Critical Thinking
PHIL 119
FALL 2011
MWF 1:10-2:10

Professor Diane Michelfelder
Office: MAIN 110
Office hours: Friday 9:30-11:30
and by appointment
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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


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 5th week, one due in the 8th 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:

<table>
<thead>
<tr>
<th>Assignment Type</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Homework assignments</td>
<td>15%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>40%</td>
</tr>
<tr>
<td>First writing assignment</td>
<td>10%</td>
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<tr>
<td>Second writing assignment</td>
<td>10%</td>
</tr>
<tr>
<td>Third writing assignment</td>
<td>15%</td>
</tr>
<tr>
<td>Class participation</td>
<td>10%</td>
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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**

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<th>Date</th>
<th>Activity</th>
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<tr>
<td>Wednesday, 7 Sept</td>
<td>Welcome and orientation to the course</td>
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| Friday, 9 Sept     | Arguments, justifications, and explanations  
**Reading:** Chapter 1, pp.1-13 |

**Week Two**

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<th>Activity</th>
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| Monday, 12 Sept    | Recognizing arguments  
**Reading:** Chapter 3, pp.51-56  
**Homework #1** |
| Wednesday, 14 Sept | Standards for evaluating arguments  
**Reading:** Chapter 3, pp.57-73 |
| Friday, 16 Sept    | Practice in analyzing arguments  
**Reading:** Chapter 4, pp.77-90 |

**Week Three**

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<th>Activity</th>
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| Monday, 19 Sept    | Propositional logic and truth-functional connectives  
**Reading:** Chapter 6, pp.141-156  
**Homework #2** |
| Wednesday, 21 Sept | Testing for validity  
**Reading:** Chapter 6, pp.156-162 |
| Friday, 23 Sept    | Conditionals  
**Reading:** Chapter 6, pp.162-169;172-173  
**Quiz #1** |

**Week Four**

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<th>Date</th>
<th>Activity</th>
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| Monday, 26 Sept    | Inductive reasoning  
An overview of the basic forms of inductive arguments  
**Reading:** Chapter 8, pp.215-218 |
| Wednesday, 28 Sept | What are we looking for in a good statistical argument?  
The variety of sampling techniques  
**Reading:** Chapter 8, pp.219-222; also from Rainbolt |
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, 4th 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