



Code	Subject Title	Cr. Hrs	Semester
SOC-102	Logic and Critical Thinking	3	I
Year	Discipline		
1	Sociology & Sociocultural Studies, Political Science		

Introduction

This course is an introduction to the problems and techniques of traditional and modern logic comprising both deductive and inductive inference. The student will learn to distinguish arguments from non-arguments, to identify and avoid common fallacies in reasoning, to test for validity both truth functional arguments and categorical syllogisms, to construct simple formal proofs of validity in truth-functional logic, and to understand the nature of inductive reasoning and its relationship to the sciences.

Objectives

The student will be able to:

1. Employ the basic vocabulary and methodologies of logic.
2. Define and identify arguments and distinguish deductive from inductive arguments.
3. Understand the relation of the concepts of truth, validity and soundness.
4. Understand the concept of logical form and be able to use specific logical forms such as conditionals to test arguments for validity.
5. Identify fallacious reasoning: psychological, material and formal in everyday conversation and popular media forms.
6. Use the concepts of theory construction and evaluation to both construct and evaluate hypotheses reliability relative to assigned problems.

COURSE OUTLINE

1. BASIC CONCEPTS.

Arguments, Premises, and Conclusions. Recognizing Arguments. Deduction and Induction. Validity, Truth

Recommended Text:

Copi, Irving, *M Introduction to logic*, Chapter: 1

2. CATEGORICAL PROPOSITIONS.

The Components of Categorical Propositions. Quality, Quantity, and Distribution. Venn Diagrams Conversion, Obversion, and Contraposition. The Traditional Square of Opposition.

Recommended Text:

Copi, Irving, *M Introduction to logic* Chapter : 5

3. CATEGORICAL SYLLOGISMS.

Standard Form, Mood, and Figure. Venn Diagrams. Rules and Fallacies.. Venn Diagrams and the Traditional Standpoint. Translating Ordinary Language Statements into Categorical Form.



Recommended Text:

Copi, Irving, *M Introduction to logic* Chapter : 6

4. SYMBOLIC LOGIC.

Symbols and Translation. Truth Functions. Truth Tables for Propositions. Truth Tables for Arguments.

Recommended Text:

Copi, Irving, *M Introduction to logic* Chapter : 8

5. LOGIC AND CRITICAL THINKING

What is Controversy, Aims of Critical Thinking, Definitions and Disputes, Uses of Language

Recommended Text:

Copi, Irving, *M Introduction to logic* Chapter: 3

6. INFORMAL FALLACIES.

Fallacies in General. Fallacies of irrelevance.. Fallacies of Presumption, Ambiguity, and Grammatical Analogy.

Recommended Text:

Copi, Irving M. (2001). *Introduction to Logic*. 4th ed. New York: Macmillan.