COURSE INFORMATION

COURSE TITLE
PHI113: Logic: GT-AH3

COURSE DESCRIPTION
Studies effective thinking using language-oriented logic. This course provides tools and develops skills for critical thinking and the formal analysis of arguments. It emphasizes the development of decision-making and problem-solving. This is a statewide Guaranteed Transfer course in the GT-AH3 category.

GT PATHWAYS
The Colorado Commission on Higher Education has approved PHI113 for inclusion in the Guaranteed Transfer (GT) Pathways program in the GT-AH3 category. For transferring students, successful completion with a minimum C– grade guarantees transfer and application of credit in this GT Pathways category. For more information on the GT Pathways program, go to CDHE GT Pathways Information.

- GT-Pathways Required Syllabus

CREDIT HOURS
3

SUGGESTED PREREQUISITE KNOWLEDGE
None

CCCOnline Course Policies
The CCCOnline Course Policies page contains information about the student's role in the classroom, grading policies, and rights and responsibilities.
COURSE MATERIALS

Your textbook is available online as an eText. You do not need to purchase any additional materials. For specific information on refund policies and the optional black and white textbook available for purchase, please contact the CCCOnline bookstore.

MINIMUM COMPUTER REQUIREMENTS

To complete this course, you will need regular access to a computer from which you can get to the internet and use email. In order to ensure that your course functions properly, you must run the System Check. This is a CRITICAL STEP, and taking the time to do it now will eliminate a tremendous amount of frustration for you later. To run the System Check, click Tools in the course NavBar and then click System Check.

REQUIRED eTEXT


This eText and its resources will help you learn the concepts and skills needed to complete the assignments, discussions, and exams in this course. They will also provide you with a good foundation for future philosophy courses.

DIGITAL MATERIALS ACCESS AND SETUP

This course uses Cengage which contains the eText in addition to interactive media content to help you remember what you learn.

- Visit the Cengage Course Start page for details on first access of the materials.

To make sure your computer is set up correctly to access the eText and other digital content, review the Cengage Technical Support page, also linked in the Technical Support Module.
COURSE COMPETENCIES AND OUTCOMES

STUDENT COMPETENCIES

The competencies you will demonstrate in this course are as follows:

A. Identify deductive and inductive arguments.
B. Analyze deductive and inductive arguments.
C. Evaluate deductive and inductive arguments.
D. Identify categorical logic.
E. Analyze categorical logic.
F. Evaluate categorical logic.
G. Identify propositional logic.
H. Analyze propositional logic.
I. Evaluate propositional logic.
J. Identify formal and informal fallacies.
K. Examine formal and informal fallacies.
L. Apply principles of logic to practical problem solving and decision-making.

REQUIRED TOPICAL OUTLINE

I. Basic Logical Concepts
   a. Arguments (M1)
   b. Recognizing arguments (M1)
   c. Deduction (M1, M2, M3)
   d. Induction (M1, M2, M3)
   e. Evaluating arguments (M1, M2, M3)

II. Deduction
   a. Categorical statements (M4)
   b. Categorical arguments (M4)
   c. Symbols and translation (M5)
   d. Propositional arguments (M5)

III. Induction
   a. Analogy and moral reasoning (M3)

IV. Fallacies
   a. Formal Fallacies (M2)
   b. Informal Fallacies (M2)
The module outcomes that will permit you to demonstrate course competencies are:

**Module 1**

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify the premises and conclusions of arguments.</td>
<td>A</td>
</tr>
<tr>
<td>2. Determine whether a written passage contains an argument.</td>
<td>A</td>
</tr>
<tr>
<td>3. Distinguish between necessary and sufficient conditions.</td>
<td>B, C</td>
</tr>
<tr>
<td>4. Describe the factors that make an argument deductive or inductive.</td>
<td>A, B</td>
</tr>
<tr>
<td>5. Analyze the validity, soundness, strength, and cogency of various types of arguments.</td>
<td>A, B, C</td>
</tr>
<tr>
<td>7. Write passages expressing simple and extended arguments.</td>
<td>A, B, C, L</td>
</tr>
</tbody>
</table>

**Module 2**

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Describe types of definitions and their components.</td>
<td>A, L</td>
</tr>
<tr>
<td>2. Rewrite arguments to express claims and assertions without emotive terminology.</td>
<td>A, B, C, L</td>
</tr>
<tr>
<td>3. Explain the techniques used to produce definitions.</td>
<td>L</td>
</tr>
<tr>
<td>4. Identify definitional inadequacies according to the eight rules governing lexical definitions.</td>
<td>L</td>
</tr>
<tr>
<td>5. Describe the differences between formal and informal fallacies.</td>
<td>J</td>
</tr>
<tr>
<td>6. Distinguish among fallacies of relevance, fallacies of weak induction, and fallacies of presumption, ambiguity, or illicit transference.</td>
<td>J</td>
</tr>
<tr>
<td>7. Identify the specific fallacy committed by a given argument.</td>
<td>K</td>
</tr>
<tr>
<td>8. Identify types of fallacies committed by arguments in an ordinary language context.</td>
<td>D, K</td>
</tr>
</tbody>
</table>

**Module 3**

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Compare the strength of various arguments from analogy, according to principles of evaluation.</td>
<td>A, B, C</td>
</tr>
<tr>
<td>2. Describe the role of analogical arguments in legal reasoning.</td>
<td>A, L</td>
</tr>
<tr>
<td>3. Explain how analogies can be useful in moral reasoning.</td>
<td>A, B, L</td>
</tr>
<tr>
<td>4. Explain how hypothetical reasoning is used in ordinary life and in scientific inquiry.</td>
<td>A, B, L</td>
</tr>
<tr>
<td>5. Describe the extent to which empirical and theoretical hypotheses might be proven true.</td>
<td>A, B, C</td>
</tr>
<tr>
<td>6. Identify the four stages of hypothetical reasoning in specific scientific breakthroughs.</td>
<td>A, L</td>
</tr>
<tr>
<td>7. Differentiate between scientific hypotheses and superstitious conjecture.</td>
<td>A, B, C</td>
</tr>
<tr>
<td>8. Describe the factors that contribute to the acceptance of superstitious beliefs.</td>
<td>A, L</td>
</tr>
<tr>
<td>9. Explain how the standards for acceptance of superstitious beliefs differ from standards used in the scientific community.</td>
<td>A, B, C, L</td>
</tr>
</tbody>
</table>
Module 4

Outcomes
1. Give examples of standard-form categorical propositions.
2. Identify the components and attributes of categorical propositions.
3. Describe the quantities and qualities of categorical propositions.
4. Use Venn diagrams to represent specific categorical propositions.
5. Differentiate between the modern square of opposition and the standard square of opposition.
6. Translate statements from ordinary language into standard categorical form.

Competencies
- D
- D
- D, E
- D, E, F, L
- D, E, F
- D, E, F, L

Module 5

Outcomes
1. Translate statements and expressions from English into symbolic terms.
2. Produce truth tables for compound propositions.
3. Produce truth tables for arguments in propositional logic.
4. Use indirect truth tables to test the consistency of propositions.
5. Use indirect truth tables to test the validity of arguments.
6. Identify the form of an argument given in symbolic terms.
7. Use the first four rules of inference to determine the conclusion of an argument.

Competencies
- G
- G, H
- G, H, I
- G, H, I, L
- G, H, I, L
- G, H
- G, H, I, L


**Grading and Evaluation**

**Methods**
Evaluation includes a combination of discussion participation, assignments, and other evaluations. Rubrics are provided for essays and discussions.

**Grading Policies**
Mark all Module due dates on your calendar for this class. You may submit assignments AHEAD of schedule.

**Late Assignment Policy:** Without making arrangements prior to the due date, late essays may be submitted up to two weeks after the due date. A late penalty will be applied. The penalty for submitting late work is 5% off for each day after the assignment is due.

Late essays must be submitted to the relevant assignment folder, and may not be submitted via email. Note that late essays might not be graded until the end of the semester. Note also that no late essays will be accepted during the final week of the course, or after the course has closed, without exception.

Emergencies: In the rare event that you cannot submit a particular assignment due to a true emergency (e.g., a serious medical problem), please contact me in advance of the assignment deadline, so that we can discuss strategies for completing the assignment. Please be prepared to provide concrete documentation of your situation, and please note that emergencies are considered only when they are conveyed to me in advance of the assignment being due.

**Summary of Grading**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussions (10 @ 25 points each)</td>
<td>250</td>
<td>20.5%</td>
</tr>
<tr>
<td>Quizzes (5 @ 100 points each)</td>
<td>500</td>
<td>41%</td>
</tr>
<tr>
<td>Exercises (5 @ 50 points each)</td>
<td>250</td>
<td>20.5%</td>
</tr>
<tr>
<td>Essays (3 @ 75 points each)</td>
<td>225</td>
<td>18%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1225</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**Grading Scale**

A = 90 to 100%  B = 80 to 89%  C = 70 to 79%  D = 60 to 69%  F = 59% and below

**Discussions**

For each module, access the Discussions by clicking on the links found under Course Content. Discussions are where we will hold our "virtual classroom." If you have questions that are of a personal nature rather than of general interest to the
class, then an email is a more appropriate medium. In general, your postings must meet the following criteria:

- The initial post must answer the questions or expand on the topics in the discussion forum instructions.
- If you duplicate the work or responses of another student, you will not earn credit (so please read your fellow students' postings when applicable).
- Please don't use text-messaging language or poor English. Please use appropriate capitalization, minimal use of acronyms, correct spelling, correct grammar and appropriate punctuation. Do not leave CAPS on when typing. It is hard to read and is considered yelling in blogs and discussion forums.
- Please see information in each unit’s individual discussion forum under the discussion link for details about what is expected to receive course credit.
- Be respectful of other's views and posts. For more information on rules of courtesy, please view the CCCOnline's Mutual Respect Policy.
- If asked to find information and present it, cite the information using MLA format.

**QUizzes**

You will take a quiz at the end of each Module. Each quiz consists of 25 multiple-choice questions that will test your understanding of the concepts covered in the Module.

**Exercises**

Each Module includes a 50-question Graded Exercise that will help you prepare for the Module quiz. Before you complete the Graded Exercise, you will have the option to complete two similar Practice Exercises for additional preparation. Although the Practice Exercises will not be graded, it is highly recommended that you complete them both before doing the Graded Exercise or taking the Quiz.

**Essays**

You will write three essays during this course. These essays will require you to demonstrate the ability to think critically and write clearly about the concepts covered in the course.
# COURSE SCHEDULE

The Schedule is subject to change as needed.

This page summarizes all of the graded assignments, discussions, quizzes, and reading assignments for the course. If you want, you can print it out and post it somewhere handy.

All assignments are described in detail on the Module Assignment pages. If you have questions check there and/or send me an e-mail.

**This course is not self-paced and is not open-exit.** All assignments, quizzes, discussions, etc., are to be completed by no later than 11:59 pm MST/MDT of the due date.

**NOTE:** Important CCCOnline semester dates (e.g., drop/withdraw/term end) appear on the [CCCOnline calendar](#).

## MODULE 1

<table>
<thead>
<tr>
<th>Reading/Assignments/Exams</th>
<th>Due Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1 Discussion 1: Introductions</td>
<td>Initial post:</td>
</tr>
<tr>
<td>Peer response:</td>
<td></td>
</tr>
<tr>
<td>Read Chapter 1 and Exploration</td>
<td>Before posting M1</td>
</tr>
<tr>
<td>Discussion 2</td>
<td></td>
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<tr>
<td>M1 Discussion 2: Arguments in Politics</td>
<td>Initial post:</td>
</tr>
<tr>
<td>Peer response:</td>
<td></td>
</tr>
<tr>
<td>M1 Graded Exercise</td>
<td>Initial post:</td>
</tr>
<tr>
<td>M1 Discussion 3: Persuasive Arguments</td>
<td></td>
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<tr>
<td>Peer response:</td>
<td></td>
</tr>
<tr>
<td>M1 Quiz</td>
<td></td>
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<tr>
<td>M1 Essay: Writing Basic Arguments</td>
<td></td>
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</tbody>
</table>

## MODULE 2

<table>
<thead>
<tr>
<th>Reading/Assignments/Exams</th>
<th>Due Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read Chapters 2 and 3, and Exploration</td>
<td>Before posting M1</td>
</tr>
<tr>
<td>Discussion 1</td>
<td>Initial post:</td>
</tr>
<tr>
<td>M2 Discussion 1: The Role of Definitions</td>
<td></td>
</tr>
<tr>
<td>Peer response:</td>
<td></td>
</tr>
<tr>
<td>M2 Graded Assignment</td>
<td>Initial post:</td>
</tr>
<tr>
<td>M2 Discussion 2: Fallacies in Advertising</td>
<td></td>
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<tr>
<td>Peer response:</td>
<td></td>
</tr>
<tr>
<td>M2 Quiz</td>
<td></td>
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<tr>
<td>M2 Essay: Analyzing Arguments in Letters to the Editor</td>
<td></td>
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</tbody>
</table>
**MODULE 3**

**Reading/Assignments/Exams**
Read Chapters 9, 13, and 14, and Exploration
Discussion 1
M3 Discussion 1: Thomson's Analogy
Peer response:
M3 Graded Exercise
M3 Discussion 2: Pseudoscientific Claims
Peer response:
M3 Quiz
M3 Essay: Analyzing Analogical or Hypothetical Reasoning

**Due Dates**
Before posting M1
Initial post:

**MODULE 4**

**Reading/Assignments/Exams**
Read Chapter 4, and Exploration
Discussion 1
M4 Discussion 1: Categorical Propositions
Peer response (argument):
Peer response (eval):
M4 Graded Exercise
M4 Discussion 2: Non-Standard Propositions
Peer response:
M4 Quiz

**Due Dates**
Before posting M1
Initial post:

**MODULE 5**

**Reading/Assignments/Exams**
Read Chapters 6 and 7.1, and Exploration
Discussion 1
M5 Discussion 1: Propositional Logic Argument Analysis
Peer response:
M5 Graded Exercise
M5 Discussion 2: Find Your Own Letter to the Editor
Peer response:
M5 Quiz

**Due Dates**
Before posting M1
Initial post:

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