PHIL 1300 Introduction to Logic

Fall 2023

Instructor:	Adam Murray
Office:	457 University College
Office Hours:	Wednesdays, 3–4:30 p.m., or by appointment
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Lectures:	MWF, 12:30–1:20 p.m., HE 207

1 Course Description

This is an introductory course in formal logic. Its aim is to introduce you to a variety of concepts and techniques of logical reasoning. The first 2/3 of the course introduce the basics of *deductive* logic. We'll be covering some subset of the following topics:

- Syntax and semantics for propositional logic

- Proof theory for propositional logic

- Syntax, semantics, and proof-theory for first-order logic

- Basic concepts of set theory, proof by induction, and basic logical metatheory

The final 1/3 of the course will introduce you to *probability theory and inductive logic*. We'll be covering some subset of these topics:

- The calculation of simple probabilities

- Reasoning about conditional probabilities

- The calculation of expected value, and the distinction between expected value and utility

As a student, you can expect to come away from this course with a solid understanding of many of the concepts and techniques of contemporary formal logic, and an appreciation of their importance for systematic philosophy.

2 Course Texts

Readings for the course draw from the following two texts. Both are open access—meaning they are entirely free for you to download onto your computer, or to print in hard copy if you so prefer.

- *Forall x: An Introduction to Formal Logic*, by P.D. Magnus and Tim Button (University of Calgary edition).

- *Odds and Ends: An Open Access Introduction to Probability and Inductive Logic*, by Jonathan Weisberg.

Both texts will be made available to you on our course UM Learn page. In addition, there is a solutions manual corresponding to *Forall x: An Introduction to Formal Logic*, which you should download. This document contains answers to many of the practice exercises you will be completing over the course of the term. Additional course notes will be made available in class and on our course page as the term progresses.

3   Course Structure

It's very difficult to (successfully) "cram" for a logic course. But it's very easy to succeed by coming to class, staying on top of the assigned readings, and regularly working on the techniques we'll be covering at our meetings. I'll typically assign 2 or 3 problems at the end of each class, as homework to be taken up at the next meeting. Make the time to do this work, regularly and often. You will find the tests and assignments very difficult if you wait until the last minute to prepare. I encourage you to approach me if you're finding the course challenging, so that we can discuss strategies that will help you succeed.

Our class meets MWF, for 50 minutes. In addition to class meetings, two one-hour **logic labs** will be held each week. The aim of the logic labs is to provide you with an opportunity to practice and develop the skills we'll be covering in class. The graduate students running the logic labs will work through selected logic problems that we have discussed in advance, but you may also bring sample problems from the assigned exercises if you're having any difficulty completing them. **Logic labs run from 2:30 to 5 p.m. on Thursdays, in 375 University College**.[1]

4   Evaluation

Final grades in the course will be determined as follows:

- 3 in-class tests, each worth 20% (Oct. 11., Nov. 10., TBA)

- Semi-weekly problem sets, due in class on Fridays ($8 \times 5\% = 40\%$)

Detailed information on each of the above components of your evaluation will be provided early in the term.

5   Additional Course Information

5.1   Course contact

Outside of class and office hours, the absolute best way to reach me is by email. However, please note that email is an inappropriate format for asking substantive questions about the course material. Those sorts of questions are encouraged, but you should bring them to class, or to my office hours, in order that we may discuss the issues properly.

Note: When emailing me, it is important that you use your `.umanitoba.ca` or `.myummanitoba.ca` email address, in order that your message is not treated as spam. You should also include 'PHIL 1300' in the subject line of your message.

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[1]This schedule is subject to change as the term gets underway.

5.2 Deadlines and late work

If you foresee any difficulty submitting your work on time, speak to me *before*—not *after*!—the deadline. In all likelihood, we will be able to work something out.

5.3 Academic honesty

As you are undoubtedly aware, using someone else's ideas without explicit acknowledgement is stealing, and constitutes plagiarism. It is your responsibility to understand the nature of plagiarism, and what to do to avoid it in your academic work. For more information on academic infractions at the University of Manitoba, and how to avoid them, see here.

Note that the common penalty in the Faculty of Arts and Sciences for plagiarism in a written assignment, test, or examination is a grade of **F** on the piece of work. For the most serious acts of plagiarism, such as the purchase of an assignment or cheating on a test or examination, the penalty can also include suspension for a period of up to five years from registration in courses taught in a particular department or from all courses taught in this Faculty.

If you are ever in any doubt about plagiarism, and other related academic offenses, it is always best to simply speak to your instructor about whatever issues are causing the problem. **I encourage you to speak with me if you have any concerns about academic integrity, either in this course or in other courses you are taking**.

5.4 Accessibility accommodations

Should you require any accessibility-related accomodations in this course due to a disability, please **do not hesitate** to communicate this fact to me either in person or by email. Click here to learn more about accessibility-related resources available to students at the U of M.

6 Significant Dates

Classes begin . . . . Sept. 6
National Day for Truth and Reconciliation (University Closed) . . . . Oct. 2
Fall reading break (no classes) . . . . Nov. 13–17
Final date to withdraw without academic penality . . . . Nov. 21
Final class . . . . Dec. 11