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Introduction to Logic Windward Community College

Philosophy 110 Introduction to Logic
CRN 64196 TR 1130-1245p PALANA 104

Syllabus

INSTRUCTOR: James Andy Stroble, PhD.

OFFICE: Palanakila 152

OFFICE HOURS: TR 1:00-2:30, or by appointment.

TELEPHONE: 236-9152 Voice mail 455-0537 e-mail: stroble@hawaii.edu

EFFECTIVE DATE: Spring 2017

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 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.

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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.
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. Grading is not based on attendance, but students who fail to attend tend to fail. There is no extra credit. Missed quizzes and exams (except for the final exam) can be made-up. Late homework will be accepted, but it is better to turn it in on schedule?

LEARNING RESOURCES AND MATERIALS:

Textbook: *Logic*, Third Edition, by Stan Baronett. Available in the Bookstore.
Study guides and other materials will be made available on Laulima

Important Registration and Withdrawal Deadline Information

01/13/2017 Last day to register

01/13/2017 Last day to receive 100% tuition refund

01/30/2017 Last day to receive 50% tuition refund

01/30/2017 Last day to drop (No "W" on transcript)

04/03/2017 Last day to withdraw from class ("W" on transcript)

Schedule

(as of January 10, 2017, subject to change, modification and/or disruption)

Week One

Jan. 10: Introductions, What Logic is.

Reading: Chapter One, Sections A-C .

Homework: Exercises 1B.1 #1-10, 1B.2 # 2-4, 1C #3, 5, 10, 12. Quiz on Thursday, last 10 minutes of class.

***** Jan. 13, Friday: Last day to Add/Late Register**

Week Two

Jan. 17: Validity, Deduction and Induction

Reading: Chapter One, Sections D-G

Homework: Exercises 1E #2-9, 1F #3, 5, 7.

Week Three

Jan. 24: Fallacies! Defense Against the Dark Arts!

Reading: Chapter Four, the whole thing!

Homework: Exercises 4B.II, # 7, 17, 23, 34. 4C.II # 9, 12, 19, 44. 4D.II # 6, 10, 11, 19. 4E, pick one!

Week Four

Jan. 31: Propositional Logic

Reading: Chapter Seven, Sections A-B; Logical Operators and Translation

Homework: Exercises 7A, # 1-15, 7B.1, #1-10.

****Monday, Jan. 30 : Last day to withdraw with 50% tuition refund, to drop without a**

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"W".

Week Five

Feb. 7: Truth Functions and Truth Tables

Reading: Chapter Seven, Sections C-D

Homework: Exercises 7C.1 #1, 2,3,5,8,11,16, 17, 19. 7D #2-6.

Week Six Kinds of Statements

Feb. 14: 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. 16th, 20 minutes.**

Week Seven

Feb. 21 : 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. 28: **Natural Deduction**

Reading: Chapter Eight, sections A-B

Homework: Exercises 8B.I # 1-10, 8B.II #1-7

Week Nine

Mar. 7: **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. 14: 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. 16th, 25 minutes.**

Week Eleven

Mar. 21: Rules of Replacement

Reading: Chapter Eight, Section E

Homework: Exercises 8E.I # 2-6, 8E.II #5, 9, 11, 8E.III #5,

******: April 3: Last Day to Withdraw (at all). Point of no-return!**

>>>> Mar 27, -Apr. 1: Spring Break, no classes<<<<

Week Twelve

Apr. 4 : 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. 6th, 30 minutes.**

Week Thirteen

Apr. 11: Indirect Proofs

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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. 18: Predicate Logic

Reading: Chapter 9A, B

Homework: Exercises 9A # 1-10

Apr. 25 : Subject-Predicate Propositions

Reading: Chapter 9C

Homework: Exercises 9B.I # 3, 9B.II #2, 9B.III #5

Week Sixteen

May 2: Last week of class. Reading: Nothing? Exercises: To Be Announced

****Final Exam: Thursday, May 11 11:30am to 1:30pm**

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.