Introduction to Logical Reasoning

Lecture #1

Course Introduction

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Course Goals

The major goal of this course is to develop your critical thinking abilities. In particular, you will develop skills for understanding and evaluating the logical structure of arguments in a variety of contexts.

Course Outline

This course is broken into three parts:

Part 1: Identifying and understanding the structure of an argument (units 1 and 2),

Part 2: Assessing arguments of differing forms (units 3, 4, 5, and 6), and

Part 3: Exploring how to reason in everyday life (unit 7).

Course Requirements

The requirements for the course are:

– Participation (10%),

– 13 Problem sets,

– 11 Quizzes, with lowest 2 dropped (30%), and

– 3 Exams (60%).

Grading

The problem sets are neither collected nor graded. It is up to you to spend as much (or as little) time on them as you see fit to learn the skills they teach.

Quizzes and exams are graded. The points you earn on each assignment will vary, so scores are normalized to a 5-point scale for determining letter grades. However, keep in mind that this is *not* a curve. Everyone can get an A; everyone can fail. (Let's aim for the former!)

Late Assignment & Absence Policies

Please note that this course has extremely strict late assignment and absence policies: I do *not* accept late assignments, and you get *no* "free" absences. There is only one exception to this:

> You and I agree on a reasonable accommodation *prior* to the original due date or the date you miss class.

If you do not feel that you can meet these requirements, please enroll in another course.

Course Website

Please visit the course website regularly:

http://www.andrew.cmu.edu/user/degray/logic/

It will have the readings (there is *no* textbook), problem sets, lecture slides, and all other course materials.

Academic Integrity

Academic integrity is embodied by commitments to honesty, respect, trust, diligence, and rigor in the pursuit of knowledge.

The most common violation is copying a neighbor's answers on a quiz or an exam. To discourage this, I create multiple versions of all quizzes and exams. Your quizzes and exams will therefore be different from those of your neighbors.

Regardless, if you ever feel the pull of temptation, please see me for an alternative course of action.

Finally, you are expected to read this course's Honor Code and sign the Honor Agreement indicating that you will adhere to that code.

Other Essentials

If you expect to miss a class or be unable to take a quiz or exam as scheduled, please notify me *in advance* so we can agree on a **reasonable accommodation**. Such accommodations usually carry a penalty: your grade on the assignment may be reduced, or you may have to do extra work. Therefore, when proposing a reasonable accommodation you must be prepared to state what you take to be a fair penalty given the particularities of your circumstances.

You have *one week* to **challenge an assignment's grade**. To do so, you must return the graded assignment with a clearly written explanation of your reasoning for challenging its grade.

Extra Credit

Extra credit 0: Introduce yourself to me at my office sometime this week. My office is right next to the men's prayer room on the first floor.

In addition, every weekly problem set has a logic puzzle that you can solve for extra credit. The write up for each is due at the beginning of the following Sunday's class.

Remember: Group work is fine for the extra credit, but you need to turn in your own work with responses in your own words. Also, please indicate with whom you worked.

Argument 1

Consider the following argument:

> All roses are flowers, and some flowers fade quickly. Therefore, some roses fade quickly.

Is this a logically valid argument? That is, does the conclusion logically follow from the premises?

Argument 2

Consider the following argument:

> If science can prove that God is dead, then God is dead. But science cannot prove that God is dead. Therefore, God is not dead.

Is this a logically valid argument? That is, does the conclusion logically follow from the premises?

Next Class...

We begin our study of informal logical reasoning by looking at the basic building blocks of arguments: statements.

Make sure you visit the course's website so that you can download this week's problem set as well as the reading you are expected to have read for next class.

Also, please do not forget to turn in your response to the Lecture #1 Questionnaire on your way out.