

INTRODUCTION TO LOGIC (PHIL 2203 – 001 & 002)

SPRING 2023

Instructor: Tori Cotton

E-mail: Thcotton@uark.edu

Class Times/Locations:

Section 001: MWF 11:50a – 12:40p, SCEN 0402

Section 002: MWF 12:55p – 1:45p, SCEN 0501

Office Hours: Tuesday: 10:00a – 11:30a & Friday: 2:00p – 3:30p in CENA 2 (836 W Center St)

1. WHAT IS LOGIC?

Welcome to Introduction to Logic!

Logic is traditionally concerned with recognizing patterns of argument and evaluating them. However, this is not all that logic can be used to do. Logic has critical ties to a broad variety of disciplines. Namely, computer science, linguistics, and mathematics. It lays the groundwork for interpreting the language we speak in an efficient manner, for talking broadly about truth and laws, and can even be integrated into our daily lives to look at things like the news, to understand when an argument is being used to manipulate you or when someone else is appealing to the wrong sort of data.

This course is mainly focused on skill building. Logic is a skill that must be practiced, rather than something that can be learned through reading a book alone. For this reason, coming to class and working the homework problems will be integral to your success.

2. COURSE FORMAT AND MATERIALS

Unless the University alters its policy, this course will meet in person. This is a lecture-based course, I expect you to come to class having done the reading, and ready to listen. **There is no required text for the course.** However, for extra practice problems and explanations of concepts presented in a different way, I *recommend* finding a used copy of:

A Concise Introduction to Logic. Thirteenth Edition, Patrick J. Hurley and Lori Watson. ISBN-13: 978-1305958098.

You will need a notebook and pencil or pen, digital or otherwise. Logic is unique in that it requires specialized notation, and often drawings or diagrams. This makes taking typed notes extremely difficult and detrimental to your learning ability.

3. OFFICE HOURS AND EMAILS

This course is built on mutual respect. I expect respect from you as an instructor and as an individual. In turn, I respect you as an adult and as a student. In this class, we have the opportunity

to discuss different viewpoints, and debate ideas. Some of these topics can sometimes be difficult to discuss, but the ability to talk about difficult topics with care is integral to your education as a philosopher and will remain essential to your success through academia and beyond. All opinions are welcome, if they are grounded in the evidence and are presented respectfully. I reserve the right to manage, intercede, side-line, or stop a conversation if it is leading us too far off track or if I feel that it is disrespectful to others.

Office hours are held in my office in CENA. If you have any difficulties finding the building, just send me an email! I can send you a google maps pin, which makes the process easy. If you want to come into my regular office hours, you are welcome to just show up. However, it will be more beneficial to you if you email me ahead of time. This way I can prepare materials to go over. Most students who are successful in my course attend office hours regularly.

If my office hours do not work with your schedule, I am more than happy to set up a meeting with you. To do so I need at least 3 business days of notice, and to be contacted by email to schedule this. Meetings may be either in-person or via ZOOM, based on your preference.

In your emails to me, please include your name, course title, meeting time, and student ID number.

On weekdays (M-F) I *try* to answer emails within a few hours of receiving them. Monday through Friday, my emails go straight to my phone, and I will respond to them as soon as I can.

On weekends my responses will be a little slower, and dependent on when I check my email. I typically check my email once in the morning, and once in the late afternoon on weekends. I think it is important to have off-time from things like email, social media, and etc.

Overall, I cannot guarantee that I can always answer your questions right away. Please allow 24 hours for me to answer your inquiries before re-mailing me. Closer to exams or due dates, it may take longer to get a response because my email tends to get overloaded.

4. LATE WORK, MAKEUPS, AND EXTENSIONS:

If you are unable to turn in a piece of work due to illness, death or emergency in the family, religious observance, or scholastic/leadership related university-sponsored activity, you should contact me via email. I will make accommodations for you to turn in work late or to take the exam at another time in the case of documented emergencies. However, it is your responsibility to get this documentation to me before the due date. Otherwise, late work will not be accepted.

Life outside of the classroom does exist, but I need to know what is going on to help you. Please reach out to me if you have any questions, or if something comes up that might impact your ability to complete the course and I will try to work with you to my best abilities. I want you to succeed!

5. CEA ACCOMIDATIONS:

University of Arkansas Academic Policy Series 1520.10 requires that students with disabilities are provided reasonable accommodations to ensure their equal access to course content. If you have a documented disability and require accommodation, please contact me privately at the beginning of the semester to make arrangements for necessary classroom adjustments. Please note,

you must first verify your eligibility for these through the Center for Educational Access (contact 479-575-3104 or visit cea.uark.edu for more information on registration procedures).

6. ACADEMIC DISHONESTY:

As a core part of its mission, the University of Arkansas provides students with the opportunity to further their educational goals through programs of study and research in an environment that promotes freedom of inquiry and academic responsibility. Accomplishing this mission is only possible when intellectual honesty and individual integrity prevail.

Each University of Arkansas student is required to be familiar with and abide by the University's 'Academic Integrity Policy' which may be found at <http://provost.uark.edu>. Students with questions about how these policies apply to a particular course or assignment should immediately contact their instructor.

7. GRADING POLICY

Attendance:

Attendance is required in this class. I will take attendance at the beginning of each class period. If you need to miss class for an illness, family emergency, jury duty, covid-related concern, religious observance, or university-sponsored activity, you must email me beforehand with a brief explanation of why you are missing class. If there is some other life event going on that is not covered by these excused absences, but is truly unavoidable, please reach out to me and we will work out a plan for your continued success in the course. You can miss 3 class days unexcused without penalty to your grade. **After these three absences your final course grade will drop by 1 point each time you miss class without a documented excuse.**

Homework (50%):

There will be 5 homework assignments in the form of blackboard assignments for the course. Each is worth 10% of your grade, for a total of 50%.

Examinations (50%):

There will be 2 cumulative exams in this course, each worth 25% of your grade, for a total of 50% of your course grade. The exams are two days long. **The exam dates are March 29 and 31 and May 3 and 5.**

The exams will be held in class. You will be required to a bluebook or greenbook to the exam. You must have this in order to take the exam, and I will not allow you to sit the exam without one. If you show up to the exam without the required materials, you will need to schedule a make-up exam with me via email.

There will be no final examination for the course.

8. COURSE SCHEDULE

*All dates are tentative and subject to change

Jan 18: Syllabus Day/ What is Logic?

Jan 20: Statements and Non-Statements, Arguments and Non-Arguments

Jan 23: Deduction v. Induction
Jan 25: The Counterexample Technique
Jan 27: Informal Fallacies: Weak Induction, Ambiguity, Relevance, and Ordinary Language
Jan 30: PL Symbols and Operators, Homework 1 Assigned
Feb 1: Well Formed Formulas (WFFs) and Syntax
Feb 3: Basic Translations
Feb 6: An Introduction to Truth Tables
Homework 1 Due 11:59p
Feb 8: Truth Tables Continued: The Material Conditional
Feb 10: Truth Tables in Depth
Feb 13: Tautology and Logical Equivalence
Feb 15: Contradiction and Contingency
Feb 17: Indirect Truth Tables for PL
Feb 20: Formal Fallacies, Homework 2 Assigned
Feb 22: NO CLASS
Feb 24: NO CLASS
Feb 27: Truth Trees for PL
Homework 2 Due 11:59p
Mar 1: Rules of Implication, Part 1
Mar 3: NO CLASS
Mar 6 Rules of Implication, Part 2
Mar 8: Rules of Replacement, Part 1
Mar 10: Rules of Replacement, Part 2,
Mar 13: Conditional Proof and Indirect Proofs, Tree Practice, Homework 3 Assigned
Mar 15: Proving Tautology
Mar 17: NO CLASS
Mar 20: SPRING BREAK – NO CLASS
March 22: SPRING BREAK – NO CLASS
March 24: SPRING BREAK – NO CLASS
Mar 27 Exam Review Day
Homework 3 Due 11:59p
Mar 29: **Exam 1, Part 1**
Mar 31: **Exam 1, Part 2**
Apr 3: QL, An Introduction and Symbols: Individual Constraints, Universal, Existential
Apr 5: QL Translations
Apr 7: QL Trees, Using Rules of Inference
Apr 10: QL Tree's Continued, Practice
Apr 12: Quantifier Negation
Apr 14: QL Conditional and Indirect Proofs, Tree Practice Homework 4 Assigned
Apr 17: Proving Invalidity with QL
Apr 19: Interpretations and Countermodels for QL Trees
Apr 21: Translations Revisited - Adding Identity
Apr 24: Relational Predicates & Overlapping Quantifiers, Homework 5 Assigned
Homework 4 Due 11:59p
Apr 26: Identity in Trees
Apr 28: Interpretations and Countermodels with Identity Trees
May 1: Exam Review Day
Homework 5 Due 11:59p

May 3: **Exam 2, Part 1**

May 5: **Exam 2, Part 2**