**St. Mary’s University**

**Department of Basic Courses**

**Course Outline**

***Course Title:*** *Logic* ***&*** Critical Thinking  
***Course Code:*** LoCT1011  
***Course Cr. Hr:*** Three (3)

**Course Description**

Logic and Critical Thinking is an inquiry that takes arguments as its basic objects of investigation. Logic is concerned with the study of arguments, and it seeks to establish the conditions under which an argument may be considered acceptable or good. Critical thinking is an exercise, a habit, a manner of perception and reasoning that has principles of logic as its fulcrum, and dynamically involves various reasoning skills that ought to be human approach to issues and events of life. To think critically is to examine ideas, evaluate them against what you already know and make decisions about their merit. The aim of logic and critical thinking course is to maintaining an ‘objective’ position. When you think critically, you weigh up all sides of an argument and evaluate its validity, strengths and weaknesses. Thus, critical thinking skills entail actively seeking all sides of an argument evaluating the soundness of the claims asserted and the evidence used to support the claims. This course attempts to introduce the fundamental concepts of logic and methods of logical reasoning.

**Course Objectives**

Ethiopian is striving to guarantee sustainable development and good living condition, where  
constant and consistent critical thinking plays an irreplaceable role.

*At the end of the course, students should be able to:* Understand the relationship of logic and philosophy,  
 Recognize the core areas of philosophy,  
 Appreciate the necessity learning logic and philosophy,  
 Understand basic logical concepts, arguments,  
 Understand deductivness, inductiveness, validity, strength, soundness, and cogency,  
 Develop the skill to construct sound argument and evaluate arguments;  
 Cultivate the habits of critical thinking and develop sensitivity to clear and accurate usage  
of language;  
 Differentiate cognitive meanings from emotive meanings of words,  
 Differentiate standard forms of categorical propositions from other types of sentences  
used in any language,  
 Develop logical and open-mind that weighs ideas and people rationally;  
 Develop confidence when arguing with others,  
 Demonstrate logical argumentative ability,  
 Develop logical reasoning skill in their day to day life, and  
 Appreciate logical reasoning, disproving mob-mentality and avoid social prejudice.  
 Understand the basic concepts and principles of critical thinking.  
 Understand the criterion of good argument.  
 Apply critical thinking principles to real life situation.

**Course Learning Outcomes**

At the completion of the course, the student will have developed an understanding of the role  
logic plays in the reasoning process. Specifically, the students are expected to achieve:  
 The ability to recognize and analyze arguments in everyday language, to detect hidden or  
implicit premises, and to extract the logical form of an argument;  
 The ability to show the deductive validity or invalidity of an argument, to recognize and  
criticize the flaws of a weak argument, and to develop counterarguments;

The ability to evaluate the strength of evidential support for scientific hypotheses,  
especially causal hypotheses, in relatively simple cases; and  
 The ability to present arguments cogently in speech and in writing

**Course Contents**

**Chapter One: Philosophy**

**1.1** Introduction.  
**1.2** Meaning and Definition of philosophy  
**1.3** Core Branches of Philosophy.  
**1.4** Importance of Learning Logic and Philosophy

**Chapter Two: Basic Concepts of Logic**

**2.1** Introduction  
**2.2** Basic Concepts of Logic  
**2.3** Techniques of recognizing arguments.  
**2.4** Types of Arguments  
**2.4.1** Deductive Arguments  
**2.4.2** Inductive Arguments  
**2.5** Evaluation of Arguments  
2.5.1 Evaluating Deductive Argument  
2.5.2 Evaluating Inductive Arguments

**Chapter Three: Logic and Language**

**3.1** Introduction  
**3.2** Logic and Meaning  
**3.2.1** Cognitive and Emotive Meaning of Words  
**3.2.2** Intensional and Extensional Meaning of Terms  
**3.3** Logic and Definition  
**3.3.1** Types and Purposes of Definition  
**3.3.2** Techniques of Definition  
**3.4** Criteria for Lexical Definitions

**Chapter Four: Basic Concepts of Critical Thinking**

4.1. Introduction  
4.2. Meaning and Definition of Critical Thinking.  
4.3. Principles of Critical Thinking.  
4.4. Criterion/Standard of Argument Good Argument.  
4.5. Factors Affecting Critical Thinking.  
4.5. Relevance of Critical Thinking.

**Chapter Five: Logical Reasoning and Fallacies**

**4.1** Induction  
**4.2** Types of Fallacies: Formal and Informal  
**4.3** Categories of Informal Fallacies  
**4.3.1** Fallacies of Relevance  
**4.3.2** Fallacies of Weak Induction  
**4.3.3** Fallacies of Presumption  
**4.3.4** Fallacies of Ambiguity  
**4.3.5** Fallacies of Grammatical Analogy

**Chapter Six: Categorical Propositions**

**5.1** Introduction  
**5.2** Categorical Propositions  
**5.2.1** The Components of Categorical Propositions  
**5.2.2** Attributes of Categorical Propositions: Quality, Quantity, and Distribution  
**5.2.3** Representing Categorical Propositions  
**5.2.3.1** Venn Diagrams  
**5.2.3.2** Boolean and Aristotelian Square of Oppositions  
**5.2.4** Evaluating Immediate Inferences: Venn Diagrams and Square of Oppositions  
**5.2.5** Logical Operations: Conversion, Obversion, and Contraposition

**Teaching Methodologies**

For the successful completion of this course, different *Student-Centered* teaching methodologies  
will be applied. These include:  
 Semi-Lecture, Class Discussion, Self-Reading, and Debate  
**Assessment Methodologie**

**Test.............................................10%** Mid Exam ………………………………………25**%** Assignment …………………………………....... 15**%** Final Exam.………………………………………**50%**

**Readings and Texts**

***Textbook***Hurley, Patrick J. (2014) A Concise Introduction to Logic, 12th Edition, Wadsworth, Cengage  
Learning.

Hurley, Patrick J. (2012) A Concise Introduction to Logic, 11th Edition, Wadsworth, Cengage  
Learning.  
 ***Reference Books***Copi, Irving M.and Carl Cohen, (1990) Introduction to Logic, New York: Macmillan Publishing  
Company.

Damer, Edward. (2005). Attacking faulty reasoning. A practical guide to fallacy free argument. Wadsworth Cengage learning, USA.

Stephen, C.(200) The Power of Logic. London and Toronto: Mayfield Publishing company.

Simico, N.D and G.G James. (1983) Elementary Logic, Belmont, Ca: Wadsworth Publishing Company.

Walelign, Emuru, (2009) Freshman Logic, Addis Ababa.