

INTRODUCTION TO LOGIC

PHILOSOPHY 121, SHADYSIDE WINTER TERM 2007-2008

GENERAL COURSE INFORMATION

Time: Monday 1:00–4:00 PM

Room: Motor Square Garden, Learning Lab – Suite #A

INSTRUCTOR

Name: David Gray

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Phone: 412-600-3918

Office Hours: Monday and Friday 12:00–1:00 PM, 4:00–5:00 PM.

Monday's hours will be held in the Learning Lab; Friday's will be in Classroom C

REQUIRED TEXTS

Irving M. Copi and Carl Cohen. *Introduction to Logic*. Twelfth Edition.

COURSE DESCRIPTION

Introduction to Logic is a very practical course aimed at improving the student's ability to think clearly, to write well, and to read and listen critically. The word 'logic' derives from the Greek word 'logos', or reason, and logic can be broadly construed as the study of the principles of reasoning. Understood this way, logic is the subject of this course.

In everyday life, we use different modes of reasoning in different contexts. We can reason about our experiences, and try to determine causal relations between different types of events. For instance, we can ask whether it is the aspirin or the glass of water it is taken with that stops a headache. Such questions form the basis of scientific inquiry. Or we can reason probabilistically, and try to determine the "odds" that the Pirates will win the World Series; or we can employ subjunctive reasoning, and wonder what would have happened had Al Gore won the 2000 election. We can reason about events occurring in time, or space; we can reason about knowledge, and belief; or we can reason about moral responsibility, and ethical behavior.

This course does not pretend to cover all these types of reasoning. Rather, we shall focus on a concern common to them all: strategies for identifying and evaluating arguments. As a means of achieving this, the usual subject matter of beginning modern formal logic is covered. In addition, this material will be embedded in a foundation of elementary set theory. Thus augmented, symbolic logic's structure and techniques are a powerful means of exploring the schemes of reasoning and important aspects of the nature of language. This is invaluable for the student interested in any other type of reasoning.

COURSE REQUIREMENTS

Quizzes	= 30%
Mid-Term Exam	= 35%
Final Exam	= 35%

Logic is learned by doing, and so we will work in and out of class with lots of examples. Class attendance and participation is very important in understanding and retaining the course material. Therefore, ***attendance is required*** and I will encourage class participation. You are allowed two absences, no questions asked. Please note, however, these are not vacation days, they are for illness, job interviews, and other emergencies. Each additional absence results in 2 points deducted from your final grade. I recognize that not everybody is comfortable speaking in class, and so only repeated absences will lower your grade. Nevertheless, active class participation can increase your final grade if you are in a borderline situation.

Every week, homework problems will be assigned, but not collected. Instead, every week there will be a short in-class quiz with material from these homework problems. Your lowest two quiz scores will be dropped. Since you are responsible for *all* the material on the exams, however, I encourage you to do all the quizzes.

The total points on the weekly quizzes will vary from week to week. But each is ultimately scaled to a score from 0 to 5 (4–5 is an A, 3–4 is a B, etc.) and all count equally towards the final grade. (For example: one week, the total number of points may be 42; and I may announce that 34 and above is an A, 26 and above is a B, 19 and above is a C, etc. In that case, a score of 32 translates to $3 + 6/8 = 3.75$, roughly a B+.) The total points on each exam will also vary, but they will be scaled in a manner similar to those for quizzes. If you wish to know how you are doing in more specific terms than what you can infer from this information, do not hesitate to contact the instructor.

Grades are determined based on *clarity* as well as correctness. You may submit an answer to a question that, arguably, has all the components of a correct answer; but if the grader has to struggle to understand what you are saying, or read between the lines, or weed out false or irrelevant information, you are unlikely to receive full credit.

You are highly encouraged to work together on the homework problems. Otherwise, students are expected to be familiar with the university policies on cheating and plagiarism. If you have any questions, please ask; do not assume.

COURSE OUTLINE

October 22: Introduction: What is Logic? What are Arguments?

October 29: Arguments and the Uses of Language

November 5: Elementary Set Theory

November 12: Definition

November 19: Symbolic Logic I: The Logical Operators

November 26: Symbolic Logic II: Symbolizing English, Tautologies, and Logical Equivalence

December 3: Symbolic Logic III: Arguments and Testing for Validity

December 10: Mid-Term Exam

December 17, 24, 31: No Class

January 7: Symbolic Logic IV: More Symbolizing and Testing for Validity

January 14: Symbolic Logic V: Formal Proofs of Validity

January 21: No Class

January 28: Symbolic Logic VI: More Formal Proofs of Validity

February 4: Symbolic Logic VII: Formal Proofs and the Rule of Replacement

February 11: Symbolic Logic VIII: More Formal Proofs

February 18: Final Exam

REASONABLE ACCOMMODATIONS

I recognize that most students are human beings with occasional human problems associated with human finitude. Illness, family emergencies, job interviews, Other Professors, etc. . . will inevitably lead to legitimate conflicts over your time. If you expect that you will be missing class, be unable to turn in an assignment on time, or take an exam at the assigned time, please notify me (either in class or via email) **in advance** and we can agree on a reasonable accommodation. Arrangements after the fact will only be made in extraordinary, documented circumstances.

CHALLENGING AN ASSIGNMENT GRADE

I also recognize that I am human too: mistakes will occasionally occur when grading your assignments and exams. Therefore, you have **one week** after work is handed back to challenge its grade. To do so, you must return the work plus a clearly written explanation of your reason for challenging the grade to me. I will promptly and seriously consider all such challenges and meet with you, if necessary, to resolve them. Work without a written explanation will not be considered. After one week, no challenges will be accepted, except

in extraordinary, documented circumstances. Of course, if you are not satisfied with your grade, but recognize that it was not due to a fault in the grading, I encourage you to talk with me to learn how to improve on your future work.

EXTRA CREDIT

Opportunities for extra credit will be provided at my discretion. If provided, extra credit will only count towards your overall quiz grade. If there are any community lectures, documentaries, television specials, news reports, web content, etc. . . on topics related to course material, please bring them to my attention. I may provide extra credit opportunities for the class based upon them.

A NOTE ON CLASSROOM COURTESY

Classes begin on the hour. Students are expected to be seated by that time and to remain seated until the class is dismissed. If you must leave before the class ends because of a medical appointment, or similar commitment, notify me before class begins and sit near the door. Students who leave without providing such notice and have not suddenly taken ill will be expected to file a drop form and not to return.

CHATHAM UNIVERSITY POLICIES

Chatham University Honor Code. Chatham University students pledge to maintain the Honor Code, which states in part: “Honor is the principle by which we at Chatham form our code of living, working, and studying together. The standards of honor at Chatham require that all students act with intellectual independence, personal integrity, honesty in all relationships, and consideration for the rights and well being of others”. Information about the Honor Code is available in the 2007-2008 Chatham SCE Handbook for Shadyside School of Nursing Students.

Disability Statement. Chatham University is committed to providing an environment that ensures that no individual is discriminated against on the basis of her/his disability. Students with disabilities, as defined under the Americans with Disabilities Act of 1990 (ADA) and who need special accommodations, should notify the assistant dean of the PACE Center as soon as possible. The PACE Center will work with students and the course instructor to coordinate and monitor the provision of reasonable academic accommodations.

Non-Registered Students Policy. In accordance with university policy, only officially registered students may attend this class and all other classes offered at the university. Please confer with your academic advisor if you need assistance with the registration process or you need additional information.