sessions:

Study sessions will be offered during the semester to reinforce concepts/principles presented in class. A  $\underline{\text{total}}$  of five (5) points can be earned by attending 10 study sessions.

### 5. Assigned homework:

Assigned homework will consist of completion of only the following exercises from <u>The Worksheet</u>: 1.2, 1.6, 3.2 (P1), 3.3, 8.3 or 8.4, 8.5, 9.1 (P1), 9.1 (P3), 9.2 (P2) or (P3), 9.3. <u>Late</u> homework will be penalized two (2) points per week.

### OTHER INFORMATION:

# 6. Learning assistance:

Because of the nature of the subject matter, students are advised to seek learning assistance from the instructor as soon as they encounter difficulty with reading an/or writing assignments.

## 7. Absences:

If you are absent, borrow a classmate's notes and copy those for the day you were absent. Students who <u>miss scheduled exams due to unexcused</u> absences will be penalized five (5) points per week for late exams.

## 8. Cell phones:

Please set your cell phone to "silent" so that the class can focus on the lesson of the day.

### DISABILITIES ACCOMMODATION STATEMENT

If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to fully participate in this class, you are encouraged to contact the Disability Specialist Counselor to discuss reasonable accommodations that will help you succeed in this class. Ann Lemke can be reached at 235-7448, <a href="mailto:lemke@hawaii.edu">lemke@hawaii.edu</a>, or you may stop by Hale 'Akoakoa 213 for more information.

## Philosophy 110 Overview

UNIT 1: What Is Logic?

Arguments, Premises, and Conclusions

**Deduction and Induction** 

Paraphrasing and Diagramming Arguments

Recognizing Arguments Arguments and Explanations

What Is A Fallacy?
Fallacies of Relevance
Fallacies of Presumption
Fallacies of Ambiguity
Exam #1: Feb. 06 (M)

UNIT 2: Symbolic Logic

Symbolic Language

Conjunction, Negation, Disjunction

Material Implication

**Argument Forms and Arguments** 

Material Equivalence Exam #2: Mar. 08 (W)

UNIT 3: The Method Of Deduction

Formal Proof of Validity
The Rule of Replacement

Proof of Invalidity

Exam #3: May 10 (W) 08:30 - 10:30 a.m.

\*LAST DAY to submit course work for credit May 03 (W) 12:45 p.m.