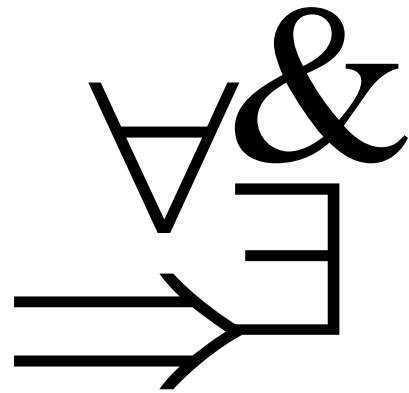


# **Philosophy/Comm 110**

## **Logic and Critical Thinking**

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### **Course Description:**

In an age of information we are constantly bombarded by messages that aim to convince us of some claim: what kind of car is best; what course of political action to take; what stance to take on pressing ethical issues. Yet, the arguments for such claims take similar forms. In this class we will learn to recognize some of the most common forms of argument—both good and bad. In addition we will learn the general principles for evaluating novel arguments. We shall demonstrate and practice many different methods for determining the strength or validity of an argument. These methods can be applied to everyday arguments, and will help you think critically about any subject matter.

The beginning of 20<sup>th</sup> century witnessed the development of two new fields of philosophy and mathematics: *Symbolic Logic* and *Probability Theory*. The field of *Logic* allowed the notions of *Reason*, *Argument*, *Truth* etc. as employed in mathematical arguments to be studied with mathematical precision. The field of *Probability* allowed imprecise reasoning, as common in science, to also be made mathematically precise. The tools provided by *Symbolic Logic* and *Probability Theory* can be used to analyze the quality of both informal everyday arguments and formal scientific and mathematical arguments. While in this class we will not enter deeply into the two fields, we will provide an introduction to both, sufficient to prepare you for classes specializing in Symbolic Logic or Probability (usually Statistics). The introduction to Logic and Probability will encompass the mathematical component of the class. This class satisfies the *general mathematics requirement* of the university. I have mathematics background; therefore, I take this requirement very seriously. I will not shy away from technical material. I believe sincerely that you need it if you are to be granted any university degree.

### **Course Text:**

***Introduction to Logic and Critical Thinking 5<sup>th</sup> Ed.***  
by Merrilee Salmon

### **Course Administration**

The class meets twice a week on Tuesday and Thursday, 8 – 9:15 a.m. at ML 210.

Office hours will be **Tuesday 10 – 11:30 and Thursday 2:30 - 4.**

## Course Requirements

You are required to attend the classes, and you are required to do the assigned daily readings. The grade partition of the class will be as follows:

1. **Three Assignments** (5% first, 15% second and third): The assignments will consist of exercises similar to the ones in the book. One of the three will be dedicated exclusively to Logic and Probability; i.e. it will be more mathematical in form. You will have one week to complete each assignment.
2. **Two Midterm examinations** (20% each): The format will be a combination of short answer and/or multiple choice questions.
3. **Final Examination** (25%): It will be similar to the midterm, only longer. The final WILL include material from the entire semester, but it will favor proportionally material after the second midterm.

The latter grade cutoffs will be the standard:

4. A = 90 – 100%
5. B = 80 – 89%
6. C = 70 – 79%
7. D = 60 – 69%.

## Tentative schedule:

Jan 13	Class Introduction
Jan 18	Chapter 1: Introduction to arguments
Jan 20	Chapter 2: Paying special attention to the language of arguments <b>Assignment 1 posted</b>
Jan 27	Chapter 3: Deductive arguments, Inductive arguments and Fallacies <b>Assignment 1 Due in class</b>
Feb 8	Chapter 4: A closer look at Inductive Arguments
Feb 17	<b>Midterm 1</b>
Feb 22	Chapter 5: Causal arguments

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Feb 24	<b>Assignment 2 posted</b>
March 3	Chapter 6: Probabilities and Inductive Logic <b>Assignment 2 Due in class</b>
March 24	Chapters 8: Deductive Reasoning and Sentential Logic
April 7	<b>Midterm 2</b>
April 11	Chapter 9: Categorical Syllogisms
April 13	<b>Assignment 3 posted</b>
April 25	Chapter 10: Arguments in which Validity depends on Relationships <b>Assignment 3 Due in class</b>
May 3	Review for the exam
May 12	<b><u>Final examination: 8 – 10 a.m. ML 210</u></b>

## Policies

**Assignments:** All assignments must be submitted in hardcopy during class on the due date (or by the end of the day's office hour if permission is asked in class and only because of technical difficulties). Assignments will be penalized a full letter grade (10%) for every 24 hours they are late, including during the weekend. Late assignments will be submitted only through email so that a time stamp is available. If a student cannot attend class for a valid reason, he or she must request a permission to submit the assignment electronically. The assignment must be emailed by 12 noon on the day it is due. Because assignments are to be created at home, no extensions will be given for medial or other reasons. The only exception will be for severe and incapacitating medical conditions, such as hospitalization or surgery. If a student is prone to short-term debilitating conditions, such as migraines, he or she is advised to complete the assignment earlier not to risk last moment occurrence of the debilitating condition. Note: Students are given ample time to complete the assignment; it is the student's responsibility to anticipate obstructive contingencies and to plan appropriately. Students are advised to finish and print the assignment 24 hours before it is due, and are expected to maintain both an electronic and paper backup copy.

**Record keeping:** Official record keeping of grades is the responsibility of each student. All returned assignments and exams must be kept and made available at a later time if necessary. They are the only true and official evidence for the grades. All electronic records of the grades, including D2L, are considered unreliable. It is the student's

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ultimate responsibility to assure the accuracy of the electronic grades and to inform the instructor if an inconsistency exists. Also, it is the student's responsibility to verify that each assignment or exam has been added correctly. Final exams are not returned, but the student has the right to see the exam at a later time.

**Attendance:** Attendance is required. Exams will be excused without penalty only for valid documented absences including: medical conditions, serious emergencies, UA – recognized religious holidays, and situations approved by the Dean of Students.

**Class Behavior:** You are required to conform to the UA Code of Conduct and to behave appropriately: <http://deanofstudents.arizona.edu/policiesandcodes/studentcodeofconduct/>

Also, please turn off any cell phones or loud electronic devices during class. No texting, tweeting, or internet browsing during class. The instructor keeps the right to ban all electronic device if he judges them to be obstructive for the class.

**Special Needs:** Students registered with the S.A.L.T. Center or the Disability Resource Center must submit appropriate documentation to me if they are requesting special accommodations.

**Academic Integrity:** You should be familiar with and conform to the University of Arizona Code of Academic Integrity:  
<http://deanofstudents.arizona.edu/codeofacademicintegrity/>

Plagiarism will not be tolerated and students caught plagiarizing will be subject to serious actions.

**Contested Grades:** Students who wish to contest a grade on an assignment must submit their request in writing by email directly to me within three days of the date on which the assignment was returned to class. The request must explain the specific points in dispute. Disputes will be resolved within seven days of being filed.