



**Critical Thinking**  
FALL 2011

PHIL 119  
MWF 1:10-2:10

Professor Diane Michelfelder  
Office: MAIN 110  
Office hours: Friday 9:30-11:30  
and by appointment  
Phone: 696-6197  
E-mail: [michelfelder@macalester.edu](mailto:michelfelder@macalester.edu)

**Course Description**

Everyday life displays a rich dynamics within which we try to think things through to logical conclusions; distinguish between solid arguments on the one hand and stupid ones on the other; determine the value of claims, often for competing goods, that others are presenting and make efforts to figure out what to believe or not to believe based on the evidence that is given; gauge the probability of whether something might or might not occur; and thoughtfully construct arguments to present to others in a variety of conversational situations. The purpose of this course is to make you more skilled in these kinds of everyday reasoning. Part of the course will be focused on understanding the logical structures of the different types of arguments—for instance, arguments that involve statistical generalizations or ones where we reason to the best explanation-- that we frequently employ in the course of everyday life. We will

cover common missteps that people often make in everyday reasoning, including missteps that people make in making judgments based on probability, so that you will be able to better recognize these when you see them and to avoid making them yourselves. We will look at some principles of probability and how these might be used in making good judgments in situations of uncertainty where risks need to be calculated as best as possible. The course will also involve in class group work that will help develop your skills in evaluating and making arguments. Toward the end of the course, we will take a step back and take a critical look at some aspects of critical thinking itself. To put it as succinctly as possible, the overall purpose of this course is to narrow the gap in your own life between thinking and critical thinking so that the more thinking you do, the more critical your processes of reflection become.

## **Learning goals**

Because the aim of critical thinking is to deepen your skills at everyday kinds of reasoning, the primary learning goals for this course are focused on expanding your capabilities for:

- Understanding the logical structures of the primary classes of arguments used in the everyday contexts of life;
- Analyzing arguments within these classes for their strengths and weaknesses;
- Recognizing common fallacies in reasoning, including reasoning involving determining probabilities;
- Constructing good arguments using principles of informal reasoning;
- Reflecting on your own thinking practices; and
- Listening to the arguments of others without prejudging these arguments in advance.

## **Required Text**

Walter Sinnott Armstrong and Robert Fogelin, *Understanding Arguments: An Introduction to Informal Logic*. 8<sup>th</sup> Ed. Wadsworth Cengage Learning.

## **Academic Integrity**

In this class, we will strive to have an environment geared as best as possible toward facilitating individual learning and one which models best scholarly practices. Please know that in reviewing your work, I will adhere to the College's *Academic Integrity Policy* as published in the *Student Handbook*.

Through the gift of your attention, you not only offer yourself more opportunities to be involved in class discussion, but you also help support the integrity of the learning environment. For your own sake and that of your fellow students, kindly

take your phone off the “ring” setting while in class and please refrain from texting, tweeting, googling, and the like.

## **Coursework**

This course will involve homework assignments, quizzes, and three short writing assignments, one of which will involve you publicly “posting” an argument, in addition to your participation in class discussions.

There will be a total of 9 homework assignments for this course. In general, homework will be assigned in class on Friday, due on Monday, and returned on Wednesday. Each homework assignment will be worth 10 points. While you will be expected to turn in all of these assignments, you may choose to drop the one on which you got the lowest mark.

In addition, there will be quizzes during weeks 3, 6, 11, and 14; and three writing assignments, one due in the 5<sup>th</sup> week, one due in the 8<sup>th</sup> week, and the other at the time of our final exam. For the first writing assignment, you will be asked to analyze the results of some recent internet-related studies from the point of view of sampling biases. A set of studies from which to choose will be provided in class. For the second writing assignment, you will be asked to publicly respond to a publicly-made argument by means of a blog post, letter to the editor, etc. and to reflect on the construction of your argument. For the third writing assignment, you will be asked to evaluate a “live” argument as well as some of the comments that follow it that appears on a blog, paying particular attention to the kinds of reasoning and possible fallacies involved in the chain of reasoning; in addition, you’ll be asked to construct what you might say if you were the next person to post a comment. You will be giving a set of blog options which you can use in responding to this assignment. More information about each of these assignments will follow in class.

You will also be responsible for taking an active role in the class by participating in discussions; attending class will factor into your class participation grade only insofar as it is not possible for you to participate in class if you do not show up.

## **Coursework evaluation**

Your final grade for this class will be based on the following percentages:

Homework assignments:	15%
Quizzes:	40%
First writing assignment:	10%
Second writing assignment	10%
Third writing assignment	15%
Class participation	10%

## **Class Schedule**

**This schedule may change at the discretion of the instructor; any changes will be announced in class and also e-mailed. All reading assignments are from the Armstrong & Fogelin text unless otherwise indicated. You should**

**do the reading for the day on which it is assigned before coming to class. Due dates for the homework and writing assignments are indicated in yellow; quiz dates are indicated in green.**

### **Week One**

Wednesday, 7 September      Welcome and orientation to the course

Friday, 9 September      Arguments, justifications, and explanations  
**Reading: Chapter 1, pp.1-13**

### **Week Two**

Monday, 12 September      Recognizing arguments  
**Reading: Chapter 3, pp.51-56**  
**Homework #1**

Wednesday, 14 September      Standards for evaluating arguments  
**Reading: Chapter 3, pp.57-73**

Friday, 16 September      Practice in analyzing arguments  
**Reading: Chapter 4, pp.77-90**

### **Week Three**

Monday, 19 September      Propositional logic and truth-functional connectives  
**Reading: Chapter 6, pp.141-156**  
**Homework #2**

Wednesday, 21 September      Testing for validity  
**Reading: Chapter 6, pp.156-162**  
**Philosophy Department Picnic, 4:30, south side of Old Main—everyone invited!!**

Friday, 23 September      Conditionals  
**Reading: Chapter 6, pp.162-169;172-173**  
**Quiz #1**

### **Week Four**

Monday, 26 September      Inductive reasoning  
An overview of the basic forms of inductive arguments  
**Reading: Chapter 8, pp.215-218**

Wednesday, 28 September      What are we looking for in a good statistical argument?  
The variety of sampling techniques  
**Reading: Chapter 8, pp.219-222; also from Rainbolt**

**and Dwyer, class handout**

Friday, 30 September

Bias in statistical arguments  
Practice in evaluating statistical arguments  
**Reading: Chapter 8, pp.222-224**  
**Homework #3**

**Week Five**

Monday, 3 October

The nature of causal reasoning  
Putting causal arguments into standard form  
**Reading: Chapter 9, pp.231-234**

Wednesday, 5 October

Techniques for evaluating causal arguments  
**Reading: Chapter 9, pp.236-243**  
**First Writing Assignment Due**

Friday, 7 October

Practice in evaluating causal arguments  
**Reading: Chapter 9, pp.245-253**  
**Homework #4**

**Week Six**

Monday, 10 October

Abductive reasoning and inference to the best explanation  
**Reading: Chapter 10, pp.257-263**

Wednesday, 12 October

TBA—I will be out of town at a conference

Friday, 14 October

**Quiz #2**

**Week Seven**

Monday, 17 October

Arguments from analogy  
**Reading: Chapter 10, pp.267-271**

Wednesday, 19 October

Constructing analogical arguments

Friday, 21 October

Evaluating analogical arguments  
**Reading: Rainbolt & Dwyer, pp.244-251, to be distributed in class**  
**Homework #5**

**Week Eight**

Monday, 24 October

Probability and its common fallacies  
**Reading: Chapter 11, pp.277-281**

Wednesday, 26 October

Coin flips and the “Monty Hall” problem  
**Reading: Lawrence Dworsky, *Probably Not*, Chapter One, to be distributed in class**

## Second Writing Assignment Due

Friday, 28 October

Fall Break—no class meeting

### Week Nine

Monday, 31 October

Rules of probability and Bayes' theorem

**Reading: Chapter 11, pp.285-297**

Wednesday, 2 November

Calculating probability

**Reading: Chapter 11, pp.297-302**

Friday, 4 November

Separating good bets from bad

**Reading: Chapter 12, pp.303-308**

Homework #6

### Week Ten

Monday, 7 November

Strategies for coping with games of ignorance

Pascal's wager

**Reading: Chapter 12, pp.308-309; 312-313**

Wednesday, 9 November

Fallacies of vagueness

**Reading: Chapter 13, pp.317-332**

Friday, 11 November

Practice in recognizing slippery-slope and other fallacies of vagueness

Homework #7

### Week Eleven

Monday, 14 November

Fallacies of ambiguity

**Reading: Chapter 14, pp.333-351**

Wednesday, 16 November

Practice in recognizing fallacies of ambiguity

Thursday, 17 November

Philosophy Café in celebration of World Philosophy Day! Come for food and conversation; 4<sup>th</sup> floor Old Main starting at 4:30 pm

Friday, 18 November

Quiz #3

### Week Twelve

Monday, 21 November

Fallacies of relevance and vacuity (eg circular reasoning)

**Reading: Chapters 15 & 16, pp.353-380**

Wednesday, 23 November

Practice in identifying fallacies of relevance and vacuity; separating legitimate from illegitimate appeals to authority

Homework #8

Friday, 25 November

Thanksgiving Holiday—no class meeting

**Week Thirteen**

Monday, 28 November

The nature of refutation

**Reading: Chapter 17, pp.381-388**

Wednesday, 30 November

Practice in evaluating reductio ad absurdum arguments

Friday, 2 December

Do new communication technologies create new informal fallacies?

Homework #9

**Week Fourteen**

Monday, 5 December

Informal fallacies and culture

**Reading:** Luciano Floridi, “Logical Fallacies as Informational Shortcuts,” to be distributed in class

Wednesday, 7 December

Quiz #4

Friday, 9 December

No class meeting—Senior Philosophy (Capstone Presentation) Day in the Campus Center---you are welcome to attend

**Week Fifteen**

Monday, 12 December

End-of-semester course wrap-up

Friday, 16 December

**Third writing assignment due**

Your assignment may be turned in to me in my office during our final exam time, 1:30 to 3:30 pm