

Course Outline: PHIL 2001 A, Introduction to Logic

Winter Term 2025

Instructor: Ian MacLean-Evans

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Office hours by appointment, over Zoom

TA names and contact info: TBA

Course description:

An introduction to the techniques and philosophical implications of formal logic with emphasis on translation of expressions into symbolic form, testing for logical correctness, the formulation and application of rules of inference, and the relation between logic and language.

Students will learn basic principles of propositional logic, including concepts like validity and soundness, translations, truth tables, derivations, and more. Students will also learn the basics of the language of first-order predicate logic.

Learning Outcomes:

Students will learn the parts of an argument, how arguments can be structured to be effective or ineffective, how to think about arguments in basic formal terms, and how basic tools of symbolic logic function. These skills will make students able to apply the principles of symbolic logic to arguments of all types. Students will be able to:

- Differentiate between components of arguments.
- Differentiate between valid and invalid arguments.
- Identify formal/structural features of valid argumentation.
- Construct truth tables for expressions written in basic propositional logic.
- Translate between English and basic propositional logic, and be able to demonstrate validity in basic propositional logic using derivations and truth tables.
- Translate between English and basic first-order predicate logic.

Required Text:

We will be using *The Carnap Book*, by G. Leach-Krouse and J. Ehrlich. *It is 100% free and is online.* Info on Brightspace. This course requires no special purchases.

Electronic Requirements:

The course content (pre-recorded lectures, grades, supplementary materials, etc) will be hosted through Brightspace. We will have regular Zoom tutorial/question sessions. As such, you need a computer with access to the internet and Zoom. We will also use a free online program called *Carnap.io*. More information on using the Carnap program will be available on Brightspace. No installations are required and it is 100% compatible with Windows and Mac.

Content Calendar: Dates You Should Watch Lectures and Do Readings by, Dates of Live Review Sessions, and Dates of Tests

Date	Material Covered in class	Chapter(s) Covered
Jan 6 th	Course Structure, What is logic?, Basics of our formal language	Ch 1
Jan 13 th	Translations between propositional logic and English	Ch 2
Jan 20 th	Intro to derivations/direct derivations	Ch 3
Jan 27 th	Conditional derivations	Ch 4
Feb 3 rd	Nested derivations, indirect derivations	Ch 5 and 6
Feb 10 th	Intro to derived rules	Ch 7
Feb 17 th	Reading week, no class	
Feb 24 th	Live review over Zoom starting at 6:05pm, practice exam review	
March 3 rd	Midterm test. Will be available for a 24 hour period, but once started will only have 3 hours to complete. The 24 hour period may start before this day or end after this day, but most of it will fall on March 3 rd .	
March 10 th	Derivation rules for "and", "or", and "if and only if"	Ch 8
March 17 th	More advanced translations between propositional logic and English, more derived rules	Ch 9
March 24 th	Truth tables	Ch 10
March 31 st	Quantified Predicate Logic Translations	Ch 11
April 7 th	Live review over Zoom starting at 6:05pm, practice exam review	
	Final Exam: Date TBD will be available for a 24 hour period, but once started will only have 3 hours to complete. 24 hour period may range across two calendar days.	

Problem Set Due Dates

Due Dates	Problem Sets Due
Jan 20 th , 4:00pm	1-3
Jan 27 th , 4:00pm	4
Feb 3 rd , 4:00pm	5
Feb 10 th , 4:00pm	6-7
Feb 24 th , 4:00pm	8
March 17 th , 4:00pm	9
March 24 th , 4:00pm	10-12
March 31 st , 4:00pm	13-14
April 7 th , 4:00pm	15

Live Sessions:

I will host weekly zoom sessions on ***Mondays at 7:05pm***, to go over unresolved questions and do practice together. These sessions may last up to half an hour. I will also host long review sessions over zoom on the "review" dates specified in the course calendar, where we will go over the kinds of questions that could be on your midterm/final. Those long review sessions may last up to two hours, and will start at 6:05pm. *It is strongly recommended that you make use of these live sessions to clarify content you are struggling with.* Specific timings on Brightspace.

Once per week, your TA will run a tutorial on recent content on zoom. Tutorials will last up to 50 minutes. This is why it is *extremely* important that you consume course content *before* tutorials. Your TA is there to help you, so watch the lectures in advance and bring them your questions! See Brightspace for how to access each tutorial.

If no one attends our live sessions (mine or the TA tutorials) within the first 5 minutes of their start times, or if questions from students run out, then we may end the sessions early.

Content Posting Schedule:

Course content will be available on the Brightspace page. Lectures will be pre-recorded and other content may be included in each lesson. Lectures will include explanations of relevant concepts and examples of their application. All content will be posted well in advance of the dates on the course calendar. *The dates in the course calendar are when you should have watched lectures/read chapters by, but you will find it helpful to watch lectures and do readings in advance of those dates.* Assignments and tests will be completed on Carnap.io, information available on Brightspace. *Grades will be posted on Brightspace. **Grades automatically generated on Carnap are NOT to be taken as official.** Test grades should not be expected earlier than 2 weeks after the day of the test.*

Evaluation/Grading:

- Carnap problem sets (**30%**): You will be assigned 15 problem sets throughout the semester. Each problem set is thus worth 2% of the final grade. These problem sets will be completed online on Carnap, and you can only submit your work on questions once you find a correct answer. As such, they are effectively marked for completion. So, if you complete them all on time, you get a free 30%! Completing them will also get you some of the necessary practice for tests. *15 sets might sound like a lot*, but each of them are at most 10 questions, and shouldn't be absurdly time consuming. You can get partial credit for a set by completing only some of the questions, or by completing some questions late. Questions completed late are worth 40% of their initial value towards the total of their set's value. Due dates are determined per set. Do the sets right after you watch the relevant lectures, and **do them early in the week so you have time to ask questions!**
- Midterm test (**35%**): There will be a midterm during the semester. It will be completed on Carnap.io (barring technical issues).
- Final exam (**35%**): Will be sometime during the final exam period. Also to be completed on Carnap (barring technical issues). It will only test content from after the midterm.

Late or Missed Work:

- Homework: Carnap problem set questions will be worth 40% of their value if submitted after the due date. The final day to submit late problem set questions will be announced once we have a final exam date, but will likely be a few days before the final exam.
- Midterm Test: The midterm will not have makeup dates if missed, barring exceptional circumstance. Technical issues that delay submission of completed tests will be considered on a case-by-case basis. If you anticipate needing accommodations, please reach out to me well in advance of the test date. Reaching out early will make it much more likely that we can arrange something for you.
- Final Exam: Students should be available during the exam period to complete our course's final exam. Final exams cannot be submitted late, even with penalty. However, I recognize that sometimes, as our department policies put it, "students encounter circumstances beyond their control where they may not be able to write a final examination or submit a take-home examination." These circumstances may include, for example, serious illness or death of a loved one. If you are subject to such circumstances and you miss the final exam, you can apply for a deferral. Information on that process can be found [here](#).

Email policy:

Email questions about course content to your TA's first. If the question persists then I am happy to answer it! Requests for accommodations should be sent directly to me. On weekdays, I will do my best to respond to emails within 24 hours of receiving them, but may take 48 hours. On weekends, I may not respond to emails at all. So, if you send me an email around lunch time on Friday, you may not hear back until Monday. Please give TA's at least the same amount of time to reply (they also have student obligations). Attempt homework as early as possible so that we have time to answer questions before the due date!

Use of Generative AI and Plagiarism:

If instructors suspect use of generative AI tools (e.g., ChatGPT) we can ask students to submit evidence of their work, including rough notes, drafts, video-recordings, photocopies, etc. Instructors may also require that students explain the steps they took when completing the assignment. *If we suspect that students are using each other's answers for evaluated work (i.e., are committing plagiarism), we are entitled to address that in the normal fashions.* Please see the university's policies on plagiarism [here](#).

Permissibility of group or collaborative work:

Students are encouraged to help each other with general questions or information about the course content, but are *not* to solve each other's homework problems and are *especially not* to solve each other's midterm or final exam questions.

Department of Philosophy and Carleton University Policies (Fall/Winter 2024-25)

Assignments:

Please follow your professor's instructions on how assignments will be handled electronically. There will be NO hard copies placed in the essay box this coming year.

Evaluation:

Standing in a course is determined by the course instructor subject to the approval of the Faculty Dean. This means that grades submitted by the instructor may be subject to revision. No grades are final until they have been approved by the Dean.

Deferrals for Term Work:

If students are unable to complete term work because of illness or other circumstances beyond their control, they should contact their course instructor no later than *three working days* of the due date. Normally, any deferred term work will be completed by the last day of the term. Term work cannot be deferred by the Registrar.

Deferrals for Final Exams:

Students are expected to be available for the duration of a course including the examination period. Occasionally, students encounter circumstances beyond their control where they may not be able to write a final examination or submit a take-home examination. Examples of this would be a serious illness or the death of a family member. If you miss a final examination and/or fail to submit a take-home examination by the due date, you may apply for a deferral no later than *three working days* after the original due date (as per the University Regulations in [Section 4.3 of the Undergraduate Calendar](#)). Visit the [Registrar's Office](#) for further information.

Plagiarism:

It is the responsibility of each student to understand the meaning of 'plagiarism' as defined in the Undergraduate or Graduate Calendars, and to avoid both committing plagiarism and aiding or abetting plagiarism by other students. ([Section 10.1 of the Undergraduate Calendar Academic Regulations](#))

Academic Accommodation:

You may need special arrangements to meet your academic obligations during the term:

- *Pregnancy or religious obligation:* write to your professor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit the [EDC](#) website.
- *Academic accommodations for students with disabilities:* The [Paul Menton Centre](#) for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send your Letter of Accommodation at the beginning of the term, and no later than two weeks before the first in-class test or exam requiring accommodation. After requesting accommodation from PMC, meet with your professor to ensure accommodation arrangements are made.
- *Survivors of Sexual Violence:* As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and where survivors are supported through academic accommodations as per [Carleton's Sexual Violence Policy](#).
- *Accommodation for Student Activities:* Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.

Important Dates:

- Sept. 4 Classes start.
- Sept. 17 Last day for registration and course changes for fall term and fall/winter (two-term) courses.
- Sept. 30 Last day for entire fee adjustment when withdrawing from fall term or two-term courses. Withdrawals after this date will result in a permanent notation of WDN on the official transcript.
- Oct. 14 Statutory holiday. University closed.
- Oct. 21-25 Fall Break – no classes.
- Nov. 22 Last day for summative tests or examinations, or formative tests or examinations totaling more than 15% of the final grade, before the official examination period.
- Dec. 6 Last day of fall term classes. **Classes follow a Monday schedule.** Last day for academic withdrawal from fall term courses. Last day for handing in term work and the last day that can be specified by a course instructor as a due date for term work for a fall term course.
- Dec. 9-21 Final examinations for fall term courses and mid-term examinations in two-term courses. Examinations are normally held all seven days of the week.
- Dec. 21 All take-home examinations are due.

- Jan. 6 Classes begin.
- Jan. 17 Last day for registration and course changes in the winter term.
- Jan. 31 Last day for a full fee adjustment when withdrawing from winter term courses or from the winter portion of two-term courses. Withdrawals after this date will result in a permanent notation of WDN on the official transcript.
- Feb. 17 Statutory holiday. University closed.
- Feb. 17-21 Winter Break – no classes.
- Mar. 15 Last day for academic withdrawal from fall/winter and winter courses.
- Mar. 25 Last day for summative tests or examinations, or formative tests or examinations totaling more than 15% of the final grade, in winter term or fall/winter courses before the official examination period.
- Apr. 8 Last day of two-term and winter term classes. Last day for handing in term work and the last day that can be specified by a course instructor as a due date for two-term and for winter term courses.
- Apr. 9-10 No classes or examinations take place.
- Apr. 11-26 Final examinations for winter term and two-term courses. Examinations are normally held all seven days of the week.
- Apr. 18 Statutory holiday. University closed.
- Apr. 26 All take-home examinations are due.

Addresses:

Department of Philosophy:
www.carleton.ca/philosophy
520-2110

Registrar's Office:
www.carleton.ca/registrar
520-3500

Academic Advising Centre:
www.carleton.ca/academicadvising
520-7850

Writing Services:
<http://www.carleton.ca/csas/writing-services/>
520-3822

MacOdrum Library
<http://www.library.carleton.ca/>
520-2735