Programme	BS Information Management	Course Code	LOG-601	Credit Hours	3
Course Title	**Logic and Critical Thinking**				

Course Introduction

This course is designed to develop and sharpen students critical thinking skills. The main thrust will be on analyzing and constructing both inductive and deductive arguments. Critical reasoning will be applied to a variety of situations such as making sound decisions, evaluating claims and assertions and avoiding fallacious reasoning. The course will enable
students to make distinction between correct and incorrect reasoning.

Learning Outcomes

On the completion of the course, the students will:
Emphasis is on improving the skills of thinking and reading critically, analyzing and evaluating points of view, and constructing sound arguments based on relevant evidence.

4. bolster the critical thinking skills in students to expose fallacies and bad reasoning, that they can also be used to support other viewpoints, and to cooperate with others in solving problems and acquiring knowledge.

Course Content

1. Introduction to Critical Thinking

What is Critical Thinking
Basic Concepts of Logical Thinking Argument,
Premises, and Conclusions Recognising arguments
Deduction and Induction
Validity, Truth, Soundness, Strength, Cogency
Argument Forms: Proving Invalidity
Extended Arguments

2. Informal Fallacies

Fallacies in General Fallacies of
Relevance Fallacies of Weak
Induction
Fallacies of Presumption, Ambiguity, and Grammatical Analogy

3. Categorical Propositions

The Components of Categorical Propositions Quality,
Quantity, and Distribution
Venn Diagram and the Modern Square of Opposition Conversion,
Obversion, and Contraposition
Venn Diagram and the traditional Standpoint
Translating Ordinary Language Statements into Logical Forms

4. Categorical Syllogisms

Standard Mood, Form, and Figure

Venn Diagrams Rules and

Fallacies

Reducing the Number of Terms Ordinary

Language Arguments

5. Propositional Logic

Symbols and Translations Truth

Functions

Truth Tables for Propositions Truth

Tables for Arguments

6. Natural Deduction in Propositional Logic

Rules of Implication-I Rules of

Implication-II

7. Induction

Analogy and Its applications Causality and Mill's Methods Hypothetical / Scientific Reasoning

Science and Superstition

Textbooks and Reading Material

1. Textbooks:

Copi, Irving M. 2014. *An Introduction to Logic*. 14th edition. London: Pearson Education

Hurley, Patrick J. 2006. *A Concise Introduction to Logic*. 9th edition. Australia: Thomson / Wadsworth.

2. Suggested Readings:

Grcic, J. 2006. *Logic and Life: An Introduction to Applied Logic and Critical Thinking*. Boston: Pearson Education.

Layman, Charles S. 2000. *The Power of Logic*. London: Mayfield Publishers. Stanley, M. 2001.

Logic and Controversy. London: Wadsworth.

Teaching Learning Strategies

Socratic Teaching Method Use of

Multi-media

Assignments: Types and Number with Calendar

2 zero credit essay types assignments for improving writing skills at different stages of the semester.