

Inver Hills Community College

PHIL 1115: Introduction to Logic and Critical Reasoning

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: Goal 02 - Critical Thinking, Goal 04 - Mathematical/Logical Reasoning

Gives students an appreciation of logical concepts and methodology. Examines the basic principles of logic and critical thinking in a natural language context. Emphasis on different kinds of arguments, syllogisms, methods of argument evaluation, and the detection of common fallacies as they arise in contexts such as political debate, advertising, science, law, and ethics.

B. COURSE EFFECTIVE DATES: 07/31/2020 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Identifying arguments and reasoning 10%
2. Fallacies 10%
3. Inductive reasoning: examples of different types 20%
4. Deductive reasoning: examine distinct deductively valid argument forms 20%
5. Predicate Logic 10%
6. Key concepts: validity and soundness 10%
7. Evaluating inductive and deductive reasoning 20%
8. Applying logical toolkit to example(s) of extended arguments 10%

D. LEARNING OUTCOMES (General)

1. Examine the meaning and standards of critical evaluations, the attitudes of a critical thinker, and the hindrances to critical thinking

Analyze arguments from non-arguments and deductive from inductive arguments

Analyze informal fallacies, and the persuasive uses of abuses of language

Analyze and evaluate deductive arguments, noting some common valid and invalid forms

2. Identify validity and soundness, strength and cogency, and examine the basic ways of proving validity

Identify and evaluate inductive reasoning, including common inductive forms such as analogical and causal arguments

Apply the various basic patterns of inference to ordinary discourse and evaluate some extended arguments

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

Goal 02 - Critical Thinking

1. Gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected.
2. Imagine and seek out a variety of possible goals, assumptions, interpretations, or perspectives which can give alternative meanings or solutions to given situations or problems.
3. Analyze the logical connections among the facts, goals, and implicit assumptions relevant to a problem or claim; generate and evaluate implications that follow from them.
4. Recognize and articulate the value assumptions which underlie and affect decisions, interpretations, analyses, and evaluations made by ourselves and others.

Goal 04 - Mathematical/Logical Reasoning

1. Illustrate historical and contemporary applications of mathematical/logical systems.
2. Clearly express mathematical/logical ideas in writing.
3. Explain what constitutes a valid mathematical/logical argument(proof).
4. Apply higher-order problem-solving and/or modeling strategies.

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted