

MODERN SYMBOLIC LOGIC

PHL245H1 F LEC0201 2023

Instructor: EAMON DARNELL

Course Email: phl245h1f.a@course.utoronto.ca

Course Web Page: [Quercus](#).

Class Meetings: **Mondays:** 3:00pm–5:00pm.
ROOM: BR 200

Wednesdays: 3:00pm–4:00pm.
ROOM: BR 200

Office Hours: **Tuesdays:** 2:00pm–3:00pm.

Zoom Link: <https://utoronto.zoom.us/j/82769178360>

Meeting ID: 827 6917 8360

No Passcode Required.

Additional office hours will be announced on Quercus.

Course Description and Outcomes:

Modern Symbolic Logic is an introductory course in first-order logic. The first half of the course will be dedicated to sentential logic—the logic of connecting and modifying statements. Students will be introduced to arguments, semantics, symbolization, and derivation techniques. The second half will expand these skills into predicate logic—this includes the logic within statements. While the obvious goal of the course is to master the technical work, students who complete the course will also have developed their reading, writing, and critical reasoning abilities dramatically.

Mode of Delivery:

This section of PHL245 is a **hybrid course**. Content presented during in-class lectures and demonstrations will be supported and supplemented by material delivered through videos posted online on the UofT's media hosting site. All course material will be accessible through Quercus via weekly modules. In addition to class and the videos, there will be a discussion forum on Piazza that will be monitored by teaching assistants, and drop-in help sessions called the Logic Lab (more on these below).

There will typically not be a class during our one-hour session on Wednesdays and you should use the free time to watch online videos and practice. The one-hour time slot will be used for (in-person) testing four times this semester. See the weekly schedule below for specifics.

Communication:

Emailing the [Course Email address](#) is the best way to communicate with your instructor for all PHL245 issues. We will do our best to respond within 48-hours (not including weekends). We will not answer emails

with questions about particular logic problems. If you have such questions, you will have to post them to the Piazza discussion board to get them answered (see below). We will also not answer emails where the answer can easily be found on Quercus or in other course materials. For issues such as missed tests, and test regrades, follow the instructions below.

You MUST have **LEC 0201** and your **Student Number** in the subject of your email

If you come to my office hours, I will be happy to answer any question that you like. This includes requesting help with any logic question—even assignment questions.

Quercus (REQUIRED):

All course materials will be posted on Quercus. This includes announcements, lecture slides, video content and demonstrations, readings, test solutions, and assignment information. Check Quercus regularly to make sure you get all the content for the course.

Logic2010 (REQUIRED):

Logic2010 is a logic program developed by Terrance Parsons and David Kaplan at UCLA. This free program will be made available to students for practice purposes and for assignments. All links and instructions can be found here: <https://logiclx.humnet.ucla.edu/>.

NOTE: If you're having problems installing the software, check the Additional Logic2010 Installation Instructions in the Course Resources module on Quercus.

Please register using your **Student Number** and not your UtorID. Make sure you select **UofT** as your institution and ensure that the **instructor** (*me*: Eamon Darnell) and **semester** (2023F) are correct, then select **PHL245 F L0201** as your course. If you forget your password, email the [Course Email address](#) with your full name, student number, and roughly the last time you remember signing in successfully.

Logic2010 will be used for Assignments 2-12. You should also use it as a question bank for practice. Please watch the instructional videos for tips on how to use Logic2010.

You must **SUBMIT EACH** of your assignment problems on Logic 2010 to get credit.

This is different from just saving your answer: **BE SURE TO SUBMIT!**

You should **CONFIRM** your submitted questions on the Logic2010 website.

Course Texts (OPTIONAL and ONLINE):

This course is an adaptation of Terrance Parsons' *Intro Logic Text*. An up-to-date version of the *TerryText* can be found through Logic2010 and is also posted on Quercus. Our class lectures are complete, which means that you do not need to read anything from this text to succeed in the course; however, doing the readings will compliment the class (and video) lectures very well.

Parsons' text is a modernization of Kalish, Montague, and Mar, *Logic: Techniques of Formal Reasoning*. You can find the KMM book in the library but be warned: it's a challenging read.

Piazza (RECOMMENDED):

Piazza is an online discussion board with lots of helpful features. If you have questions about course material, such as difficulties with logic problems, post your questions on the Piazza board. **Good questions** will be answered by your fellow students, teaching assistants, or me. This is an excellent resource for getting extra-help throughout the course.

What is a good question? It should include the problem in it—don't expect people to go search for the problem you are working on. It should include some of your own work that shows where you got stuck—it's not helpful to just get the full solution. It should not just be about basic course issues that are answered in the syllabus or in course announcements—all this stuff is in the syllabus. If your question isn't answered by a teaching assistant, odds are it's not 'good' in the senses above.

Your posts on Piazza are governed by UofT's student code of conduct. Click here for more information: <http://www.viceprovoststudents.utoronto.ca/publicationsandpolicies/codeofstudentconduct.htm>

Logic Lab (RECOMMENDED):

The Philosophy Department is offering weekly drop-in help sessions for all your extra-help needs. The Logic Lab will have regular weekly hours where a tutor will help you with your questions, including those assigned for Assignments 2–12. Even if you don't have specific problems you can **go to the Lab** to do your homework just in case something comes up. The Logic Lab times will be posted on Quercus.

Evaluation:

There will be four 50-minute tests that will always be on Wednesdays between 3:00pm and 4:00pm. Test rooms will be announced on Quercus. Each test will be worth 13.75% of your final grade. Tests will be written on paper and will be returned electronically through Crowdmark. I strongly suggest you write your test with a pencil and eraser. No matter what you use, be sure that it is dark enough so that it will scan clearly using a black-and-white scanner.

There will be 12 equally weighted assignments. Each assignment will be worth 0.83% of your final grade. Assignments will be submitted through Logic2010 except for Assignment 1, which will be on Quercus. See Quercus or the Logic2010 assignments page for details and due dates.

A cumulative final exam will be scheduled during the exam period at the end of the semester. It will be in-person, three hours in length and is worth 35% of your final grade.

Four In-Class Tests	55%
12 Weekly Assignments	10%
Final Exam	35%

Test Corrections:

All test solutions will be posted to Quercus. If you feel that one of your questions was not graded accurately, your first step is to check the solutions. Once your test is returned via Quercus, you will have 7 days (including weekends and holidays) to submit a request for a regrade. This will be done by filling out an MS Form that will be linked on Quercus. **We will not handle regrade requests over email.** Requests sent by email will not be looked at. More specific instructions can be found on the regrade request form.

Final Exam regrade requests are not handled by the instructor. Contact your registrar for information on this.

Missed Tests:

If you have a legitimate excuse for medical or other reason, then you can request approval to write the make-up test. For your first missed test, we do not require an official medical note. Simply fill out the MS FORM titled “Missed Test Form” on Quercus. You can upload a copy of documentation there if you possess any. This must be done within seven days (including weekends and holidays) of the test that you missed. The exception to this is that for test 4 there will be a much shorter window to request the make-up test. If you have an unusual request or you cannot fill out the form for some reason you may email the course email address. If you miss more than one term test you will have to discuss what will happen with your instructor. It is your responsibility to come to the instructor’s office hours or schedule an appointment.

Missing a test due to a course conflict is not a legitimate reason.

UofT has an [absence declaration policy](#) that you should know. A very important part of the policy is that “Students should also advise their instructor of their absence. Instructors will not be automatically alerted when a student declares an absence. It is a student’s responsibility to let instructors know that they have used the Absence Declaration so that you can discuss any needed consideration, where appropriate.” So, if you use the UofT absence declaration, which you should, you must still follow the above instructions and complete the missed test form.

There will be a **cumulative** make-up test at the end of the semester. The mark you earn on it will substitute for the test that you missed and will count in the weighting system detailed above. Date and time will be announced later on Quercus.

If you miss the final exam, you must contact your registrar immediately. Exams are out of the jurisdiction of individual professors.

Missed Assignments:

We will automatically accept all assignment questions submitted 48 hours past the assignment due date at a 50% penalty. We will not accept any assignments after 48 hours. If you miss an assignment for a legitimate reason, email the [Course Email address](#) to inquire about an extension. Keep in mind that because you have lots of time to complete an assignment, we will be much stricter about the granting of extensions for assignments: the subject of your email MUST include **LEC0201** and your **student number**.

Accessibility and Accommodations:

UofT has an excellent accessibility services: <http://www.studentlife.utoronto.ca>. If you need any accommodations, please contact accessibility services and then we can work together to make the course a positive experience for you.

Health and Wellness:

If you find yourself struggling with the course or any other aspect of university life, please make use of the resources at the school. Here are some links:

Registrar: <https://www.future.utoronto.ca/current-students/registrars>

Health and Wellness: <https://www.studentlife.utoronto.ca/hwc>

Personal Safety: <https://safety.utoronto.ca/>

Student Support Program: <https://www.studentlife.utoronto.ca/cie/myssp>

Sexual Violence Prevention and Support Centre: <https://www.svpscentre.utoronto.ca/>

Campus Police: <http://www.campuspolice.utoronto.ca/>

Academic Integrity:

The University of Toronto treats cases of academic misconduct very seriously. Academic integrity is a fundamental value of learning and scholarship at the UofT. Participating honestly, respectfully, responsibly, and fairly in this academic community ensures that your UofT degree is valued and respected as a true signifier of your individual academic achievement.

The University of Toronto’s Code of Behaviour on Academic Matters outlines the behaviours that constitute academic misconduct, the processes for addressing academic offences, and the penalties that may be imposed. You are expected to be familiar with the contents of this document. Potential offences include, but are not limited to:

- On tests and exams: Using or possessing any unauthorized aid, including a cell phone. Looking at someone else’s answers. Letting someone else look at your answers. Misrepresenting your identity. Submitting an altered test for re-grading.
- Misrepresentation: Falsifying or altering any documentation required by the University, including (but not limited to) doctor’s notes. Falsifying institutional documents or grades.

See <https://www.academicintegrity.utoronto.ca/> for more information.

With regard to remote learning and online courses, potential academic offences in a digital context include, but are not limited to:

- Accessing unauthorized resources (search engines, chat rooms, Reddit, etc.) for assessments.
- Using technological aids (e.g. software) beyond what is listed as permitted in an assessment.
- Posting test, essay, or exam questions to message boards or social media.
- Working collaboratively, in-person or online, with others on assignments that are expected to be completed individually.

NOTE: You are allowed an encouraged to work together on your assignments. The above policies apply to tests and final exam for which you are not allowed to work with others or consult any resources (online or otherwise).

Weekly Schedule (Tentative):

Week	Dates	Topics
1	SEP. 11	<i>Introduction</i> ; Unit 1: Arguments; Unit 2: Semantics in Sentential Logic
	SEP. 13	† † † <i>No Class</i> † † †
2	SEP. 18	Unit 2: continued; Unit 3: Symbolization in Sentential Logic
	SEP. 20	† † † <i>No Class</i> † † †

Weekly Schedule (Tentative):

Week	Dates	Topics
3	SEP. 25	Unit 3: Continued
	SEP. 27	TEST 1: Units 1, 2, and 3
4	OCT. 02	Unit 4: Derivations in Sentential Logic
	OCT. 04	††† No Class †††
5	Oct. 09	THANKSGIVING: UNIVERSITY CLOSED
	OCT. 11	TEST 2: Units 3 and 4
6	OCT. 16	Unit 5: Single-Place Symbolization in Predicate Logic; Interpreting the Quantified Language.
	OCT. 18	††† No Class †††
7	OCT. 23	Unit 6: Single-Place Derivations in Predicate Logic.
	OCT. 25	††† No Class †††
8	OCT. 30	Units 5 and 6: continued.
	Nov. 01	TEST 3: Units 5 and 6
	Nov. 06–10	READING WEEK
9	Nov. 13	Unit 7: Multi-Place Symbolizations in Predicate Logic.
	Nov. 15	††† No Class †††
10	Nov. 20	Unit 7: Multi-Place Derivations in Predicate Logic.
	Nov. 22	††† No Class †††
11	Nov. 27	Units 7 and 8: continued.
	Nov. 29	TEST 4: Units 7 and 8
12	DEC. 04	Unit 9: Semantics for Predicate Logic.
	*DEC. 06/07	Unit 9: continued; Review