

## **Phil 1200: Introduction to Logic and Reasoning**

8:00am-9:15am T/TH – Strickland Hall #117

**Instructor:** Kenneth Shields

**Email:** kwsb56@mail.missouri.edu

**Office Hours:** Tuesdays 9:40-10:40am; Thursdays 1:00-2:00pm

**Location:** Second Floor of Student Center (Brady Commons), Leadership Lounge

**Text:** Robert Fogelin and Walter Sinnott-Armstrong, *Understanding Arguments*: 8th edition or special edition “modified for the University of Missouri.”

**Other required materials:** access to (1) Blackboard, (2) a word processor, (3) a PDF reader, and (4) notebook paper/pencil

### **Course Description**

The importance of careful, reflective thinking cannot be overstated. It's necessary for the survival of any democracy, and it's arguably an essential component of an excellent, flourishing life. But careful, reflective thinking is a skill. This course is designed to help you develop this skill. Moreover, as with most skills, humans have developed tools that help us use this skill more accurately and efficiently. After familiarizing ourselves with the analytic conception of argument and reason, we will explore deductive and inductive tools that together form the foundation of good critical thinking.

### **Course Goals**

After completing the entire course, you should be able to:

- Construct formal arguments from informal written passages and essays.
- Give truth-value meanings to the truth-functional connectives within propositional logic and provide symbolizations of English sentences into sentential logic.
- Employ probability reasoning (e.g., Bayes's theorem) to help accurately answer questions and make reliable choices involving chance (e.g., “How likely is it that I have colon cancer given that (a) I tested positive, (b) the background rate is 0.3 percent, (c) the test is 90 percent reliable, and (d) the test's error rate is 3 percent?” [Hint: the likelihood is not high])
- Grasp and explain some of the common fallacies (e.g., the fallacy of equivocation), and distinguish among a variety of different kinds of claims (e.g., ethical claims, ontological claims, conceptual claims, scientific claims, etc.), as well as determine what kinds of evidence such claims would require if to be reasonably believed.

### **What you should expect from this course**

While the word ‘introduction’ might suggest a beginner’s atmosphere, it’s extremely important that you appreciate just how *difficult* being introduced to something for the first time can be! Instead of thinking you’re about to play a game on the easy setting, you should remember what it’s like to attempt something you hadn’t done before. For example, an introductory course on playing the piano would be quite challenging if you had no previous experience playing piano. Given that this will likely be your first experience with doing philosophy, you should expect an analogous challenge. But just like learning to play piano, your persistence and diligent practice in this course will be rewarded with the development of your abilities.

### **What I (and your peers) expect from you**

Aristotle once said, “It is the mark of an educated mind to be able to entertain a thought without accepting it.” It is expected that you will keep this quote in mind. There will be occasions where you disagree with something I or one of your peers has said, and when that time comes, we expect you to be respectful and temperate when raising your objections. Critical, reflective discussion is practically impossible when tempers are high – try to remember that we are only evaluating thoughts and ideas, not people and their characters.

### **What you should expect from me**

As the instructor for this course, you should expect me to explain the material using clear examples and relevant discussion, to be available during office hours to assist and address any questions you may have, to grade assignments in a timely manner, and to respond to emails within a reasonable time. I plan on offering a questionnaire evaluating how I’m doing as an instructor around mid-semester, but any concerns you have can be discussed with me during office hours.

### **Course Outline**

(Tentative: Material may be added or deleted as time allows or requires. Dates for specific reading assignments will be given in the lectures and on blackboard.)

- I     How to Analyze Arguments
  - Chapter 1 – Uses of Arguments
  - Chapter 2 – The Web of Language
  - Chapter 3 – The Language of Argument
  - Willingham, Why Don’t Students Like School?, Blackboard (suggested)
  
- II    How to Evaluate Arguments: Deductive Standards
  - Chapter 6 – Propositional Logic
  - Chapter 7 – Categorical Logic

- III     How to Evaluate Arguments: Inductive Standards  
 Chapter 8 – Arguments To and From Generalizations  
 Chapter 9 – Causal Reasoning  
 Chapter 10 – Inference to the Best Explanation and from Analogy  
 Chapter 11 – Chances  
 Chapter 12 - Choices
- IV     Fallacies  
 Chapter 13 – Fallacies of Vagueness  
 Chapter 14 – Fallacies of Ambiguity  
 Chapter 15 – Fallacies of Relevance and Vacuity  
 Chapter 16 – Fallacies of Vacuity  
 Chapter 17 – Refutation

### Course Requirements

- Regular attendance and active participation in class are expected. Failure to attend class on a regular basis or repeated behavior that detracts from the quality of the class will result in a request to the Dean to cancel your enrollment in the course.
- Electronic devices (laptops, cell phones, smart phones, tablets, etc.) are *not permitted in class*. Such devices keep you and your fellow philosophers from fully engaging in discussion. Use of these devices counts as disrupting the class, which will result in your enrollment being cancelled. We won't cover anything so quickly that you won't be able to keep up with just pen and paper. Besides, there's research that suggests that having to copy your notes from paper onto your computer helps with retention and assimilation of the material.
- Exams  
 There are three exams for this course. Each exam is made up of multiple choice and true/false. The exams will not be cumulative. All exams will be taken in class.

1. First exam	(Thursday, 2/26)	(25%)
2. Second exam	(Thursday, 4/9)	(25%)
3. Third exam	(TBA – finals week)	(25%)

**First exam grade:** I realize that the first exam is usually the hardest, given that you don't know what to expect or how best to study for it. For this reason, you will have the option of replacing your first exam grade with the grade you make on your second or third exam. So suppose you make a 60 on the first exam, but an 80 on the second exam. In this scenario, I will change

your first exam grade to an 80. Or suppose you made a 90 on the third exam. Then I would change the first exam grade to a 90. But be careful – it would clearly be unwise to blow off the first exam since you don't know how well you will do on the second or third exams. The best course of action is to do your very best on all three exams.

- Quizzes (15%)  
There are 15 weekly online quizzes to assess your comprehension of the material. The quizzes are intended to help you prepare for the exams. Each quiz is made up of 5 total questions, multiple choice or true/false. The questions will come from the readings/lectures for that week. The quizzes will be available in the *Quizzes* area of Blackboard. When a quiz becomes available, it remains available until its due date. Once the quiz has begun, you will have *20 minutes* to complete it. If you lose your internet connection or are unable to submit the quiz, *contact me as soon as possible!* Quizzes will not be cumulative. At the end of the semester, I will replace two of your lowest quiz grades with your highest quiz grade.

**IMPORTANT:** The following are key considerations to successfully completing quizzes:

- Complete all assigned readings (textbook and lecture) prior to accessing the online quiz.
  - Force completion is turned ON: you must complete the quiz once you start it – you may *NOT* come back to the quiz later. If you are disconnected, send email to your instructor immediately. After contacting your instructor, please send an email to [blackboard@missouri.edu](mailto:blackboard@missouri.edu), with your name, username, course name, the title of the exam, and a description of the problem.
  - To ensure Blackboard logs every answer, click the “Save” at the bottom of the page every two or three questions. You must click “Submit” in order to have your quiz graded.
  - You *MUST* enable Compatibility View with Internet Explorer 8. A complete list of supported browsers is available [online](#).
- In-class Exercises, Activities, and Peer-Review Assignments (10%)  
There will be a variety of in-class activities and assignments which are meant to give you a chance to practice the kinds of skills and abilities this course is designed to help you develop. They are relatively low-stakes and are all designed to help you achieve the course goals. At the end of the semester, I will replace one of your lowest in-class exercise grades with your highest in-class exercise grade.

## **Grades and Other Concerns**

- Plus/minus grading will be used: A+ (100%-97%), A (96%-94%), A- (93%-90%) and so on. Grades will not be curved. There will be no extra credit assignments.
- *Missed exams may be made up only if there is a verified medical excuse or the equivalent and the request is made within one day after the exam or essay due date. Missed quizzes and other assignments will be excused under the same conditions.*
- Concerns about grades or any other “business” aspects of the course should be reserved for my office hours. These concerns will not be addressed during class sessions. If the concern remains unresolved, the next step is to contact the Philosophy Department chair, Professor Robert Johnson (438 Strickland Hall).

## **Academic Integrity**

Academic integrity is fundamental to the activities of a university. Academic dishonesty will result in a failing grade on the assignment and, most likely, for the course. The case will be reported to the Office of the Provost for disciplinary action under the University’s Collected Rules and Regulations. Discipline may include suspension or permanent expulsion from the University. When in doubt about plagiarism, paraphrasing, quoting or collaboration, consult with your discussion section leader or with me.

## **Students with Disabilities**

If you anticipate barriers related to the format or requirements of this course, if you have emergency medical information to share with me, or if you need to make arrangements in case the building must be evacuated, please let me know as soon as possible. If disability related accommodations are necessary (for example, a note taker, extended time on exams, captioning), please register with the Disability Center (<http://disabilitycenter.missouri.edu/>), S5 Memorial Union, 573- 882-4696, and then notify me of your eligibility for reasonable accommodations. For other MU resources for persons with disabilities, click on "Disability Resources" on the MU homepage.