

CUYAMACA COLLEGE
COURSE OUTLINE OF RECORD

PHILOSOPHY 130 – LOGIC

3 hours lecture, 3 units

Catalog Description

Study of correct thinking comprising both deductive and inductive inference and principles of scientific method. Application of fundamental principles of logic to practical problems.

Prerequisite

None

Course Content

- 1) Since the purpose of this course is to help students develop the ability to construct and analyze arguments, the majority of time will be spent in doing this. Full use will be made of exercises, both synthetic and experiential. For example, students might be given assignments requiring them to evaluate the reasoning patterns of the editorial pages of newspapers and advertising media.
- 2) More specifically, students will learn that their everyday sentences contain a logical commitment, that a series of sentences may form either a mere juxtaposition or a reasoned sequence, that if they form a reasoned sequence this may be either valid or invalid, and that the conclusion may be either certain or probable. Students will also learn to distinguish problems concerning validity from problems concerning truth.

Course Objectives

Students will be able to:

- 1) Identify and differentiate between inductive and deductive reasoning.
- 2) Identify and describe the correct forms of reasoning for both inductive and deductive arguments.
- 3) Identify and explain fallacious reasoning in both inductive and deductive arguments.
- 4) Formalize ordinary language propositions and arguments into symbolic terms.
- 5) Detect fallacies and evaluate the forms of argument used in newspaper articles, advertisements, scientific articles, etc., as regards to their validity.
- 6) Use the rules of deduction to prove the invalidity of various arguments.

Method of Evaluation

A grading system will be established by the instructor and implemented uniformly. Grades will be based on demonstrated proficiency in subject matter determined by multiple measurements for evaluation, one of which must be essay exams, skills demonstration or, where appropriate, the symbol system.

- 1) Research assignments that measure students' ability to evaluate arguments found in the mass media on the basis of their strength and validity.
- 2) Written assignments that measure students' ability to formulate standard form arguments given ordinary language essays and articles.
- 3) Periodic quizzes that measure students' ability to apply the rules of induction and deduction to a variety of argument forms and determine their strength/validity.
- 4) Exams that measure students' ability to recognize and evaluate argument forms with regard to fallacies and validity.

Special Materials Required of Student

None

Minimum Instructional Facilities

Standard classroom

Method of Instruction

- 1) Lecture and discussion
- 2) Audiovisual, multimedia presentations

Out-of-Class Assignments

- 1) Writing assignments, including essays
- 2) Reading assignments
- 3) Apply terms and theories discussed in class to solve logic problem sets

Texts and References

- 1) Required (representative examples):
 - a. Hurley, Patrick. *A Concise Introduction to Logic*. 14th edition, Cengage, 2024. (available March 2023).
 - b. Copi, Irving and Carl Cohen. *Introduction to Logic*, 14th edition. Prentice Hall, 2010.
- 2) Supplemental: None

Student Learning Outcomes

Upon successful completion of this course, students will be able to:

- 1) Identify and differentiate between inductive and deductive reasoning.
- 2) Identify and explain fallacious reasoning in both inductive and deductive arguments.
- 3) Use the rules of deduction to prove the invalidity of various arguments.