Logic, Reasoning, and Persuasion

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Course Description:

An argument is a series of statements, one set of which (the premises) is intended to provide either logically conclusive or strong support for another statement (the conclusion). In this course, we will study of the logical structure of argumentation in ordinary language, with an emphasis on the relation of logic to practical (and controversial) affairs in politics, criminal justice, religion and ethics. We will also examine and learn to spot traditional informal fallacies — e.g., "begging the question"— which although formally valid, are still instances of bad reasoning. Discussions explore the nature of validity, truth, meaning, and evidence in relation to the evaluation of arguments.

Required Text: *The Concise Guide to Critical Thinking*, by Lewis Vaughn
ISBN: 9780190692896

Undergraduate Learning Outcomes

As a result of fully participating in this class, students will be able to:

- Recognize differences between deductive and inductive arguments
- Recognize differences between Valid and Invalid arguments
- Recognize differences between Sound and Unsound arguments
- Recognize differences between Cogent and non-cogent arguments
- Be adept at spotting 22 Informal Fallacies
- Understand the structure of categorical syllogisms, including Aristotle's square and the definition of major term, minor term, middle term, major premise, and minor premise.
- Know how to check the validity of a categorical argument by drawing Venn diagrams for the four categorical standard form statements.
- Know how to translate ordinary and singular statements into standard categorical form.
- Know how to use Venn diagrams to tell if two statements are, or are not, equivalent.
- Be proficient in diagramming and analyzing arguments
- Be adept at translating sentences of english into FOL (first order logic)
- Be able to construct valid and sound arguments in support of their beliefs
- Be able to charitably reconstruct valid & sound arguments for anyone's reasoned beliefs (even if you don't agree with the conclusion!)

Expectations for All Students

1) Commit to checking the blog and Sakai EVERY DAY of the online course; failure to check in and participate regularly will affect your final grade.
2) Be prepared to engage positively in online discussions & actively complete online requests;
3) Be respectful of perspectives offered by classmates and professor;

4) Complete all assignment sets;

5) Complete an anonymous evaluation of my teaching, given on Sakai last 2 wks of class.

General Schedule of Topics and Readings

The class is (roughly speaking) composed of a series of lectures that work through all chapters of our text in the given order. The syllabus and pace of the readings will be somewhat dictated by what we get covered in class each week—often a complex and changing dynamic. However, the *intended* schedule of readings is located at the end of this syllabus.

Assessment

40 %: Daily answers to problem sets, due on Sakai at 1.30 sharp, unless otherwise announced
25 %: Blog Assignment: Participation on the class blog daily.
25 %: Final test on Chapters 7-13 during the final exam period
10 %: Participation, attention, and attitude: see "student expectations", above.

Homework Protocol

- HWs are graded on a 100 point basis; for *the first 3* assignments, you get a 100/100 for merely *completing it*. The answers will be discussed online during *class blog time* for the first 3 assignments.
- The remaining HWs, due virtually every day, not only needs to be completed, but completed *correctly* in order to get a good score. A "model answer" will be available on Sakai for you to see *after* the due date.
- HW exercises are posted on Sakai under Assignments tab, in the directions section. Sakai will almost always notify you by email that an assignment is due, however, always assume it is due and go to Sakai to find out which exercises are due even if you don't receive notification.
- Write your answers directly into the text box supplied by Sakai. No attachments accepted—it must be typed in PLEASE SAVE WORK FREQUENTLY. HWs due every day BEFORE class by NOON on Sakai unless otherwise noted. When the assignment becomes open, a note will be posted to Sakai announcements.
- Lowest HW grade will be dropped from grade book at semester end.

Late Submission Policy

- LATENESS: Homework that is late by less than an hour will be docked 10% automatically. Otherwise, late HW is not accepted, except in extenuating circumstances, in which case you must see me during office hours to discuss your reason.
- If you have problems accessing Sakai, ***you*** are responsible for contacting the Sakai help desk and getting that fixed. I don't even know how to help with that type of thing. Sakai help is at 848-932-

Attendance Policy

Attendance online is **mandatory**. Student absence for religious holidays must be cleared via email to me PRIOR to the holiday (and are **not** counted towards your absences).

Disability Accommodations

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: https://ods.rutgers.edu/students/documentation-guidelines.

The course will cover the following chapters and topics:

Lesson	Topic	Reading
1	Introduction to logic and critical reasoning	Ch. 1: The Power of Critical Thinking
2	Impediments to critical thinking	Ch. 2: Obstacles to Critical Thinking
3	Argument basics; judging arguments	Ch. 3: Making Sense of Arguments
4	Argument patterns; long arguments	Ch. 3: Making Sense of Arguments
5	Experts, evidence, common errors	Ch. 4: Reasons for Belief and Doubt
6	Catch Up	
7	Fallacies	Ch. 5: Fallacies and Persuaders
7	Translation, Connectives, Truth Values	Ch. 6: Propositional Logic
8	Syllogisms & Venn Diagrams	Ch: 7: Categorical Logic
9	Catch up	
10	Enumerative and Statistical Induction	Ch. 8: Inductive Logic
11	Explanations and Inferences	Ch. 9: Inference to the Best Explanation
12	Testing and Judging Scientific Theories	Ch 10: Scientific Reasoning
13	Moral reasoning, principles, and arguments	Ch 11: Moral Reasoning
14	Review for Final	

*NB: *If we don't need to use the catch up days, the remainder of the semester will consist in exploring various other kinds of logic and/or reasoning (3 value, modal, higher order, Bayesian reasoning, to name a fe*w)