PHIL 107: Logic and Reasoning

Syllabus

Winter 2006:
Instructor: Dr. Ashley McDowell
Office: 202 Humphrey House
Office phone: 337-7077
email: mcadowell@kzoo.edu or ashley.mcadowell@gmail.com
Office Hours: Mondays and Wednesdays 12:45 – 1:45 in the Beaner’s Café in the Library;
Tuesdays and Fridays 1:30 – 2:30 in my office, Humphrey House 202;
and by appointment

Coffee Hour:
Even week Mondays after class – 11:45 – 12:45 (these are non-required, informal
discussion sessions with me and others in the class, about course material and related
topics) at the Beaner’s Café in the Library

Texts:
Howard Kahane and Nancy Cavender, *Logic and Contemporary Rhetoric: The Use of Reason in
Everyday Life, 10th edition*

Note on Moodle:
this course website will include lots of information – go to
http://www.kzoo.edu/8080/moodle/ and find our course, and get yourself logged on.

Note on email:
I will be sending mail to the class alias, which only knows your K email address. Make
sure your K email is forwarded to whatever email account you use regularly, if it’s
something else.

Description:
This course has two complementary components: an introduction to formal logic, and a study of ways to
reason better. These are two ways to approach the subject of **thinking well**.

Formal logic is the art of converting arguments into symbolic notation, in order to determine the strength
and soundness of support for conclusions. To learn logic one must learn the symbols, argument constructions, and
ways to distinguish good from bad logical form. This involves working through arguments and proofs in a
systematic way. To learn to do this, you will be doing a substantial number of homework problems. The text we
are using comes with “Logic Coach” software that allows you to work through the problems on your computer,
accessing help files and getting feedback as you do so.

To learn reasoning and critical thinking, one must learn to pay attention to the structure and strength of
reasons for conclusions. We will study “informal fallacies,” the pitfalls of poor reasoning. We will study the best
ways to construct arguments, as well as to evaluate them.

Assignments in this course will almost all be in the form of “objective” homework, quizzes, and tests. It is
probably not an understatement to say, however, that those who conscientiously absorb the lessons of this course
will forever write better papers, construct better arguments, and, in general, become better thinkers.

Class Format:
This class will consist largely of lecture and working through problems. Participation is expected by all members of
the class, and you may be called on frequently. I may sometimes have you break up into pairs or groups to work on
an in-class assignment or discussion. Since philosophical learning is best done in an environment of discussion,
attendance and participation are expected.

You will be responsible for completing the readings and assignments before each class, and being prepared
to discuss those readings and assignments. You should be aware that some of the material in this course most likely
will be quite challenging for you. Give yourself plenty of time to do these readings and assignments carefully. **You
must bring with you to class whatever text(s) we are working on for that day**, and any questions you had about the homework.

1 This is a long syllabus – my tendency is to put as much helpful material in writing as I can. I’d like you to read it
all, but I’ve marked especially crucial material with a line in the left margin, for quick reference.
In this class, we will be learning about logical constructions without examining in depth the arguments and proofs for their legitimacy. Thus there will usually be fact of the matter about whether an answer or interpretation is correct. We will not merely be exchanging opinions, but will be seeking the truth. In that spirit, everyone’s contributions will be both respected and open to correction or dissenion. Be careful not to take it personally if an answer or idea that you put forward is criticized; this is helpful if what we’re after is really solving the problems and gaining logical and critical thinking skills.

What you can learn about and gain from this course:

Unless you have plans to become a professional philosopher, which I expect few of you do, the most important things you will gain from this course will not be detailed retention of specific philosophical positions. Rather, you should hope and strive to gain abilities in three main areas:

- **Theoretical learning**, like appreciation of issues in logic and critical reasoning and their importance; and the ability to recognize logical and critical thinking problems and considerations in many contexts.
- **Practical learning**, like the ability to recognize fallacious reasoning, logical errors, and critical thinking pitfalls in everyday contexts like politics, advertising, media, and personal discussions; and the ability to use tools to improve your own critical thinking and the logical structure of your reasoning.
- **Philosophical methodology**, with skills falling into three main sub-areas, as follows.

  - **First, Critical thinking and problem solving**, like extracting the main points from difficult material, following and reconstructing arguments, and thinking questions through.
  - **Second, Communication**, such as learning to express yourself clearly, systematically, and persuasively, and to make decisions and then justify your position in a clear, logical, and compelling way.
  - **Third, Creativity, research, and investigation**, like gaining proficiency at conducting investigations - learning to ask the right questions, and to develop and assess methods and standards for answering those questions; and solving problems using careful but innovative techniques and basing your conclusions on reliable evidence.

What I expect you to achieve:

In some ways, this class will resemble a math course; in others, a self-help seminar; and in other ways, a course on how to be a more effective participant in our “richly diverse and increasingly complex world.” You’ll become good at formal logic, which is kind of like doing puzzles or learning a game, except that the rules of the game and the solutions to the puzzles apply to real-world arguments and reasoning structures. You’ll learn about fallacies in reasoning, how to recognize and avoid them. You’ll learn how critical reasoning and logic apply to subjects and communications all around us, and how it can help you clarify what’s being said and decide for yourself with a firm foundation.

Course Requirements and Grading Scheme

**Homework on Moodle and to turn in: 35%**

You’ll be doing homework for nearly every class meeting, as you would for a math class, for instance. The homework exercises will mostly come from the textbooks or the CD-ROM; some may be exercises you’ll do on the online Moodle course site. I may not correct all of your homework; for some assignments, I may simply check to see that you tried the exercises; for others, I will assign a grade but not record the correct answers; for others, I may both grade and correct your assignments. It is up to you to have me go over any homework problems you did not understand, want clarified, or simply want to know the correct answer to. We can do this in class or in meetings.

**Assignment responsibilities:**

Any assignments that are to be turned in outside of the Moodle site must be turned in as hard (paper) copies – no emailed assignments will be accepted except by special permission. It is your responsibility to retain copies of all assignments you turn in, in a reliable format. An assignment that is between one hour and 24 hours late will receive a 1/2 grade reduction. An assignment that is between one day and two weeks late will receive a full grade reduction. Assignments will not be accepted more than two weeks late.

You will be permitted one “freebie”: an assignment turned in as much as two days late, no questions asked, as long as you let me know you’re taking your freebie. Be mindful not to use it lightly. In this class, it’s important to keep up with the exercises, so be careful not to let yourself get behind at a crucial time.
A note on changing grades: if you feel you have been assigned a grade unfairly or inaccurately, you should by all means talk to me about it. My only requirement is that you prepare an argument (a set of reasons and facts) before you do so.

Exam on fallacious reasoning and introductory material: 25%
There will be an in-class exam on the material presented in weeks 1-4. The exam is currently scheduled for Monday of Week 5 (Jan 30), although it is possible that the date will change if our progress is substantially different from the current plan. This exam will consist of problems of the sort in these sections of your textbooks.

Week 10 group presentation: 10%
In the final week, you will do group presentations in groups of three people. There will be 10 presentations altogether, on assigned topics drawn from Chapters 10-12 of the Kahane & Cavender textbook (on advertising, the news, and textbooks). I will provide a sign-up sheet for you to choose your preferred topic; if more than three people choose a topic, I'll randomly select three and have the others choose another topic. Presentations should be prepared well ahead of time, including reading the relevant chapter (which everyone will do anyway) and meeting as a group at least twice: first to plan your presentation and allocate tasks, and later to put it all together and practice to make sure the presentation fits the time allotted (20 minutes for each presentation). See the end of this syllabus for a list of the topics you'll be choosing from.

These presentations will function to help you explore an issue to which logic and critical thinking crucially apply more in-depth and more independently. Presenting your thoughts to the class will let you have the experience of constructing a thought process that is coherent and engaging, and really applying the tools you've picked up throughout the quarter.

Group members will evaluate their own and each other's performance on the following dimensions: organization, acceptance of responsibility, initiative/motivation, creativity, task completion, attendance and participation, collaboration, attitude, independence, and communication. I will evaluate the presentations based on the following dimensions: appropriate incorporation of reading material or outside information (if warranted); breadth and depth (didn't try to do too much or too little); quality of use of course concepts; clarity; quality of presentation of arguments; helpfulness of examples or illustrations (if any); overall mastery of the subject; cooperation among team members; engagingness of presentation/success in getting the “audience” on board; organization; effectiveness; thoroughness; (appropriate) creativity or imagination; and division of labor.

Final exam (30%):
The final exam will be on everything covered after the first exam, including propositional logic and Kahane and Cavender Chs. 6-12. The exam will cover the material discussed in the presentations, as well. The exam will be a set of exercises like those in the chapters from this section of the course.

Participation and conduct:
These dimensions do not carry a specific weight in the grading scheme for this class, but will be considered seriously at final grade time if you are at the borderline between two grades.

Participation is expected, and I will be calling on people frequently. In a philosophy class of this kind, everyone taking part in the discussion and exercise of the problems is best. I know that participation is difficult for some people, but you can consider this a safe place to practice contributing to a group discussion, which you will surely need to do throughout your life. The rules for classroom civility and discourse (see below) will help make this an inviting place to contribute your voice.

I will keep general track of your contributions in class. Keep in mind that contributions can take various forms, including asking for clarification, participation in group work, and giving helpful examples. Keep in mind also that more does not necessarily mean better: those who excessively dominate class time, speak disrespectfully, or otherwise use their voices in a negative way may be penalized for doing so. If you are in doubt, or if you are interested in advice about how to participate more effectively or more easily, ask me.

Your conduct in this class includes improvement and effort. It also includes issues of respectful behavior, such as tardiness, distracting behavior, or disrespectful behavior towards members of the class. See below for more information.

Attendance:
Attendance is expected: three or more unexcused absences will result in a full grade reduction for the course. Absences will only be excused for required sports activities or for a dire personal circumstance.
Rules of civility and discourse:
In this course, you will be expected to behave like what I'm sure you are – a civil person interested in entering into an atmosphere that is maintained to be courteous and respectful. Just so that my expectations are clear, let me express some specific guidelines. In order to create a smooth and harmonious learning community,

- take care not to disrupt class; please
  - wait until class is over to pack up
  - turn off cell phones
  - do not look at any material other than class material
  - stay awake during class
  - arrive on time
    - if you must arrive late, please take a seat quietly near the door, and see me after class to record your lateness, so I do not record you absent.
- to allow everyone to stay focused on the class lecture or discussion,
  - only one person at a time in the class should be speaking. Side conversations are distracting for surrounding students and for me.
- to ensure the best possible environment for discussion, please
  - no "hogging the floor"
  - no blaming or shaming
  - no personal attacks
  - always respect the confidentiality of the classroom
  - keep your contributions aimed at our common goals: discovery, progress, and learning, not winning, making the "other side" look bad, or getting attention.
    - If you violate one of these discussion rules, I will likely point it out to you in class or afterwards.
    - If you think someone else is violating one of these discussion rules, I encourage you to raise the issue (without blaming, shaming, or personal attack!)

Academic integrity and the Honor System

"It is always important to think of the intellectual world as a community of mutual dependence, mutual helpfulness, mutual protectiveness, and common delight. We take ideas from others and we give them to others. We are indebted to others, and others are indebted to us. In sharing and acknowledging the community, we define ourselves more certainly as individuals. The ability to describe our sources is also an ability to define our own originality and our own selves. All communities depend on generosity, trust, definition, and the proper use of sources is part of the mortar that holds the community of the mind together."

- Richard Marius, Expository Writing Program, Harvard University

In this class, as in all classes at Kalamazoo College, we will be operating under the Honor System. It is important that you familiarize yourself with that system. You should also familiarize yourself with proper procedures for collaborating, doing research, and citing sources. I expect each of you to visit my webpage and read the essay there called "Plagiarism and How to Avoid It" (http://kzoo.edu/~molowell/Academic_integrity_and_plagiarism.htm). Should you have any questions about citations, plagiarism, or honor system issues, please visit or contact me.

Any assignment you turn in that I find to violate academic integrity, either through dishonesty, plagiarism, lack of appropriate citations, or unauthorized collaboration, will receive a grade of 0. Any further instance of a violation of academic integrity will be punished by a failing grade in the class as a minimum sanction.²

Special needs
If you have any special needs that I can accommodate, please let me know as soon as possible.

Office hours
My office hours are posted above. They will be conducted on a first-come, first-served basis, and by appointment, with appointments taking precedence. You should feel absolutely free to come to them and discuss the course, the material, the assignments, or philosophy.

² I owe some of the phrasing in this statement to Prof. Vaughn Maatman
I request that each of you take a few minutes to visit me during my office hours sometime in the first week or two of classes. It will be an opportunity for us to chat one-on-one for the first time, and to get to know each other a bit more.

**A note on reading:** don't succumb to the misconception that in order to read something you only have to move your eyes over the lines, or "read it out loud in your head," so to speak. What I expect is that you will read the material in a more sophisticated way, thinking as you go. You should be asking yourself the main points, making sure you understand the structure of the reading, thinking about how this reading relates to others you've done, and otherwise working to **comprehend** the material, not just to complete a technical "reading" of it. You might try highlighting, underlining, making margin notes, or outlining — whatever helps you focus and understand.

**A note on the exercises:** although I'll only be assigning select exercises, I highly recommend that you do more than I assign. This material is most helpful if it is as automatic as possible, so the more you practice it, the better your reasoning and critical thinking will be from now on. More pragmatically, this is the best way to get a good grade in the class.

**Some class tips:**
- **talk to other people about what you're studying.**
  Organize a study group; go to coffee hours; corral your roommate and make him or her hang out and talk some philosophy with you. Doing philosophy out loud helps you learn it much better.
- **make good notes.**
  Not just in class, which is essential, but it can also help to take notes on what you read. If you're having to sum up what you've read in a few phrases, you're having to pay attention and make yourself get the gist of the reading. Try to take good notes in class — what seems clear at the time can be baffling or fade away after a little time.
- **explain philosophical ideas to someone else.**
  You know that you really understand something if you can explain it to someone else. If you can't find someone to try to explain an argument or theory to, pretend. Use a dog, mirror or wall and act like it just offered you a million dollars to explain this philosophical concept in your own words (hey, it could happen!).
- **try to make it real to yourself.**
  Think about how these issues and techniques might apply to your interests or your life. Look for situations where the answer to a question of logic or reasoning matters. Use your creative and imaginative abilities to try to engage the topic, and you'll find it more fun than if you think of it as memorization. And what's more fun is easier to learn.

**Presentation topics for 10th week:**
The following topics are meant to be broad jumping-off points for your group to center its presentation around. You will be expected to go beyond the material in the chapter, which everyone in the class will be familiar with. In several cases, you'll be incorporating material from earlier sections of the course. Also, you can (and probably should) incorporate examples from outside of the class material.

Monday's presentations will be on Ch. 10 of the Kahane and Cavender text, "Advertising: Selling the Product." The topics are as follows:

1. fallacious reasoning encouraged by advertising
2. psychological weaknesses played on by advertising
3. political advertising
4. advertising and logic

Wednesday's presentations will be on Ch. 11, "Managing the News." The topics are as follows:

5. media, proportionality, and critical thinking (could include suppression, censorship)
6. media slant and "objectivity"
7. hyping, sensationalism, catering to public tastes
8. positive power of the media

Friday's presentations will be on Ch. 12, "Textbooks: Managing Worldviews." The topics are as follows:

9. "dumbing down," distortion, ignoring the gulf between theory and reality
10. censorship, pressure groups, and politics
Schedule of Readings

This schedule is tentative. Any changes will be announced in class and by email. The reading assignments listed for each day must be completed before that class. All readings are found in your textbooks.

WEEK ONE
W 1/4  Introduction to class and the subject

Introductory Material on Logic and Reasoning

F 1/6  K&C Ch. 1

WEEK TWO
M 1/9  Hurley 1.1 – 1.2  Note: coffee hour today
W 1/11  Hurley 1.3, 1.4, and 1.6

Fallacious Reasoning

F 1/13  K&C Ch. 3: “Fallacious Reasoning – 1”

WEEK THREE
M 1/16  MARTIN LUTHER KING, JR. HOLIDAY: NO CLASS
W 1/18  K&C Ch. 4: “Fallacious Reasoning – 2”
F 1/20  Fallacious Reasoning 1 & 2 review

WEEK FOUR
M 1/23  K&C Ch. 5: “Fallacious Reasoning – 3”  Note: coffee hour today
W 1/25  Fallacious Reasoning – 3 continued
F 1/27  Review of Fallacious Reasoning

WEEK FIVE
M 1/30  Exam on Fallacious Reasoning and Introductory Material

Categorical Propositions

W 2/1  Hurley 1.5 and Hurley 4.1 and 4.2
F 2/3  Hurley 4.3

WEEK SIX

M 2/6  Hurley 6.1 and 6.2
W 2/8  Hurley 6.3 and 6.4
F 2/10  Hurley 6.6

WEEK SEVEN

M 2/13  Hurley 7.1
W 2/15  Hurley 7.2
F 2/17  Review Hurley 7.1 & 7.2

WEEK EIGHT
M 2/20  Hurley 7.3  Note: coffee hour today
W 2/22  Hurley 7.4
F 2/24  Review Hurley 7.3 & 7.4

WEEK NINE

M 2/27  K&C Chs. 6 and 7
W 3/1  K&C Ch. 8
F 3/3  K&C Ch. 9

WEEK TEN

M 3/6  K&C Ch. 10; Presentations on advertising  Note: coffee hour today
W 3/8  K&C Ch. 11; Presentations on news
F 3/10  K&C Ch. 12; Presentations on textbooks

EXAM WEEK
W 3/15  Final exam, 1:00 – 4:00