(p ∨ q) ≡ ~∃φ ∨ Philosophy 110 ∨ ~∃φ ∨ q)

Introduction to Logic

Philosophy 110 Introduction to Logic

TR 1130-1245p PALANA 104 CRN 62146

INSTRUCTOR: James Andy Stroble, PhD.
OFFICE: Palanakila 152
OFFICE HOURS: TR 10:30-11:30, or by appointment.
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EFFECTIVE DATE: Spring 2018

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

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

• Recognize fallacies of relevance, presumption, and ambiguity.
• Employ rules of logic in deductive analysis.
• Construct truth tables for deductive analysis.
• Use symbolic systems for deductive analysis.

Students who successfully complete Philosophy 110 will have learned the principles of accurate thinking. They will know how to acquire reliable information and how to evaluate competing claims. Students who do not, well, they will be wandering into a morass competing claims to truth, with no means of sorting out the truth from the appearances.

COURSE HALLMARKS
To satisfy the Symbolic Reasoning requirement, a course will
1. expose students to the beauty, power, clarity and precision of formal systems.
2. help students understand the concept of proof as a chain of inferences.
3. teach students how to apply formal rules or algorithms.
4. require students to use appropriate symbolic techniques in the context of problem solving, and in the presentation and critical evaluation of evidence.
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5. include computational and/or quantitative skills.
6. build a bridge from theory to practice and show students how to traverse this bridge.

COURSE TASKS

• READ the assigned parts of the textbook, before class.
• Attend class!
• Homework exercises: Logic is like a language, or music, you must practice to learn. Homework due on Thursdays.
• Quizzes: Take the quizzes, make them up if you miss one. Quizzes are on Thursdays.
• Take Exams: We have lots of them, so we can practice.

METHOD OF GRADING:

Grading will be based on a percentage scores on weekly quizzes, three mid-term exams, and a final exam, and percentage of attempted or completed homework assignments, with the following weights:

• Homework: 10%
• Quiz average: 20%
• Mid-term exams: 30% (or, 10% each)
• Final exam: 40%
Letter grades will be assigned on an approximate curve, depending upon the range of final total percentages.

LEARNING RESOURCES AND MATERIALS:


Important Registration and Withdrawal Deadline Information

01/12/2018 Last day to register
01/12/2018 Last day to receive 100% tuition refund
02/01/2018 Last day to receive 50% tuition refund
02/01/2018 Last day to drop (No "W" on transcript)
04/02/2018 Last day to withdraw from class ("W" on transcript)

Schedule

(as of January 5, 2018, subject to change, modification and/or disruption)

Week One
Jan. 9-11: Introductions, What Logic is.
   Reading: Chapter One, Sections A-C.
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Homework: Exercises 1B.1 #1-10, 1B.2 # 2-4, 1C #3, 5, 10, 12. Quiz on Thursday, last 10 minutes of class.  
*** 01/12/2018  Friday: Last day to Add/Late Register  
Week Two  
Jan. 16, 18: Validity, Deduction and Induction  
Reading: Chapter One, Sections D-G  
Homework: Exercises 1E #2-9, 1F #3, 5, 7.  
Week Three  
Jan. 23, 25: Fallacies! Defense Against the Dark Arts!  
Reading: Chapter Four, the whole thing!  
Homework: Exercises 4B.I, # 7, 17, 23, 34. 4C.II # 9, 12, 19, 44. 4D.II # 6, 10, 11, 19. 4E, pick one!  
Week Four  
Jan. 30, Feb. 1: Propositional  Logic  
Reading: Chapter Seven, Sections A-B; Logical Operators and Translation  
Homework: Exercises 7A, # 1-15, 7B.I, #1-10.  
**Thurs Feb. 1, 2018: Last day to withdraw with 50% tuition refund, to drop without a "W".  
Week Five  
Feb. 6, 8: Truth Functions and Truth Tables  
Reading: Chapter Seven, Sections C-D  
Homework: Exercises 7C #1, 2,3,5,8,11,16, 17, 19. 7D.I #2-6.  
Week Six  
Kinds of Statements  
Feb. 13, 15: Reading: Chapter Seven, Sections E-G  
Homework: Exercises 7C.2.I #2-5,  7C.2.II # 1-5,  7E #9-16,  7F.1# 2-10.  
**First Mid-term Exam, Feb. 15, 25 minutes.  
Week Seven  
Feb. 20, 22: Validity and Truth Tables  
Reading: Chapter Seven, sections G-I  
Homework: Exercises 7G.1 I # 2-8,  7G.1 II #3, 4;  7G.2 #2, 3, 4;  7H.1 I # 5, 10  
Week Eight  
Feb. 27, Mar. 1: Natural Deduction  
Reading: Chapter Eight, sections A-B  
Homework: Exercises 8B.I # 1-10, 8B.II #1-7  
Week Nine  
Mar. 6, 8: Natural Deduction:  
Reading: Chapter Eight, Section C  
Homework: Exercises 8B.III # 3-6, 8B.IV # 2-4. 8C.I # 4, 8, 8C.II # 7.  
Week Ten  
Mar. 13, 15: Deduction Replacement Rules  
Reading: Chapter Eight, Section D  
Homework: Exercises 8D.I #2-6, 8D.II #2, 8, 9, 8D.III #3, 9, 18.  
**Middle Mid-term examination: , Mar. 15, 30 minutes.  
Week Eleven  
Mar. 20, 22: Rules of Replacement  
Reading: Chapter Eight, Section E  
Homework: Exercises 8E.I # 2-6, 8E.II #5, 9, 11, 8E.III #5,
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Spring Break!!!  Mar. 26 (Prince Kuhio Day) through March 30 (Good Friday) No Class!

Week Twelve
Apr. 3, 5 : More on the Method of Deduction
Reading: Chapter Eight, Section F
Homework: Exercises 8F.I #2-6, 8F.II #2-6, 8F.III #2, 5, 11.
**Third Mid-Term Exam, Apr. 5, 30 minutes.
****: April 2nd, Last Day to Withdraw (at all). Point of no-return!

Week Thirteen
Apr. 10, 12: Indirect Proofs
Reading: Chapter Eight, Sections G, H: Conditional and Indirect Proof
Homework: Exercises 8G.I #5, 8H.I # 5, 12, 8H.II # 2, 3.

Week Fourteen
Apr. 17, 19: Predicate Logic
Reading: Chapter 9A, B
Homework: Exercises 9A # 1-10

Week Fifteen
Apr. 24, 26 : Subject-Predicate Propositions
Reading: Chapter 9C
Homework: Exercises 9B.I # 3, 9B.II #2, 9B.III #5

Week Sixteen
May 1: Last class. Reading:Nothing?  Exercises: To Be Announced

**Final Exam: Thursday, May 10 11:30am to 1:30pm (In the usual classroom)

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, lemke@hawaii.edu, or you may stop by Hale ‘Akoakoa 213 for more information.