

**College of San Mateo
Official Course Outline**

1. COURSE ID: PHIL 103 TITLE: Critical Thinking

Units: 3.0 units **Hours/Semester:** 48.0-54.0 Lecture hours; and 96.0-108.0 Homework hours

Method of Grading: Letter Grade Only

Recommended Preparation:

Eligibility for ENGL 100, or ENGL 105 and READ 400.

2. COURSE DESIGNATION:

Degree Credit

Transfer credit: CSU; UC

AA/AS Degree Requirements:

CSM - GENERAL EDUCATION REQUIREMENTS: E2c.Communication and Analytical Thinking

CSU GE:

CSU GE Area A: ENGLISH LANGUAGE COMMUNICATION AND CRITICAL THINKING: A3 - Critical Thinking

3. COURSE DESCRIPTIONS:

Catalog Description:

Designed to develop critical thinking. Presents techniques for analyzing arguments used in political rhetoric, advertisements, editorials, scientific claims, and social commentary. Develops the ability to create and refine written arguments. Includes inductive and deductive arguments, the validity and consistency of arguments, the relationship between evidence and conclusions, and the use of arguments in science.

4. STUDENT LEARNING OUTCOME(S) (SLO'S):

Upon successful completion of this course, a student will meet the following outcomes:

1. When presented with an argument, the student is able to assess the soundness of the argument by assessing deductive validity using appropriate deductive techniques (and assessing the truth or epistemic value of the premises using reliable sources of information).
2. When presented with an argument, the student is able to assess the cogency of the argument by assessing inductive strength using appropriate inductive techniques (and assessing the truth or epistemic value of the premises using reliable sources of information).
3. Explain the adequacy of arguments which use casual reasoning.
4. Explain the limits of analogical reasoning.
5. Identify examples of fallacious reasoning.

5. SPECIFIC INSTRUCTIONAL OBJECTIVES:

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

1. Identify and precisely articulate written or oral arguments
2. Compare and contrast valid and invalid argument forms.
3. Distinguish the concepts of consistency and inconsistency.
4. Evaluate the adequacy of evidence used in arguments.
5. Distinguish examples of fallacious reasoning.
6. Analyze the use of emotional, ambiguous and prejudicial language as persuasive tool in arguments.
7. Distinguish inductive from deductive arguments.
8. Use the scientific method to evaluate scientific studies and surveys.
9. Compare and contrast the use of statistics.
10. Criticize arguments of analogy.
11. Evaluate the adequacy of casual arguments.
12. Assess the structure and importance of reason and its interdisciplinary application.

6. COURSE CONTENT:

Lecture Content:

1. The Analysis of Arguments
 - A. Language
 - a. Concepts
 - i. language; a model of reality
 - ii. abstract / concrete

- iii. levels of abstraction
 - iv. the relationship of ideas
 - b. Definitions
 - i. rules for good definitions
 - ii. avoiding ambiguity
 - iii. constructing good definitions
 - iv. kinds of definition
 - v. emotive language
 - c. Propositions
 - i. the sentence as the vehicle of the proposition(s)
 - ii. the grammar of sentences
 - iii. the meaning of the proposition: expressed/asserted
 - d. the relation of belief and knowledge
- 2. Arguments
 - A. Identification
 - a. definition of argument
 - b. argument vs. dispute
 - c. premise and conclusion indicators
 - d. purpose: persuasion, explanation, discovery, recording inferences
 - B. Types of Arguments
 - a. Deductive
 - i. formal and informal
 - ii. degree of certainty of the conclusion
 - b. Inductive/scientific method
 - i. probability: the degree of certainty
 - ii. causal arguments
 - iii. arguments from analogy - questionable analogies
 - iv. generalization based on small or unrepresentative samples
 - v. Mill's method of confirmation
 - C. Location
 - a. political rhetoric
 - b. scientific research
 - c. media
 - d. philosophy
- 3. Argument Analysis
 - A. Formal methodological analysis
 - a. diagramming (venn)
 - b. natural deduction
 - c. truth tables, truth trees
 - d. symbolic logic
 - B. Fallacious reasoning: informal analysis
 - a. Identification of the fallacy
 - b. Articulation of a specific fallacious structure
 - i. subjectivistic: appeal to popularity/majority, appeal to emotion, appeal to force, etc.
 - ii. credibility: appeal to authority, ad hominem, to quoque, etc.
 - iii. logical structure: begging the question, post hoc, false alternative, appeal to ignorance, non sequitur, straw man, etc.
 - c. additional fallacious reasoning based upon ambiguity in language
- 4. Assessing Logical Strength
 - A. Consistency of premises
 - a. what constitutes consistency
 - b. concerns of inconsistency
 - B. Evidence as support
 - a. the criteria of truth for premises
 - b. criteria is external to the argument itself
 - C. Validity
 - a. formal/informal
 - b. internal coherence of the argument
 - c. based upon a proper relation of ideas
 - D. Soundness

- a. validity of structure
 - b. truth of premises
- E. Fidelity and charity
 - a. accurate articulation of another's argument
 - b. fair assessment of the strength of the argument
- F. Critical Thinking
 - a. fallacious reasoning, especially straw man
 - b. incorrect or imprecise definitions
 - c. premises that are clearly false
 - d. lack of proper conceptual relationships
 - e. ineffective or inappropriate example

7. REPRESENTATIVE METHODS OF INSTRUCTION:

Typical methods of instruction may include:

- A. Lecture
- B. Activity
- C. Critique
- D. Discussion
- E. Guest Speakers
- F. Individualized Instruction
- G. Observation and Demonstration
- H. Service Learning
- I. Other (Specify): Methods should include the following: 1. Structured whole-class discussion: 2. Modeling: use models of student and professional writing to introduce, teach and reinforce effective writing and critical thinking strategies 3. Individual instruction: one-on-one, student-teacher conferences focused on writing as process 4. Peer review workshops: students share and critique each other's writing 5. Project-based learning: find ways to have students writing for a larger audience than just the teacher through use of blogs, websites, end of term compendiums or e-portfolios.

8. REPRESENTATIVE ASSIGNMENTS

Representative assignments in this course may include, but are not limited to the following:

Writing Assignments:

Students may also be required to write short essays based upon an argument of their own construction.

The following is a typical major assignment for a critical thinking course:

Compose an argument in Standard Logical Form and write a short essay version of the argument. On the first (cover) page, state your argument in Standard Form and identify its logical structure by abbreviating or symbolizing the statements.

Then express your argument as a short (3 page) essay. Provide evidence in the essay that the premises are true (or at least plausible) by making use of reliable sources of information.

See faculty webpage for rubrics on the evaluation of essays and arguments.

Your argument should be either deductively valid or inductively strong, and it should avoid fallacies. Take into consideration how someone who rejects your conclusion might criticize your argument.

Reading Assignments:

Students will read approximated 300-500 pages of text to learn the concepts, criteria, and techniques of critical thinking.

Other Outside Assignments:

Students will do homework problems and lab work by arrangement to practice the techniques and develop critical thinking skills.

9. REPRESENTATIVE METHODS OF EVALUATION

Representative methods of evaluation may include:

- A. Class Work
- B. Exams/Tests
- C. Group Projects
- D. Homework
- E. Papers
- F. Projects
- G. Quizzes
- H. Written examination

10. **REPRESENTATIVE TEXT(S):**

Possible textbooks include:

- A. Vaughn, Lewis. *The Power of Critical Thinking*, 5 ed. New York: Oxford University Press, 2016
- B. Moore/Parker. *Critical Thinking*, 11 ed. New York: McGraw Hill, 2015

Other:

- A. Critical thinking texts such as
 - David Kelly, *The Art of Reasoning*, Norton, 2014
 - Brooke Moore and Richard Parker, *Critical Thinking*, Mc Graw Hill, 2014
 - Richard Epstein, *Critical Thinking*, Wadsworth, 2005
 - Rosemary Patton and Sheila Cooper. *Writing Logically, Thinking Critically*, 7th ed. Longman, 2011
 - Sylvan Barnet and Hugo Bedau. *Current Issues and Enduring Questions*, 10th ed. Bedford St. Martins, 2014
- B. Examples gathered by the instructor and the class from the media and from texts currently used in various disciplines. Such readings are a perfect place to reflect a sensitivity to cultural diversity.

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Course Originator: Jeremy Ball