

PHIL 1320 A01 Introduction to Logic

Fall 2020

Instructor: Dr. Adam Russell Murray
Office: 457 University College
Office Hours: Wednesdays, 2:30–3:30 p.m., or by appointment; to be held virtually over Zoom
Email: adam.murray@umanitoba.ca
Lectures: T/TH; 10:00–11:15 a.m.; online

1 Course Description

Welcome!

This is an introductory course in *formal logic*. Its aim is to provide you with skills in logical reasoning, argumentation, and problem-solving that are widely applicable in all areas of life, and in any professional field.

The first half of the course covers the basics of *deductive logic*. That is the sort of logic underlying arguments like the following:

1. Any student who takes a course in introductory logic at university is wise.
2. You are a student taking a course in introductory logic at university.
3. Therefore, you are wise.

That seems like a pretty good argument: if you accept its premises (statements 1 and 2), then you're more or less rationally required to accept its conclusion (3). One way to express this fact is to say that the argument is a *formally valid* argument. You can expect to leave this course with a strong understanding of the nature of formal argument validity, and related concepts pertaining to the construction and critical evaluation of patterns of ordinary, everyday reasoning (like the pattern on display in (1–3) above).

The second half of the course will introduce you to the basic concepts of *probability theory and inductive logic*. The central concept here is that of *likelihood*, or *probability*. Consider the following example. Although I'm not 100% *certain* that wearing a mask helps slow or prevent the spread of COVID-19, like most of us I think it is more likely than not that wearing a mask helps slow the spread. But suppose that as the fall season progresses I gain additional evidence—evidence I don't have *now*—for thinking that wearing a mask will help slow the spread. How should this new evidence affect my initial credence in the idea that wearing a mask helps slow the spread of COVID-19? Well, presumably, if I'm being rational, my new evidence ought to *increase* the degree to which I think that it is probable that wearing a mask helps slow the spread of this disease. That is, given my new evidence, I would be acting *irrationally* were I to fail to update my degree of credence in the hypothesis that wearing a mask helps slow the spread of COVID-19.

We will discuss formal approaches to the logic of probability that help us think in a very precise way about the influence of evidence on our explanatory hypotheses about the world around us. Naturally, this material will be very useful to you if you are interested in thinking clearly about topics of immediate public and social concern, such as the ongoing global pandemic and the appropriate social and political response to it.

2 Course Texts

Readings for each class meeting will 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. Both texts are available to you now on our course website on the UMLearn portal.

- *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.

Required reading for each week will be announced in advance in our class meetings, and posted on our course website.

3 Evaluation

Final grades in the course will be determined as follows.

1. A mid-term test (25%); to be held during regular class hours on November 5th.
2. A final exam (25%); to be held during regular class hours on December 10th.
3. Semi-weekly problem sets ($5 \times 10\% = 50\%$)

Detailed information on each of the above components of your evaluation in the course will be provided in class meetings, and posted to the course website.

4 Course Structure

4.1 Zoom

These are strange times! Barring exceptional circumstances, I don't anticipate that we will have the opportunity to meet face to face this semester. All class meetings will therefore be held online. We will be using Zoom for this purpose. You should ensure that you have a Zoom account installed on your computer (or preferred electronic device) in advance of the beginning of term. It would also be wise to familiarize yourself with the use of the program in advance of your first classes. Our meetings will be private/password-protected, and information about accessing class meetings via Zoom will be made available to you on the course UMLearn page.

4.2 Weekly meeting and tutorial sections

Our class meetings fall on Tuesdays and Thursdays, from 10:00 until 11:20am. However, the structure of our Tuesday and Thursday meetings will differ.

- On **Tuesdays**, we will have a class meeting in which I will present, explain, and discuss new course content. This will be a fast-paced and challenging course, and it is highly recommended that you make every effort to attend each Tuesday meeting. I anticipate ‘lecturing’ for approximately 55 minutes of each 80 minute block, leaving 25 minutes for questions and general discussion.
- On **Thursdays** we will have tutorial and discussion sections. The main aim of these sections is to take up and review class material, to assist you in the completion of your semi-weekly problem sets, and to prepare for the in-class tests.
 - I plan to run two of these sections every Thursday, each lasting about 40 minutes, and each dealing with the same material.
 - You will be assigned one of these sections (either **Section A** or **Section B**) as your ‘default’ tutorial section: though you should feel free to attend both, should you choose to attend only one it is preferable that you attend only your assigned section. This is to facilitate a smaller group-setting in which you will have a greater opportunity to ask questions and engage both with me and other students in the course.

4.3 Course notes

Course notes expanding upon material covered in class and in the assigned readings will be posted regularly to the course UMLearn page. You should log in and check this page on a regular (at least weekly) basis.

4.4 Virtual office hours

In addition to our two weekly meetings, I will hold a set of ‘virtual’ office hours each Wednesday afternoon, from 2–4pm. These will be run via Zoom. You should feel free to drop in and ask any questions of me, and to discuss any issues arising with our course.

4.5 Expectations and requirements

Your attendance at all course meetings is expected, though not required. When attending class, however, it is important that you respect the following guidelines in order to enable the smooth operation of a fully online course this fall.

- **Computer Microphones.** Please ensure before logging-in/joining a class meeting that your microphone is *turned off*. This is to minimize distortion/background noise for all students. You are welcome and encouraged to ask questions, and you may of course turn on your microphone to do so.
- **Cameras.** I treat it as a defeasible expectation that you have your camera on while participating in class. Your personal circumstances may make this impossible, which is entirely fine. But if you are able to do so, please turn your camera on in order that we as a group are able to engage with one another as naturally as possible. Teaching and learning tend to go much better when we can see each other face to face.
- **Be on time.** This is important. Please make every effort to join the class on time to minimize disruption and distraction.

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 philosophical 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 imperative that you use your `.umanitoba.ca` or `.myumanitoba.ca` email address, in order that your message is not treated as spam. You should also include ‘PHIL 1320’ in the subject line of your message.

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. Otherwise, late penalties are set at 1/3 of a letter grade per day, up to a maximum of 5 days. This includes weekends.

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 **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 accommodations 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

Our first class	Sept. 10
Midterm test	Nov. 5
Fall reading break (no classes)	Nov. 9–13
Final day to withdraw from this course without academic penalty	Nov. 23
Final test	Dec. 10
Final day of fall term	Dec. 11