Kareem Khalifa
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Office Hours: Tuesdays, 2:30- 3:15, Language Hall, Rm. 203 and by appointment

Course description: Logic is concerned with good reasoning; as such, it stands at the core of the liberal arts. We will develop our reasoning skills by analyzing arguments found in conversation, newspapers, political debates, and popular culture, as well as formulating our own. We will then use the formal techniques of modern propositional logic to codify many of our strategies for reasoning.

Texts:

(ARQ) Browne, M.N. and S.M. Keeley, 2004. *Asking the Right Questions: A guide to critical thinking*. 7th edition. Upper Saddle River: Pearson-Prentice Hall.

(Logic) Copi, I.M. and C. Cohen, 2005. *Introduction to Logic*, 12th edition, Upper Saddle River: Pearson-Prentice Hall.

You should bring whichever text we are working with at the time to class. Failure to do so will be reflected in your participation grade.

Course objectives:
I have two principal objectives:
  1) To cultivate your critical thinking skills. By critical thinking skills, I include the abilities to recognize, analyze, and criticize arguments in the contexts of reading, writing, thinking, and discussion. I expect you to do this not only with others' positions but, more importantly, with your own positions.
  2) To encourage you to be active learners. By an active learner I mean a person who has the curiosity, confidence, and desire to take the initiative to seek information that will make the recognition, analysis, and criticism of arguments—once again, both others' and your own—more poignant, penetrating, and insightful.

I hope you share these objectives. If not, I suggest you take another course.

Evaluation:
We will meet our objectives through homework, quizzes, exams, and discussion. Here is the breakdown of their relative weights:

Basic Homework: 15%
High-Stakes Homework: 20%
Monthly exams: 40%
Final exam: 15%
Participation: 10%

Your final grade will be calculated according to the following scale:

93-100 = A	83-87 = B	73-77 = C	63-67 = D
90-92 = A-	80-82 = B-	70-72 = C-	60-62 = D-
	88-89 = B+	78-79 = C+	68-69 = D+
			0-59 = F

If your final grade is x + 0.5% or higher , I will round it up to x+1%. If it is x+ 0.49% or lower, I will round it down to x %.

> Ex. If your final grade is 89.49%, you receive an 89 and receive a B+ for the course. If your final grade is an 89.50% you receive a 90 and receive an A- for the course.

There will be no exceptions to these rules. All individual assignments, tests, grades, etc. that determine your final grade will be calculated as raw scores, i.e., no rounding occurs except for the final grade.

__Homework:__ Expect to be doing homework on a daily basis in this course. Improving your critical thinking skills is a lot like improving your jump shot, golf swing, guitar technique, abs, etc.—*it requires practice.* All homework assignments should be handed at the end of the respective class. You will be graded in one of two ways:

A. *__Basic Homework:__* On most assignments, you will be given a grade of S (satisfactory), S- (less than satisfactory), or U (unacceptable). On these assignments, S = 2/2, S- = 1/2, and U = 0/2.
   a. A *satisfactory* (S) assignment is one that:
      i. Is handed in at the end of class, <u>and</u>
      ii. In which an honest effort (as judged by me) has been shown for all the problems in the assignment.
   b. A *less than satisfactory* (S-) assignment is:
      i. An assignment that would be satisfactory, except either:
         1. It was sent to me after the end of class it was due but no later than 11:59PM of the day after it was due. (i.e., it was sent to me by 11:59PM Wednesday if it was due on Tuesday or by 11:59PM Friday if it was due on Thursday)
            a. In this case, you must EMAIL me your assignment.
         2. An honest effort has not been shown for one problem, but it was handed in at the appropriate time.
   c. An *unacceptable* (U) assignment is one that is handed in later than 11:59PM of the day after it was due, or in which an honest effort has not been shown for more than one of the problems in the assignment.

This "honest effort' requirement may seem tough, but it amounts to the following: even if you're completely stumped by a problem, scribble down some ideas you had for solving the problem. This helps me figure out where you need help, and keeps you from getting passive.

B. *High-stakes Homework:* On some assignments, I will scrutinize your work more closely, judging you on everything: correctness, clarity, spelling, etc. On these assignments, you will be graded on a scale of 0-100. Any high-stakes assignment not handed in at the appropriate time can receive nothing higher than a 50. It will be penalized 10 points for every day it is late. Thus:
   a. A high-stakes assignment handed in after class on the same day can receive nothing higher than a 50.
   b. A high-stakes assignment handed in the day after it was due can receive nothing higher than a 40.
   c. A high-stakes assignment handed in two days after it was due can receive nothing higher than a 30.
   d. …
   e. A high-stakes assignment handed in five days or more after the day it was due receives a 0.

Importantly, you will not know which assignments are high-stakes and which are basic until these assignments are returned to you. The moral of the story: DO YOUR HOMEWORK! Even if you get 60's on your high-stakes assignments, your final grade will be almost 3 whole grades higher if you do all of your assignments than if you don't do a single assignment.

Monthly tests: Approximately once a month, you will be given an in-class, non-cumulative test. These tests may also include a take-home section. They will be graded on a scale of 0-100.

*Final exam***:** At the end of the semester, you will be given an in-class, *cumulative* final exam, in which anything from the entire semester is fair game. It will be graded on a scale of 0-100. THE FINAL EXAM WILL BE HELD ON TUESDAY DECEMBER 20, 2005, 9:00 AM – 12:00 NOON. The following is a direct quotation from the College:

> "Students must have the permission of the Dean of Academic Affairs to take an exam earlier or later than scheduled. Permission is normally granted for medical reasons or for participating in educational programs.
>
> **Leaving early for rides or flights, vacations, relatives' or friends' weddings or graduations, or having more than one exam on one day, are not considered valid reasons to request an earlier or later exam.**"

*Participation***:** This is a general evaluation of the amount of effort and astuteness you have demonstrated to me in the course. Considerations that are relevant include promptness, attendance, quantity and quality of both contributions and questions in class

sessions, as well as discussions outside of class. This grade reflects your performance in all of those areas of the course other than the graded, written assignments.

However, you cannot earn more than 75% in participation if you do not receive an S on at least ¾ of your basic homework assignments. Note, though, that receiving an S on at least ¾ of your basic homework assignments is a necessary (but not sufficient) condition for receiving 75% in participation.

The most important determinant of your participation grade is classroom *discussion*. Meeting our objectives is a collective effort. We're working through this stuff together, so be ready to talk shop. This means doing your homework and being ready to discuss examples.

Please be polite and do not interrupt others when they are speaking (Exception: In the interests of covering all the day's readings, I—and only I—may put the brakes on a discussion). Please raise your hands before entering a discussion. Also, please turn off your cell phones before class. This is a major pet peeve of mine, so you are guaranteed to annoy me if your phone goes off in class.

Objections to grades:
If you object to a grade you receive, send me an email with passages in your assignment/test where you think I was being unfair. Provide reasons why my grades were not fair. The email should also include times when you can meet over a one-week period. I will not discuss grades without reading an email first. This process should not be adversarial; rather, it is an extended application of your critical thinking skills. These policies are intended to facilitate clarity and communication, as well as to guarantee that I respond as thoughtfully as I can to your queries and concerns.

Honor code:
You are expected to abide by all the rules of Oxford College of Emory University's honor code. Failure to do so will lead to reporting you to the proper university authorities.

Alright, enough administravia. The following is a **rough** outline of the first month of the semester, and is subject to revision. This will allow us some time to explore certain ideas that really grab our interests. Also, feel free to talk to me outside of class if something really intrigues you.

PART I: The nuts and bolts of informal logic
WEEK 1: September 1

  1) **Preliminaries**
      a. Personal introductions. General overview. Course logistics.

WEEK 2: September 6 – September 8
  2) **What is critical thinking?**

a. *Read*: ARQ, pp. 1-14; Logic, pp. 2-9, 21-28
b. *Assignment*: Logic, pp. 10-12, exercises 5, 14, 18; pp. 28-30, exercises 6, 8, 9

3) **Recognizing Arguments**
   a. *Read*: ARQ, pp. 15-36; Logic, pp. 30-37
   b. *Assignment*: Logic, pp. 38-39, exercises 4, 8; pp. 40-44, exercises 2, 8, 19

WEEK 3: September 13 – September 15
4) **Analyzing complex arguments**
   a. *Read:* Logic, pp. 51-55
   b. *Assignment*: Logic, pp. 56-59, exercises 3, 4, 7, 9.
5) **Arguments and explanations**
   a. *Read:* Logic, pp. 44-46
   b. *Assignment*: Logic, pp. 46-51, exercises 3, 4, 12, 13, 22, 24

WEEK 4: September 20 –September 22
6) **Deductive validity, inductive strength, and the truth of sentences**
   a. *Read*: Logic, pp. 12-20 (including "Summary" on p. 20)
   b. *Assignment*: Logic, p. 20, exercises 2, 3, 4, 6, 7, 8

7) **Constructing deductively valid arguments**
   a. *Read:* Logic, pp. 59-64, p. 68
   b. *Assignment:* Logic, pp. 65-67, exercises 1, 2, 4, 7, 9

WEEK 5: September 27 – September 29
Review Session
MONTHLY EXAM #1

PART II: Fallacies
WEEK 6: October 4 – October 6
1) **Fallacies: the basics + fallacies of relevance**
   a. *Read:* ARQ, pp. 83-99; Logic, pp. 125-135
   b. *Assignment:* Logic, pp. 136-138, exercises 2, 3,4,6, 7 (part I)
2) **Fallacies of Relevance (Cont'd), Defective Induction, and Presumption**
   a. *Read:* Logic, pp. 140-151
   b. *Assignment:* Logic, pp.138-140 (part II), exercises 2, 6, 8; Logic pp. 152-154, exercises 2,3,4,6, 7, 9

WEEK 7: October 11-October 13
Fall Break
3) **Fallacies of Ambiguity**
   a. *Read:* ARQ, pp. 37-52; Logic, pp. 154-163
   b. *Assignment:* Logic, pp. 163-164 (part I), exercises 3,6,9; Logic, pp. 164-165 (part II), exercises 3, 4, 6;

   4) **Fallacies: Grand Finale**
      a. *Assignment:* Logic, pp. 165-170, exercises 2, 3, 4, 9, 11, 13, 17, 22 (part III) (You're not done with today's assignment! Read item b, below)
      b. *Assignment:* Find four <u>different </u>fallacies in editorials, commercials, the web, etc. For each fallacy, do the following:
         i. Photocopy these fallacies, and where applicable, provide citations and/or URL's. Make sure you provide proper citations (check the MLA handbook in the library if your are unsure). If it is an editorial, include the whole editorial, but highlight, underline, etc., the fallacious passage.
         ii. Define the fallacy that you think applies to the example.
         iii. In one *typed* paragraph, provide an argument as to why the example is complicit in the fallacy.

MONTHLY EXAM #2

PART III: Formal Logic

WEEK 9: October 25-October 27
Formal Logic
   1) **Introduction and three basic operators**
      a. *Read:* Logic, pp. 307-317
      b. *Assignment:* Logic, pp. 318-319 (part I), exercises 2, 6, 8, 21, 24; Logic, p. 320 (part II), exercises 2, 8, 22
   2) **Conditional Statements and Material Implication**
      a. *Read:* Logic, pp. 322-329
      b. *Assignment*: Logic, p. 329 (part I), exercises: 1, 7, 17, 19, 22, 24;

WEEK 10: November 1-November 3
Tuesday, Nov 1: NO CLASS.
   3) **Conditionals and Material implication (cont'd)**
      a. *Assignment*: Logic, p. 330 (part II), exercises: 7, 11, 22, 25; pp. 330-331 (part III), exercises: 2, 4, 8, 14, 18, 21, 24

WEEK 11: November 8- November 10
   4) **Argument forms and refutation by logical analogy**
      a. *Read:* Logic, pp. 332-334
      b. *Assignment:* Logic, pp. 335, exercises 1, 3, 9, 13, 16, 18, 22

   5) **Validity, Truth Tables, and Common Argument Forms**
      a. *Read:* Logic, pp. 336-344
      b. *Assignment:* Logic, p. 344 (part I): 1, 3, 9, 13, 16, 18, 22; p. 344 (part II), exercises 1, 3, 6, 9

WEEK 12: November 15-November 17
  6) **Truth tables (continued); Statement Forms and Material Equivalence**
       a. *Read:* Logic, pp. 346-350
       b. *Assignment:* Logic, p. 344-345 (part III), exercises 2, 4, 7, 9; pp. 350 (part I), exercises 1, 2, 4, 8, 9

  7) **Statement forms and material equivalence (cont'd); Logical equivalence and the three laws of thought**
       a. *Read:* Logic, pp. 356-358
       b. *Assignment:* Logic, pp. 350-351 (part II), exercises 3, 4, 8, 9 pp. 351 (part III), exercises 2, 4, 9, 14, 19

WEEK 13: November 22- November 24
Review
Thursday, November 24—Thanksgiving—No Class

WEEK 14: November 29-December 1
Tuesday, November 29: TEST #3

  8) **Formal proof of validity:**
       a. *Read:* Logic, pp. 359-362
       b. *Assignment:* Logic, p. 363 (part I), exercises 3, 7, 11, 17; pp. 363-364 (part II), exercises 2, 4, 7, 9

WEEK 15: December 6-December 8
  9) **Formal proof of validity (continued):**
       a. *Assignment:* Logic, pp. 365-366 (part III), exercises 2, 4, 12, 17, 22, 24, 29; pp. 366-367 (part IV), exercises 4, 8, 11, 14
       b. *Assignment:* Logic, pp. 367 (part V), exercises 2, 4, 9; pp. 367-370 (part VI), exercises 1, 2, 8, 9

WEEK 16: December 13
Tuesday, December 13—Last day—Test #4 DUE: Review

FINAL EXAM: TUESDAY DECEMBER 20, 2005, 9:00 AM – 12:00 NOON