REQUIRED READING


ISBN-10: 1292024828

COURSE OBJECTIVES

This course is an introduction to the basics of logic as an academic discipline. We will consider what logic is. It is the study of the distinction between valid and invalid reasoning. Having established our working attitude to logic we will investigate the basic terms, forms, types, and style of argument and the uses of language in argument. To that end the basic vocabulary of logic and argument must be learned.

Our most extensive analysis will be of deductive logic, that is to say, arguments which produce logically necessary conclusions once their premises are accepted. The standard forms of such arguments will be analyzed, and their accompanying fallacies noted. The symbol systems used to express and analyze these forms will be practiced.

The overall objective of this is two-fold: first, it will inform students of the precise and formal nature of logical proof (and its relative rarity); second, exposure to and practice with arguments and their identification as valid or invalid should greatly sharpen the students' natural skill at validating arguments and constructing their own valid arguments. This last is in many ways the final objective of this course.

So the course objectives can be stated to be:

- To learn what an argument is. What components does it contain, what assumptions does it make?
- To learn what makes a good argument. Why does a given conclusion follow from certain assumptions?
- To learn what makes a bad argument. Why are certain conclusions not entailed by certain propositions?

COURSE REQUIREMENTS

Attendance
Since discussion is required to ensure that each point is fully understood and absorbed attendance is crucial. Missed classes will be penalized.

Learning good logic skills is like learning both language and manual skill--they require practice, both physical and mental. To that end all students will be required to answer questions, solve problems, and do exercises from the textbook in class. Note that these exercises are not graded. All you need to do is to demonstrate to the instructor and to the class that you have made an
effort to complete them. It is your responsibility to raise questions about points which you have not understood. This is your opportunity to seek clarification on difficult passages. You are NOT automatically expected to fully understand everything you read.

IF STUDENTS DO NOT MAKE AN EFFORT TO PERFORM THESE EXERCISES POINTS WILL BE SUBTRACTED FROM THEIR TOTAL.

Readings
The assigned reading and schedule of classes is a guideline designed to cover the required sections of the textbook in the span of the semester. Readings and assignments may be changed according to student performance.

Homework
There will be a certain amount of reading homework after most classes to ensure a constant and ongoing effort to master each section before moving on to the next. This homework will not be handed in and will not be graded as such. It is for your own good rather than for the grading process. However, questions will be asked about the homework at the start of each class, and if it is apparent that you have not done it points will be subtracted. Time will be allowed in class to attempt the exercises but they must be studied beforehand as homework.

GRADING

Grading will be done on a points system up to a maximum of 400 total possible points:

Quizzes (5 @ 40 points) These quizzes are the most important element of the course and are meant to ensure steady effort and ongoing understanding. WARNING: Failure to score a passing grade on any quiz will result in the loss of all point for that quiz. 200 points = c.50%.

Computer exercises. Although these exercises will not be graded for performance 100 points will be given for simply completing them. Up to one quarter of your total grade points can be lost by not doing the required exercises. 100 points = 25%

Final examination This will review the whole course so the start is not forgotten at the end. WARNING: Failure to pass the final is failure to pass the course. 100 points = c.25%
Monday, August 27, 2018

- PHI 102, Practical Logic Begins
  10:30 AM - 11:30 AM
  Class does not meet.
  Online assignment—*acquire the textbook!* and read Chapter One, 1.1 and 1.2.
  Do the Exercises on pages 9-11.

- Online Quiz, Chapter One: Basic Logical Concepts – Available 4:00 PM

  Online quiz, Chapter One: Basic Logical Concepts

  Starts Aug 27, 2018 4:00 PM

Wednesday, August 29, 2018

- Questions on the Assignment.
  Introduction.
  ITL 1.1 - What Logic Is.
  ITL 1.2 - Propositions and Arguments.

Friday, August 31, 2018

- Recognizing Arguments.
  ITL 1.3 - Recognizing Arguments.

  By now, you should be able to do at least some of the first D2L Quiz—Chapter One: Basic Logical Concepts.

  You can also find some relevant computer exercises for week one, [here](#). You are not required to do these but they might be useful, especially since they accompany a different textbook and give a slightly alternate perspective on the material. You can log in using the Course Key: PHI1022018. The relevant sections are:

  3.1 propositions vs. sentences

  3.2 assertion; connectives (if, or, etc.); relative clauses
Monday, September 3, 2018

- **The Structure of Arguments**

  Questions on the Homework.
  ITL 1.4 - Arguments and Explanations.

Wednesday, September 5, 2018

- **The Structure of Arguments**

  ITL 1.5 - Deductive and Inductive Arguments.
  ITL 1.6 - Validity and Truth. Summary of Chapter 1.
  By now you should be able to finish the first D2L quiz.

Friday, September 7, 2018

- **QUIZ ON CHAPTER ONE**

  You should have finished the first D2L quiz by now. The second D2L quiz will be available from 4:00 PM today.

  Required Homework is: Read Chapter Two. Do exercises from 2.1, 2.2, & 2.3.

  The relevant exercises from the other online exercises are:

  Relevant computer exercises for week Two:
  4.1 Arguments (vs. explanations); premises & conclusions
  4.2 Argument diagrams; premises and conclusions
  4.3 Logical strength
  4.4 Deduction vs. induction; validity

- **Chapter Two: Analyzing Arguments – Available 4:00 PM**

  Chapter Two: Analyzing Arguments

  Starts Sep 7, 2018 4:00 PM

Monday, September 10, 2018

- **Analyzing Arguments**

  Questions on the Homework.
  ITL 2.1 - Paraphrasing Arguments.
  ITL 2.2 - Diagramming Arguments.
Wednesday, September 12, 2018

- **Analyzing Arguments**
  
  ITL 2.3 - Complex Argumentative Passages

Friday, September 14, 2018

- **Analyzing Arguments**
  
  ITL 2.4 - Problems in Reasoning.  
  Homework: Read Chapter Three. 
  You should have completed the [second D2L Quiz](#) — Chapter Two: Analyzing Arguments.  
  The third quiz will become available at 4:00 PM.

- **Chapter Three: Language and Definition – Available 4:00 PM**
  
  [Chapter Three: Language and Definition](#) 
  
  Starts Sep 14, 2018 4:00 PM

Monday, September 17, 2018

- **Language and Definitions**
  
  Questions on the homework.  
  ITL 3.1 - Language Functions.  
  ITL 3.2 - Emotive Language, Neutral Language, and Disputes.  
  ITL 3.3 - Disputes and Ambiguity

Wednesday, September 19, 2018

- **Definition**
  
  ITL 3.4 - Definitions and their Uses.  
  ITL 3.5 - The Structure of Definitions: Extension and Intension.  
  ITL 3.6 - Definition by Genus and Difference.

Friday, September 21, 2018

- **QUIZ ON CHAPTERS TWO AND THREE**
  
  You should have completed the [third D2L quiz](#) by now. The [fourth D2L quiz](#) will become available at 4:00 PM.  
  Required Homework: Read Chapter Four on informal fallacies. Practice fallacy recognition.
The Relevant alternative computer exercises for weeks Three and Four are:
1.1 genus & species; concrete & abstract
1.2 Consistent classification; mutually exclusive and jointly exhaustive
1.3 classification diagrams
2.2 genus and species/differentia; faulty definitions
2.3 rules for definition

- **Chapter Four: Fallacies – Available 4:00 PM**

  Chapter Four: Fallacies

  Starts Sep 21, 2018 4:00 PM

**Monday, September 24, 2018**

- **Informal Fallacies**

  ITL 4.1 - What is a Fallacy?
  ITL 4.2 - Classification of Fallacies.

**Wednesday, September 26, 2018**

- **Fallacies, cont.**

  ITL 4.3 - Fallacies of Relevance.

**Friday, September 28, 2018**

- **Fallacies, cont.**

  ITL 4.4 - Fallacies of Defective Induction.
  Work on the D2L quiz #4.

**Monday, October 1, 2018**

- **Fallacies, cont.**

  ITL 4.5 - Fallacies of Presumption.

**Wednesday, October 3, 2018**

- **Fallacies, cont.**

  ITL 4.6 - Fallacies of Ambiguity.
Friday, October 5, 2018

- **QUIZ ON CHAPTER FOUR.**

  You should complete D2L Quiz #4 before the in-class quiz. The D2L Quiz on Chapter Five: Categorical Propositions will become available at 4:00 PM.

  **Required Homework: Read Chapter Five, parts 1-5.**

  Relevant alternative computer exercises for weeks Five and Six are:
  5.1 Fallacies (subjectivism, appeal to majority, appeal to emotion, or appeal to force)
  5.2 fallacies (appeal to authority or ad hominem)
  5.3 fallacies (false alternative, post hoc, hasty generalization, accident, slippery slope, composition, division)
  5.4 fallacies (appeal to ignorance, equivocation, begging the question, or diversion)

- **Chapter Five: Categorical Propositions – Available 4:00 PM**

  Chapter Five: Categorical Propositions

  Starts Oct 5, 2018 4:00 PM

Monday, October 8, 2018

- **Deduction**

  Questions on the Homework.
  ITL 5.1 - The Theory of Deduction.

Wednesday, October 10, 2018

- **Deduction**

  ITL 5.2 - Classes and Categorical Propositions.
  ITL 5.3 - The Four Kinds of Categorical Propositions.

Friday, October 12, 2018

- **Deduction**

  ITL 5.4 - Quality, Quantity, and Distribution.
  ITL 5.5 - The Traditional Square of Opposition.
  Required Homework: Read Chapter Five, part 6-8.
  Relevant alternative computer exercises for week Seven:
  6.1 Subject & Predicate; Logical Standard Form (A, E, I, O); singular/particular propositions
  6.2 Square of Opposition (Trad)
  6.3 Square of Opposition (Modern)
Monday, October 15, 2018

- **Further Immediate Inferences**
  
  ITL 5.6 - Immediate Inferences.
  ITL 5.7 Existential Import and the Interpretation of Categorical Propositions.

Wednesday, October 17, 2018

- **Further Immediate Inferences**
  
  ITL 5.8 Symbolism and Diagrams for Categorical Propositions.

Friday, October 19, 2018

- **QUIZ ON CHAPTER FIVE**
  
  Complete [D2L Quiz#5](#) before the in-class quiz. [D2L Quiz--Chapter Six](#); Categorical Syllogisms will become available at 4:00 PM.
  
  **Required Homework: Read Chapter Six, parts 1 through 3.**

  Relevant alternative computer exercises for week Eight:
  
  6.4 Translation into Standard Form; Venn Diagrams for propositions; consistence
  6.5 Immediate inferences—converse, obverse, contrapositive, subalternate

- **Chapter Six: Categorical Syllogisms – Available 4:00 PM**

  [Chapter Six: Categorical Syllogisms](#)

  Starts Oct 19, 2018 4:00 PM

Monday, October 22, 2018

- **Arguments in Standard Form**

  ITL 6.1 - Standard Form Categorical Syllogisms.

Wednesday, October 24, 2018

- **Standard Form**

  ITL 6.2 - The Formal Nature of Syllogistic Argument and Refutation by Logical Analogy.
Friday, October 26, 2018

- **Venn Diagrams**

  ITL 6.3 - The Venn Diagram Technique for Testing Syllogisms.

  **Required Homework: Read Chapter Six, parts 4 and 5.**
  Learn the rules and fallacies.
  Continue with D2L Quiz #6.
  Relevant [alternative computer exercises](#) for week Nine:
  7.5 Venn Diagrams for Arguments

Wednesday, October 31, 2018

- **Rules and Fallacies in Syllogistic Argument.**

  Questions on the Homework.
  ITL 6.4 - Syllogistic Rules and Syllogistic Fallacies.

Friday, November 2, 2018

- **Syllogistic Argument**

  ITL 6.5 - Exposition of the 15 valid forms of categorical syllogism.

  **Required Homework: Read Chapter Seven, parts 1 - 4.**
  Complete with D2L Quiz #6. D2L Quiz on Chapter Seven: Syllogisms in Ordinary Language becomes available at 4:00 PM.
  Relevant [alternative computer exercises](#) for week Ten:
  7.1 Categorical Syllogisms: Standard form; Mood & Figure
  7.2 Validity
  7.3 Enthymemes
  7.4 Distribution, Rules for Valid Syllogisms

- **Chapter Seven: Syllogisms in Ordinary Language – Available 4:00 PM**

  [Chapter Seven: Syllogisms in Ordinary Language](#)

  Starts Nov 2, 2018 4:00 PM

Monday, November 5, 2018

- **Syllogisms in Ordinary Language.**

  Questions on the Homework.
  ITL 7.1 - Syllogistic Arguments.
  ITL 7.2 - Reducing the number of terms to three.
Wednesday, November 7, 2018

- **Syllogisms in Ordinary Language**
  ITL 7.3 - Translating Categorical Propositions into Standard Form.
  ITL 7.4 - Uniform Translation.
  Complete D2L Quiz #6 & begin #7 before the quiz on Friday.
  Relevant alternative computer exercises:
  8.3 Translation into Standard form (Disjunctive & Hypothetical syllogisms)

Friday, November 9, 2018

- **QUIZ ON CHAPTERS SIX AND SEVEN (parts 1-4)**

  Homework: Read Chapter Seven, parts 5 - 8.

Monday, November 12, 2018

- **Arguments in Ordinary Language.**

  ITL 7.5 - Enthymemes.
  ITL 7.6 - Sorites

Wednesday, November 14, 2018

- **ITL 7.7 - Disjunctive and Hypothetical Syllogisms.**

Friday, November 16, 2018

- **Dilemma**

  ITL 7.8 - The Dilemma.
  Relevant alternative computer exercises for weeks Eleven and Twelve:
  4.5 Implicit premises (enthymemes)
  7.3 Enthymemes
  8.4 Extended arguments (sorites)

Monday, November 19, 2018

- **QUIZ ON CHAPTER SEVEN**

  Required Homework: Read Chapter Eight, parts 1 - 4.
  D2L Quiz—Chapter Eight: Symbolic Logic becomes available at 4:00 PM.

- **Chapter Eight: Symbolic Logic – Available 4:00 PM**

  Chapter Eight: Symbolic Logic Starts Nov 19, 2018 4:00 PM
Monday, November 26, 2018

- **Symbolic Logic.**

  Questions on the Homework.
  ITL 8.2 - The Symbols for Conjunction, Negation, and Disjunction.

Wednesday, November 28, 2018

- **Conditional Statements and Material Implication.**

  ITL 8.3 - Conditional Statements and Material Implication.

Friday, November 30, 2018

- **Argument Forms and Refutation by Logical Analogy.**

  ITL 8.4 - Argument Forms and Refutation by Logical Analogy.
  Required Homework: Read Chapter Eight, parts 5 and 6.
  Relevant alternative computer exercises for weeks Thirteen and Fourteen:
  8.1 Disjunctive Syllogism
  8.2 Hypothetical Syllogism
  9.1 Symbols for arguments
  9.2 Main connectives
  9:A Additional Exercises
  10.3 Inference Forms: Modus Ponens, Modus tollens, hypothetical and disjunctive syllogisms; simplification, addition, conjunction, dilemma. Proofs.

Monday, December 3, 2018

- **Defining and Testing Validity**

  Questions on the Homework.
  ITL 8.5 - The Precise Meaning of Valid and Invalid.
  ITL 8.6 - Testing Argument Validity using Truth Tables.

Wednesday, December 5, 2018

- **Review**

  Review of material since last quiz: Symbolic Logic to Testing Validity using Truth Tables.
Friday, December 7, 2018

- Review
  Review for Final Exam.

Monday, December 10, 2018

- Logic Final Examination
  8:00 AM - 10:30 AM