Huron University College
Undergraduate Course Outline—Intersession 2023

Philosophy 2250: Introduction to Logic

Intersession Term 2023
Mon – Thurs (Fri Tutorial)
Course is Online – OWL

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Description & Objectives

This course is intended to introduce students to the art and science of logical reasoning. To the first end, we will develop syntactic and semantic methods to test the validity of arguments using the two most basic and popular systems of modern logic: the logic of sentences, and the logic of first-order predicates with identity and definite descriptions. To the second end, we will investigate the properties of these systems (called *meta-theory*). This will help us to explain why and how these systems capture and characterize the essential aspects of our valid reasoning, especially in application to science, mathematics, computation, and everyday life.

The study of formal logic provides excellent preparation for intellectual work in almost all other disciplines. Everyone can benefit from learning, in a systematic way, various methods of sound reasoning—methods that prize precision, clarity, rigour, practice, and patience. Students in this course should expect to develop an enhanced ability to engage in disciplined argument and to critically evaluate the arguments of others, especially in philosophical and scientific contexts. Students should also be prepared to confront and hopefully overcome personal concerns about "math-phobia", or the paralyzing aversion to mathematical or technical material. Finally, to succeed students will need to learn to *try, try, and try again*. Learning how to approach an uncertain problem and to persist in the face of adversity is the primary skill this course will impart. The course assumes no prior knowledge of logic.

Requirements

- Participation: 5% (forum interaction, textbook errors, Zoom participation)
- 8 Homeworks: 16% (2% each – graded for completion)
- Daily Quizzes: 24% (1–3% each, most days via OWL Tests & Quizzes area)
- Midterm: 25% (timed assignment available May)
- Final Exam: 30% (timed assignment during the June 2023 exam period)

Quizzes reinforce content and require daily engagement. Homeworks are more substantial, encouraging consistent practice. They'll be corrected but graded for completion only—try your best to answer each question assigned. Homework submitted a day late receives 50% credit. After that no credit, but they'll still be corrected.

Students are expected to engage with OWL ***daily*** to keep up with the reading and practice schedule as outlined below and detailed in the Daily Lesson Checklists. Students ***cannot*** do well in this course without substantial daily engagement and practice.

Texts

- Merrie Bergmann, J. Moore, & J. Nelson (2014). *The Logic Book*, 6th ed. McGraw-Hill. (E-book available from Bookstore, physical available from Amazon; see OWL for a special note!)
- Various supplementary readings to be made available on OWL.

Schedule

Please note this is a six-week accelerated online course—a full-year's work in an extremely compressed timeframe. The material requires attention every single day, not just for learning but more importantly for ***skills practice***. Expectation is 4–6 hours of engagement per weekday. The pace will be quick, the workload extremely heavy, but the rewards great.

Presentation of course content will be largely asynchronous—you'll follow along day-by-day as the course progresses, working through course activities and materials so that you can meet the course deadlines. But we'll also hold several live sessions each week as a group via Zoom for questions/practice, usually Mondays and Wednesdays with an extra drop-in tutorial on Fridays. Outside these times I'll still endeavour to be as accessible as possible.

Everybody is capable of getting near 100% in this course. But it requires a serious work ethic and time investment. Dedication and practice are key—it's up to you to manage your schedule to put in the effort and time required.

Monday	Tuesday	Wednesday	Thursday	Friday
"First Term"				
May 15 §1.1–1.3	May 16 §2.1–2.2 **Homework 1**	May 17 §2.3–2.4	May 18 §3.1–3.3 + Intro to Set Theory	May 19
May 22 **Long Weekend!!**	May 23 §3.4–3.5 + SetTheory **Homework 2**	May 24 §5.1	May 25 §5.2–5.4	May 26
May 29 §3.6 + Math Proofs	May 30 §6.1–6.2 + Induction **Homework 3**	May 31 §6.3–6.4	June 1 Computation **Homework 4**	June 2 **Midterm Review!**
"Second Term"				
June 5 *Drop Date* **Midterm!**	June 6 §7.1–7.3	June 7 §7.4 **Homework 5**	June 8 7.5 + Relations & Descriptions	June 9
June 12 §8.2–8.3	June 13 §8.4, §8.6 **Homework 6**	June 14 §10.1–10.2	June 15 §10.3–10.4	June 16
June 19 §8.1, §8.5 + Truth Definition	June 20 §11.1–11.2 **Homework 7**	June 21 §11.3–11.4	June 22 Infinity & Math **Homework 8**	June 23 **Exam Review!**

Final Exam: Either June 26th or 27th, as scheduled by the Registrar.