

Logic, Reasoning, and Persuasion

50:730:101 Section 91 Hybrid

T/Th 11:10-12:30

In-class Meetings Armitage 106

Office Hours via Zoom

Instructor: Phillips (Ed) Young

Preferred Contact: through Canvas email

Alternative: phillipy@camden.rutgers.edu

Description:

This course is dedicated to studying how and why inferences and arguments which seem persuasive often fail to hold up under logical scrutiny. We will study the basic components of arguments, including definitions, classification schemes, and propositions, and then move on to study a variety of types of arguments, including inductive generalizations, arguments by analogy, and statistical arguments as well as the deceptively persuasive but ultimately invalid inferences known as fallacies.

Rationale:

This is one of the best general education courses you can take in college, because it will help you analyze information in all your other courses--and in the rest of your life. The ability to analyze and evaluate classifications and definitions, the relations between premises and conclusions, and common forms of argument and inference will help you to evaluate claims made by politicians, activists, business leaders--and even teachers! These skills will not only help you become a more informed consumer, a more effective professional, and a more responsible citizen, they will also help you learn more effectively in virtually every other course you will take in college, no matter what your area of study may be.

Course Goals:

This course is designed to enhance critical thinking in a number of areas. Accordingly, student success will be based on demonstration of skills including the following:

- 1) Evaluating classification schemes according to the use of mutual exclusive and jointly exhaustive categories and consistent principles.
- 2) Distinguishing between good and bad definitions based on criteria like scope, essentiality, and genus/differentia relations.

- 3) Correctly interpreting the meaning of a variety of propositions based on the logical consequences of definitions and grammar.
- 4) Interpolating necessary but unstated premises in an inference and evaluating their impact on the plausibility of that inference.
- 5) Recognizing and explaining common logical fallacies and cognitive biases.
- 6) Determining the validity of an argument based on criteria relevant to the argument type, including but not limited to:
 - a. The dependent and independent variables in an inductive generalization.
 - b. The relative importance of similarities and differences in an analogical inference.
 - c. Confounding factors in the evaluation of correlations presented in statistical arguments.

Related General Education Goals

In serving the above course goals, this course serves the more general educational goals of providing foundations for lifelong learning which are related to *Intellectual and Practical Skills*, including:

- Analysis
- Critical Thinking
- Problem Solving

Within those general goals, this course focuses on the category of goals related to *Logic and Quantitative Reasoning*, including the ability to:

- Analyze and evaluate logical arguments.
- Demonstrate an understanding of the scope and limitations of logical reasoning, including the nature of rational norms.
- Describe and assess different methods of gathering information.
- Demonstrate the ability to comprehend quantitative information embedded in common language.
- Formulate well-organized conclusions supported by quantitative evidence and statistical inference.

Required Text:

The Art of Reasoning, 5th edition, by Kelley & Hutchins (W.W. Norton)

Course Requirement Summary:

There will be a *quiz* on each chapter of the text indicated in the schedule of readings and assignments. Each may be taken only once, and There will be no make-ups for missed

quizzes. But I will accept an *alternative/make up assignment* for any missed quiz, as described in the "Course Requirement Details" section of this syllabus. In addition, *quiz remediations* will be opportunities to improve upon quiz scores by correcting missed quiz items. *Lecture Attendance* scores can be earned by attending weekly classroom meetings. InQuizitive exercises are also to be completed for each chapter. See explanations for each of these below. Each chapter's score will count equally (100 points) in the overall final average, and the InQuizitive exercises and attendance scores will each count the same as a chapter. There are also extra credit opportunities as described below.

Schedule of Readings and Assignments

Chapter, Topic	Forum Dates	Class Meets	Zoom Office	InQuizitive Due	Mini Lecture Quiz	Quiz Date	Quiz Remedy	Quiz Alt
Syllabus materials, Canvas orientation	N/A	9/6	9/8	N/A	N/A	Until 9/11	N/A	N/A
Chapter 1: Language	9/6-9/22	9/13, 9/20	9/15, 9/22	9/21	9/21	9/22	9/24	10/1
Chapter 2: Argument Analysis	9/23-10/6	9/27, 10/4	9/29, 10/6	10/5	10/5	10/6	10/8	10/15
Chapter 3: Fallacies	10/7-10/20	10/11, 10/18	10/13, 10/20	10/19	10/19	10/20	10/22	10/29
Chapter 4: Cognitive Bias	10/21-11/3	10/25, 11/1	10/27, 11/3	11/2	11/2	11/3	11/5	11/12
Chapter 11: Causal Induction	11/4-11/17	11/8, 11/15	11/10, 11/17	11/16	11/16	11/17	11/19	11/28
Chapter 12: Analogical Reasoning	11/18-12/1	11/22, 11/29	12/1	11/30	11/30	12/1	12/3	12/10
Chapter 13: Statistical Reasoning	12/2-13	12/6, 12/8	12/13	12/12	12/12	12/13	12/14	12/20

Notes:

- 1) All chapter/part references are to the **required text**, *The Art of Reasoning* (5th edition).
- 2) Because of the start and finish dates for the semester, as well as the timing of the Thanksgiving holiday and finals week, the academic calendar does not follow a strict 7-day week. Hence the time frames for the study of chapters 1, 12, and 13, as well as the intervals between their respective due dates, are irregular compared to the others. Please plan accordingly.

Course Requirement Details:

Lecture Attendance

Attendance credit (100 points) is earned by being present (with a mask, as per school policy) for each weekly in-class meeting. The average of your attendance scores will be the equivalent of one quiz score in your final grade. Please note that absences will be excused if documentation (such as a screen-shot of a "Campus Pass" denial) is provided.

In addition, I suggest taking full advantage of the opportunity to ask and post discussion questions, as well as reviewing the flashcards and crosswords for each chapter, since these activities are all beneficial for learning the course concepts. But to earn the attendance credit, attendance in class is all that is required.

Lecture Attendance-related Extra Credit Opportunity

Each module includes several mini-lecture video recordings. These mini-lectures are about course concepts I have found sometimes need special attention. In some cases, this is because students may find the text's explanation unrelatable for some reason. In others, it is because the concepts are so foundational, any misunderstanding of them will cause problems in multiple additional areas. In some cases, I have found that additional examples and analysis have been helpful. In any case, they are there for your review, and are strongly recommended if you need to miss class for any reason.

The extra credit opportunity is in the quiz questions that are inserted into the videos. For each question you answer correctly, I will add an extra credit point to your attendance. You must answer all the questions and watch the video through to the end for the points to register. You may re-watch the videos and re-take the quiz questions to improve your score, but only up until the due dates indicated.

InQuizitive

This interactive learning management tool gives you an opportunity to work through our course concepts in a game-like format while earning points toward your target grade range. At the same time, the data collected from the class' performance will help me know which course concepts need more attention in our class meetings. Collectively, they will be worth the same as a chapter quiz in determining your overall grade for the course. You can continue to use them after their due dates as review exercises, but only points earned by the due date will count towards your grade.

Quizzes

Quizzes will consist of 20 multiple choice questions. There will be a 24-hour window within which each will be available, and once begun, you will have 50 minutes to finish.

Quiz Remediation

You will have an opportunity to improve upon your quiz scores by demonstrating you know/have learned the right answers to questions you have missed. To do so, you will be required to 1) identify the correct answers, 2) cite and paraphrase passages from the text that show why they are the right answers. Fulfillment of these requirements for each incorrect answer restores 60% of the missed points.

Quiz Alternative/Makeup Assignments

You may substitute a written evaluation of materials drawn from a source outside our textbook for any missed quiz. It may come from newspapers, journals, web sites, or even textbooks for other courses. Sourcing for the text of the material must be submitted along with its evaluation.

The purpose of these assignments is to allow you to make up for any quizzes you may miss. They may also be used to replace low quiz scores. The idea is to show that you are able to apply the analytical techniques you have learned in class to sources in the world outside of our classroom.

Because our subject matter varies so much from chapter to chapter, specific criteria for the alternative assignments will be available in each module. But they will all involve 1) whether you have correctly identified the course concepts in question, 2) whether your evaluation makes appropriate use of the analytical tools relevant to that concept, and 3) whether you do a reasonable job of identifying the strengths and weaknesses (where relevant) of the specific argument you evaluate.

Sometimes it can take a lot of time and effort just to find material which corresponds to the concepts discussed in a specific chapter. So I suggest that you begin looking for examples of our course concepts as soon as we begin each chapter, so that if you need to substitute this assignment for a quiz, you will be prepared to do so. In particular, since you are already studying from your texts for other classes, using them can provide an opportunity not only to save time but also to integrate your learning experience.

Quiz Alternative-related Extra Credit Opportunity

Besides the points you can earn for the above assignment, you can earn extra credit points by finding suitable online sources for the quiz alternatives that others can also use. Email the URL to me (through Canvas) not less than one week before the alternative is due so I can have time to look it over and be sure it is suitable and then distribute it to the whole class. For this, I will give you an extra attendance score (100 points) for that chapter.

Policies

Since I am giving these policy statements to you in writing, 1) I will presume that you understand them unless you tell me otherwise, and 2) ignorance will not be excused.

I: Academic Integrity

Rutgers' academic integrity policy, including explanations of what count as violations and the penalties they incur, is spelled out here:

<https://academicaffairs.rutgers.edu/academic-integrity-policy-and-procedures>

Be aware that I will pursue penalizing any student who violates academic integrity to the maximum extent allowed by this policy, and that I will make no exceptions.

II: Course Completion

Incomplete grades will be only be assigned to students who arrange for them with me in advance. Otherwise, course requirements remaining unfulfilled at the scheduled finish time for the final exam will be assigned scores of zero. All late work is subject to grade penalties.

III: Communications

All communications for this course should be submitted through the Canvas course website email, for purposes of security and documentation as well as convenience.

IV: Final Grade Computation

The scale for final grades is based on the following percentages:

Score	Letter Grade
90% and higher:	A
87% and higher:	B+
80% and higher:	B
77% and higher:	C+
70% and higher:	C
60% and higher:	D
Below 60%:	F

Please note that since I provide multiple ongoing opportunities for improving scores, I do not "round up" when determining final grades for anyone who has foregone those opportunities.