Phil 370: Theoretical Logic
Syllabus

Instructor: Dr. Audrey Yap (ayap@uvic.ca)
O ce: CLE B307
O ce Hours: TWF 10:30-11:20 and by appointment
Class Information: TWF 1:30-2:20 in CLE A203
Drop-in Hours: Th 2:30-3:20 in CLE D131
Course Website: Through CourseSpaces `http://coursespaces.uvic.ca`
Textbook: Open Logic Textbook, downloadable from the course website. For more information on this textbook, see `http://openlogicproject.org`
Prerequisites: Phil 203, Math 122, or permission of the instructor.

If you notice any accessibility issues with respect to this class, please let me know and I will do my best to solve them. If you require any formal accommodation, you are encouraged to register with the Centre for Accessible Learning. `https://www.uvic.ca/services/cal/`

Course Objectives: Techniques of formal symbolic logic are used in modeling deductive arguments. We use them most often to model the validity of arguments, and to prove that a conclusion follows from the premises. We have criteria for determining when one sentence is a logical consequence of others, and when one sentence is deducible from others. The *metatheory* of formal logic is the study of these rules and criteria. For instance, we want to make sure that our rules for deduction will always lead us to correct conclusions, and that we have enough rules to ensure that everything that logically follows can also be deduced. The goal of this course is to introduce you to the main ideas and metatheorems of formal symbolic logic, as well as teach you how to write mathematically rigourous proofs. It is important to know how to prove theorems, but such proofs also need to be clear and readable. Proof-writing skills will also be emphasised in this course.

Communication: O ce hours are held on a drop-in basis. You do not need to make an appointment to see me during those times, although the amount of time I can spend talking to any one person during o ce hours can depend on how many people are waiting. If you do want to schedule an appointment outside my o ce hours, try emailing me with a few suggestions for times that would work for you. I'm also happy to try and answer short questions either before or after class, time permitting. In general, email is my preferred method of communication, especially for any o cial 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 Audrey, Professor (Prof.) Yap, or Dr. Yap. 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 a ect whether or not I will be able to help you

performance. A grade in the C+ or C range means satisfactory, or minimally satisfactory, performance. A grade of D or D- indicates merely passable or marginal performance. An F indicates unsatisfactory performance.

Schedule:

All of the topics covered are discussed in the Open Logic Textbook, available through the course website. I may occasionally post supplementary notes, but you are expected to come to class and take your own notes. If you miss any classes, I encourage you to get notes from one of your classmates, since I will sometimes end up answering in class questions and coming up with examples on the y that will not be included in the posted material.

Week Nine: Mar 10, 11, 13

Topic: Soundness and Completeness.
HW6 due Mar 13

Week Ten: Mar 17, 18, 20

Topic: Completeness.
HW7 due Mar 20

Week Eleven: Mar 24, 25, 27

Topic: Model Theory.
HW8 due Mar 27

Week Twelve: Mar 31, Apr 1, 3

Topic: Model Theory. Review.
HW9 due Apr 3

Note: This syllabus is provisional, and should only be used to give a rough guide to the course schedule. Dates may be changed if necessary.