

Logic I

Format: Work Text (Digital Available August 2016)

Course Objective

The Logic I course introduces students to the science and art of right thinking or reasoning through the use of informal logic. After a short survey of the contributions of Greek philosophers, students will dive into an extended study of logical fallacies of relevance, presumption, and clarity. Fallacies include ad hominem personal attacks, appeals to fear, red herrings, equivocation, and sweeping generalizations. Students will analyze arguments and everyday conversations in order to identify and counter fallacies. The course concludes with an investigation into the principles of argumentative dialogue and the impact of language and emotions in debate.

Course Prerequisites or Corequisites

- None

Unit 1: Reasoning

- Understand that logic is “right thinking or reasoning.”
- Understand that logic is a wide field involving art, science, and skill.
- Recognize the contribution of Greek philosophers, Socrates and Aristotle, to the establishment of logic as a field of study.
- Understand the importance of logic in a classical education.
- Distinguish the difference between formal logic and informal logic.
- Compare and contrast inductive and deductive reasoning.
- Define fallacy.
- Recognize and analyze fallacious arguments of relevance.
- Recognize and describe ad hominem abusive fallacies.
- Recognize and describe ad hominem circumstantial fallacies.
- Recognize and describe tu quoque fallacies.
- Recognize and describe genetic fallacies.
- Recognize and describe mob appeal fallacies.
- Recognize and understand the subtle difference between an appeal to belief and an appeal to popularity.
- Recognize and describe snob appeal fallacies.

Unit 2: The Contrast

- Recognize, classify, and describe an appeal to fear.
- Recognize and describe the appeal to force as a variation of the appeal to fear.
- Recognize and describe peer pressure as a variation of the appeal to fear.
- Recognize, classify, and describe the appeals to pity and laughter.
- Recognize, classify, and describe the appeals to flattery, ridicule, and spite.
- Recognize, classify, and describe red herrings.
- Understand how irrelevant goals or functions are fallacious.
- Understand how an irrelevant thesis is fallacious.
- Recognize, classify, and describe the appeal to ignorance.
- Recognize and describe the straw man fallacy.
- Understand how accusations of a phobia might be a straw man argument.
- Recognize and describe chronological snobbery.

- Differentiate between the appeal to novelty and the appeal to tradition.
- Recognize and describe appeal to authority fallacies.

Unit 3: The Fallacy

- Understand that fallacies of presumption introduce false assumptions into an argument.
- Understand that fallacies of presupposition are a subcategory of fallacies of presumption.
- Recognize, classify, and describe the four types of fallacies that beg the question.
- Recognize, classify, and describe the fallacy of bifurcation.
- Recognize, classify, and describe the fallacy of moderation.
- Recognize, classify, and describe the fallacy of composition.
- Recognize, classify, and describe the fallacy of division.
- Recognize, classify, and describe the is-ought fallacy.
- Distinguish between the two variants of the fallacy of division.
- Discern the relationship between the fallacies of division and composition.
- Recognize, classify, and describe the fallacy of sweeping generalization (accident).
- Recognize, classify, and describe the fallacy of hasty generalization (converse accident).
- Recognize, classify, and describe the fallacy of expediency and special pleading.
- Define the principle of relevant difference.

Unit 4: The Argument

- Recognize, classify, and describe the fallacy of false analogy.
- Recognize, classify, and describe the fallacy of false cause.
- Distinguish between the four types of false cause.
- Recognize, classify, and describe the fallacy of biased statistics.
- Distinguish between fake precision and biased statistics.
- Understand the pitfalls of ambiguous language in a dialogue.
- Recognize and describe the fallacy of equivocation.
- Recognize and describe the fallacy of accent.
- Recognize and describe fallacies that make a distinction without a difference.
- Understand how euphemism is a form of distinction without a difference.
- Recognize and discern between various styles of argumentative dialogues.
- Demonstrate an understanding of the stages of argumentative dialogue.
- Understand how fallacies present challenges in natural language argumentation.

Unit 5: Aristotle's Influence

- Understand Aristotle's theory of the three modes of persuasion.
- Define ethos, pathos, and logos.
- Understand principles of argumentative dialogue.
- Explain the importance of language in argumentative dialogue.
- Understand the relationship between correlations and causes.
- Understand that determining a cause is complex and may involve multiple factors.
- Recognize barriers to logical thinking.
- Analyze how barriers to logical thinking relate to Aristotle's three modes of persuasion.
- Differentiate the positive and negative aspects of emotion in argumentative dialogue.
- Understand ways that illogical thinking may harm argumentative dialogue.
- Recognize ways that diversionary tactics may harm argumentative dialogue.
- Consolidate understanding of fallacies of relevance.
- Consolidate understanding of fallacies of presumption.

- Consolidate understanding of fallacies of clarity.
- Understand Aristotle's relationship to formal logic.
- Distinguish the difference between categorical and propositional logic.
- Define the three acts of the mind.