

SYLLABUS

Course Title: Introduction to Formal Logic
Course Number: PHIL 230
Ticket Number: 17232

Prerequisites: Completion of GE Analytical Reading/Expository Writing; either GE Mathematics or MATH 210

Contact Information: Dr. Dean Pickard, Faculty Office: ST 506
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Catalog Description:
Introduction to modern deductive logic; includes propositional logic and theory of quantification.

Instructor's Description:
This course satisfies the "Critical Thinking" component of the Basic Skill section of the General Education Program, which recognizes critical reasoning as a fundamental competence. Courses in this section of General Education take reasoning itself as their focus. Their goals are to provide students with criteria and methods for distinguishing good reasoning from bad and to help students develop basic reasoning skills that they can apply both within a broad range of academic disciplines and outside the academic environment. Students are expected to acquire skill in recognizing the logical structure of statements and arguments, the ability to distinguish rational from non-rational means of persuasion, skill in applying the principles of sound reasoning in the construction and evaluation of arguments, and an appreciation of the value of critical reasoning skills in the pursuit of knowledge.

Goal:
Students will analyze information and ideas carefully and logically from multiple perspectives and develop reasoned solutions to problems.

Student Learning Outcomes:
Students will:

1. Explain and apply the basic concepts essential to critical examination and evaluation of argumentative discourse;
2. Use investigative and analytical thinking skills to examine alternatives, explore complex questions; and solve challenging problems;
3. Synthesize information in order to arrive at reasoned conclusions;
4. Evaluate the logic and validity of arguments, and the relevance of data and information;
5. Recognize and avoid common logical and rhetorical fallacies.

Course Objectives:
The Student Learning Outcomes (SLOs) are achieved through the Course Objectives (COs). Each SLO is targeted by one or more COs, and each CO targets one or more SLOs. The course activities are designed to meet specific COs and the student performance during these activities is monitored and assessed. The activities include lectures, tests, quizzes, and examinations. Additional activities such as recitations, critiques, and other comparable occurrences may be included. They are effective means of meeting the COs, hence achieving the SLOs through the COs.

The SLOs are targeted by the corresponding COs as follows (see next page):

Week	Topics Covered:	pages	Date
1.	A) Arguments, Premises, Conclusions B) Deduction and Induction	Ch1 p. xviii-xix, p. 1-31 Ch1p. 32-42	Jan20
2.	Quiz 1: pages 1-42 A) Validity, Truth, Soundness, Strength, Cogency B) Extended Arguments	Ch1 p. 42-61 Ch1 p. 61-73	Jan27
3.	Quiz 2: pages 42-73 Propositional Logic: Translation, Truth Functions	Ch6 p. 290-332	Feb3
4.	Quiz 3: pages 290-332 Propositional Logic: Truth Tables Propositions/Arguments	Ch6 p. 313-325	Feb10
5.	Quiz 4: 313-325 Propositional Logic: Indirect Truth Tables, Argument Forms & Fallacies	Ch6 p. 325-349	Feb 17
EXAM 1: Propositional Logic p. 290-349			Feb24
6.	Natural Deduction in Propositional Logic: Implication I	Ch7 p. 350-361	Feb 24
7.	Quiz 5: Implication I-II Natural Deduction in Propositional Logic: Implication II, Replacement I	Ch7 p. 361-380	Mar10
8.	Quiz 6: 361-380 Natural Deduction in Propositional Logic: Replacement II, Conditional Proof	Ch7 p. 381-397	Mar17
9.	Quiz 7: p. 381-397 Natural Deduction in Prop. Logic: Indirect Proof, Proving Logical Truths	Ch7 p. 397-405	Mar24
10.	NO CLASS MARCH 31: Cesar /Chavez Day		
11.	NO CLASS APRIL 7: SPRING BREAK		
EXAM 2: Natural Deduction in Propositional Logic			Apr14
12.	Quiz: 8 p 397-405 Predicate Logic: Translation, Rule of Inference	Ch8 p. 406-425	Apr14
13.	Quiz: 9 p 406-425 Predicate Logic: Quantifier Change, Conditional/Indirect Proof	Ch8 p. 425-435	Apr21
14.	Quiz: 10 p 425-435 Predicate Logic: Invalidity, Relational Predicates/Overlapping Quantifiers	Ch8 p. 435-453	Apr28
15.	Quiz: 11 p435-453 Predicate Logic: Identity	Ch 8p. 453-467	May5
EXAM 3: Predicate Logic:			May 12
16.	(Final Exam Meeting 8-10PM)		May12

Required Texts: Hurley, Patrick, *A Concise Introduction to Logic*. 10th ed., Thompson/Wadsworth, 2008.
ISBN: 13:978-0-495-50383-5

Course Requirements and Methods of Evaluation:

10-11 quizzes, 10-20 pts each, drop 4 lowest, 3 exams 100 pt each

Note 1:

Informal fallacies are a major part of the critical thinking course offered at CSUN. If this material is covered in this course, it will be a reading assignment only with a single quiz which may be repeated once.

Note 2:

- A) If you drop the class, do so officially or you could receive an F.
- B) You are subject to exclusion if you miss more than 6 hours. Following an absence, find out what you missed.
- C) Late arrival or early departure: sit near the door.
- D) After arriving, do not leave and re-enter class except for emergencies.
- E) **Beepers/cell phones** should be turned off **before** entering class.
- F) Plan on staying without leaving until the class is over.
- G) Please see me first for help or complaints.