

Phil 203: Elementary Formal Logic

Syllabus

Course Information:

Instructor: Dr. Audrey Yap (ayap@uvic.ca)

This course can be completed entirely asynchronously and online. However, there will be *optional* Zoom and in-person sessions each week. You are encouraged to attend at least one session per week to supplement the online material.

Zoom Tutorial Session: T 10:30am–11:20am.

In-Person Tutorial Sessions: WF 10:30am–11:20am (location TBA)

Office Hours: T/Th 9:30am–10:20am on Zoom (sign up required)

Course Website: Through Brightspace (<https://bright.uvic.ca/d21/home>)

Textbook: Abridged Version of <http://forallx.openlogicproject.org/> PDF copy available through the course website. We will also use free web-based software at <https://carnap.io/>.

Course Description:

This is an introductory course in formal logic that covers the use of symbolic techniques for the analysis and construction of good arguments. Proofs in formal logic mirror the structure of good arguments in English generally, so to construct them, we learn about good methods of inference. Not every method of reasoning results in a valid argument, so it is useful to learn about ways of differentiating good from bad methods. Since this course covers the basics of modern symbolic logic, it is extremely useful for any students who might want to continue studying logic; but any students interested in writing better arguments can benefit from it.

Learning Objectives:

You will learn the basic terminology and concepts of formal logic, and apply them to the formal languages we will learn using truth-functional connectives and quantifiers. The main skills you will learn will be:

- symbolizing English sentences in a formal language,
- using truth tables for evaluating sentences and arguments, and
- constructing logical proofs using a formal system.

Course Logistics:

All lectures and graded activities for the course can be completed completely asynchronously. This means that there are no particular times of day when you need to watch course videos, post in discussion forums, or complete your assigned work. There are still regular deadlines for completing your assigned work, though, so you will still be expected to keep up with what we are covering on any given week. The textbook is available on the course website as a downloadable PDF file. Weekly quizzes and tests will be posted on the course website, and will be completed using a system called <http://carnap.io/>. This will not require you to download any software, but you will need to be connected to the internet to complete and turn in your gradeable work.

Lectures: Lecture videos and slides will be posted on Brightspace. All videos will be captioned, and I will try to fix any errors in the automatic transcriptions, but please feel free to email me if you notice any mistakes. But this is a course where you will learn by working through material, not just by listening to me talk about it. The purpose of my lectures is to help you understand how to complete the course activities. The course schedule at the end of this document lists the topics for each week and relevant readings from the textbook. All of my course videos, modules and practice questions to work through, and the week's test or problem set will be available on the course website prior to the start of the week when the material is covered.

Tutorials: In order to make sure that you can connect with each other and with me on a regular basis, there will be three tutorial sessions per week: TWF 10:30am–11:20am. I highly encourage you to use these sessions as a chance to work through the course modules in a space where I (and your classmates) can be available to answer questions in real time. I can go over examples from the lectures more slowly or answer questions about them. The Tuesday tutorials will be held online over Zoom, and the other two (Wednesday and Friday) will be in person on campus. For the in-person sessions, you will be expected to follow whatever public health guidelines are applicable at the time.

Communication: Email is my preferred method of communication, especially for any official requests. If you ask me a question over email, you can expect a reply within about 1 working day. If you don't hear back from me after that time frame, feel free to try again in case your message went astray. When you do address me (over email or otherwise), please do so as either Professor (Prof.) Yap, Dr. Yap, or Audrey. Please don't use any of Mrs/Miss/Ms/Mr, for a variety of reasons. If you are ever nervous about sending me an email, or asking a question, feel free to include a picture of a puppy with your request. This will not affect whether or not I will be able to help you with your request, but will give you an excuse to look for pictures of puppies. Finally, my pronouns are she/her/hers. If you think I am unlikely to know the name you would prefer to be called, or the pronouns I ought to use for you through the entry that I will see for you through Brightspace, please don't hesitate to make me aware.

Office Hours: I will be available for office hours on Tuesday and Thursday mornings. My default platform for office hours will be Zoom, but if that does not work for you, please feel free to email me in advance to suggest an alternative. You will need to schedule an appointment beforehand using the following link: <https://calendly.com/ayap/office>. Appointments can be scheduled in 15 minute blocks, up to a week in advance. If you are working with a study group and would like to attend office hours as a group, simply designate one person to reserve the appointment slot, and let me know who else will be attending.

Graded Items: In order to supplement my practice questions, and the ones from the book, you will also be generating practice questions for each other. You can receive up to 8 marks for engagement by posting original (not duplicates of textbook questions or those in the practice assignments) practice questions and solutions for your classmates on the course discussion forums. Guidelines for the questions and solutions will be posted for each forum. At the end of each week, there will also be either a problem set on the week's material ($4\% \times 8$ total) or a unit test ($15\% \times 4$ total) covering the last several weeks of material. These will be completed on carnap.io, and are untimed, which means that they only need to be turned in by the due date.

Academic Integrity: You are welcome and encouraged to discuss course material with others in your class, and work through modules and practice questions together. However, you are not allowed to provide the solutions for someone else's problem sets or tests, or vice versa. If you are ever unsure about what constitutes a violation of academic integrity, more information is provided on the University Calendar: <http://web.uvic.ca/calendar/undergrad/info/regulations/academic-integrity.html>.

Extensions: I know that sometimes things do not go as planned. You are welcome to two days' worth of extensions on problem sets or tests. This means you can take two extra days to complete a single assignment, or have one extra day on two different assignments. Please let me know before the due date if you are using an extension. You also do not need to tell me why you need the extension, but if you anticipate needing more than these two days during the semester, I highly encourage you to make an appointment with me to talk about how we can plan for you to keep up with the course schedule. No extensions will be given on engagement points, since they are for the benefit of the other students in the class. However, you will only need to post 8 during the semester, so missing one or two weeks will not be a problem.

Grading Breakdown:

Gradable Item	Description	Value
Engagement	Posting practice questions on the course discussion boards.	1% x 8 weeks = 8%
Problem Sets	Questions about the week's material	4% x 8 problem sets = 32%
Unit Tests	Non-cumulative test on material from the whole unit.	15% x 4 tests = 60%
		Total = 100%

Accessibility:

If you notice any additional accessibility issues with respect to this class, please let me know and I will do my best to solve them. I would also encourage any students who might benefit from their services to register with the Centre for Accessible Learning (<https://www.uvic.ca/services/cal/>).

Numerical and Letter Grades:

Grades will be given as percentile marks. The percentile mark for the course will be converted to a letter grade in the following manner:

A+ = 90 - 100, A = 85 - 89, A- = 80 - 84, B+ = 77 - 79, B = 73 - 76, B- = 70 - 72, C+ = 65 - 69, C = 60 - 64, D = 50 - 59, F = 0 - 49. The A range means exceptional, outstanding and excellent performance. A grade in the B range means a very good, good and solid performance. A grade in the C+ or C range means satisfactory, or minimally satisfactory, performance. A grade of D indicates merely passable or marginal performance. An F indicates unsatisfactory performance.

Schedule of Topics:

- Week One: Short week — Sep 8–12
Topic: Introduction to Arguments and Formal Logic (Chap 1-2)
- Week Two: Sep 13–19
Topic: Symbolizing English (Chap 4-6)
Practice Questions posted by Sep 16
Problem Set One completed by Sep 19
- Week Three: Sep 20–26
Topic: Introduction to Truth Tables (Chap 8-10)
Practice Questions posted by Sep 23
Problem Set Two completed by Sep 26
- Week Four: Sep 27–Oct 3
Topic: Truth Tables, Continued (Chap 11-13)
Practice Questions posted by Sep 30
Test One (Translation and Truth Tables) completed by Oct 3
- Week Five: Oct 4–10
Topic: Natural Deduction (Chap 14-15)
Practice Questions posted by Oct 7
Problem Set Three completed by Oct 12
- Week Six: Oct 11–17 (Thanksgiving is Oct 12)
Topic: Natural Deduction (Chap 15-16)
Practice Questions posted by Oct 14
Problem Set Four completed by Oct 17
- Week Seven: Oct 18–24
Topic: Natural Deduction (Chap 16)
Practice Questions posted by Oct 21
Test Two (Natural Deduction) completed by Oct 24
- Week Eight: Oct 25–31
Topic: Introduction to First-Order Logic (Chap 21-22)
Practice Questions posted by Oct 29
Problem Set Five completed by Oct 31
- Week Nine: Nov 1–7
Topic: More Complex Translations (Chap 23-24)
Practice Questions posted by Nov 4
Problem Set Six completed by Nov 7

- Week Ten: Nov 8-14 (Reading Break is Nov 10-12)
Topic: Grammar Review for FOL (Chap 25)
Practice Questions posted by Nov 14
Test Three completed by Nov 14
- Week Eleven: Nov 15–21
Topic: Truth and Interpretations in FOL (Chap 27-28)
Practice Questions posted by Nov 18
Problem Set Seven completed by Nov 21
- Week Twelve: Nov 22–28
Topic: Natural Deduction for FOL (Chap 32-33)
Practice Questions posted by Nov 25
Quiz Eight completed by Nov 28
- Week Thirteen: Nov 30-Dec 5
Topic: Natural Deduction for FOL (Chap 34-36)
Practice Questions posted by Dec 2
Test Four completed by Dec 5