

## INTRODUCTION TO LOGIC: PHIL 2001B

Carleton University, Philosophy Department

Winter 2022, online blended course

Tuesday, 6:05-7:55 PM

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Office Hours: Tuesday, 5-6 PM, online

TAs: TBD

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**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. Special emphasis will be placed on practice. Open to first-year students.

**Objectives:** In this course students will develop and strengthen skills to identify, evaluate and construct arguments; cultivate a critical thinking practice through the study of varied examples; and understand argument as a dialogical process necessary for private and public decision making. More specifically, the aims of this course are to:

- Define what an argument is and distinguish it from non-argument
- Differentiate between valid and invalid arguments
- Investigate the relationship between truth and validity
- Identify formal/structural features of valid argumentation
- Recognize the more common fallacies to be avoided in reasoning
- Construct arguments consistent with best practices in a discipline, with special application in philosophy; apply logical reasoning to controversies in ethics, politics, science and others
- Formulate constructive responses to criticism
- Understand the function of logic in the context of theories of/issues about meaning, knowledge, values and/or reality

### Required Material

1. Harry J. Gensler, *Introduction to Logic*, 3<sup>rd</sup> edition (or 2<sup>nd</sup> edition)
2. LogiCola program – available free, at <http://www.harryhiker.com/lc/>
3. Various supplementary materials that will be posted on cuLearn

### Course requirements

- There will be homework due most weeks (8 assignments in total).
- Two mid-term tests.
- Final exam, cumulative.

It is vital to keep up with the class material, because the lessons build on each other. Attending the live lectures, reviewing the posted material, paying attention, and asking questions are crucial components for success in the course.

### Course format

This course features a weekly lecture (Tuesdays 6:05-7:55) and tutorials as follows:

- Mondays 10:35-11:25 (B02)
- Wednesdays 11:35-12:25 (B01)
- Wednesdays 12:35-1:25 (B04)
- Wednesdays 2:35-3:25 (B03)

You must sign up for the lecture, as well as one of the scheduled tutorials. Both of these components are part of the course. The tutorials are used for practice and application of the main concepts taught in the lecture.

### Course sections

1. Foundational concepts of logic
2. Syllogistic logic
3. Propositional logic
4. Propositional proofs and refutations
5. Basic quantificational logic

### Online blended learning

This is an online blended course, which means that some material will be presented live (you must connect at certain times) and some will be pre-recorded lectures and informational material that you can access at any time after being uploaded. The class time (partially or entirely) will be used for review, practice, questions, etc. Since the course is skill-based, these practice sessions are essential. Tests will be online, during class time.

## **E-Mail & BrightSpace**

It is your responsibility to check your Carleton e-mail and BrightSpace regularly. Important course documents, as well as the most current class schedule and homework assignments, are posted on BrightSpace, which is up to date until at least the next test.

I can best be reached by email, but please note that I am not permanently “on-call”. I will do my very best to answer all messages in a timely manner, but it’s advisable not to leave important or emergency messages until the last minute, because they might not reach me on time.

Also note that more complex questions about the material covered in class or problem sets in the book are best addressed during practice sessions – please take advantage of those.

## **How to succeed in this course**

1. **Read and abide by the University and Departmental Policies outlined at the end of this document.**
2. **Preparation** – Do the reading and all other assignments before you attend or play the lecture. I recommend that you first skim the text to get a general idea of the content, then read slowly and carefully, outlining major points and noting your questions.
3. **Respect** – Please always be respectful and civilized toward other students and me. This includes, for example, not interrupting when others are talking, maintaining order and silence so others can make the best of their learning experience and, obviously, not displaying any sort of bigoted or discriminatory views. Always make sure you use the appropriate tone with your professor and your colleagues, whether live or in written communication. If unsure about the right way to communicate, google it. [Here’s](#) one good source.
4. **Live sessions** – Keep your device camera turned off. Keep your device microphone muted, unless you need to speak. Phones must be turned off or silenced during live sessions. You must resist the urge to constantly browsing the web, checking for messages or, even worse, sending messages during lecture.
5. **Plagiarism and cheating** are very serious academic offenses and are unacceptable. I expect all assignments to be completed independently by each student. Any work you submit and represent as your own must actually be your own. If I believe you have cheated, I will immediately send an incident report to the Dean’s Office, which will determine further action, in accordance with University Policies.

## **Grades**

Any work submitted late will receive a **50% grade reduction**. Exceptions will be granted only if I receive the request for late submittal with a valid and properly documented reason (such as a doctor’s note indicating injury or illness) no later than the due date. Special arrangements for make-up tests must be made in advance and with proper documentation. Personal reasons will be accepted only in extremely rare cases, at the discretion of the instructor.

You can expect a return time for test grades of **2 weeks**.

There will be **no shifting** of any portion of the grade to another assignment, as it is against this course’s policies.

## **Homework:**

The homework will be done through the LogiCola program. You must submit the scores through cuLearn (**not email**) before each deadline. Each problem set you complete on time (at any level) counts toward 1 point for your homework grade, up to a total of 51 for the semester. Late assignments (at any level) are penalized by 50%. If you try to fake your scores, my program will show it to me automatically and this will count as cheating (see statement above about cheating and its repercussions).

**How Logicola scores count toward test grades:** Before each test, I calculate the average highest score (level) at which you did all the assigned exercises having to do with the material on the test. The default level for this course is 6 (the maximum level is 9). Your exercise scores average, if above 6, adds a corresponding bonus to the next test grade. So: if your average level is 7 you get a +1 bonus on the test; if the average level is 8 you get a +2 bonus on the test, and if the average level is 9, you get a +3 bonus on the test.

**Tutorials:** attendance in tutorials may be taken into account into the calculation of the final course grade, if your grade needs more than 0.50 points to get the next letter grade up.

Final grades will be calculated as follows:

- Homework: 15 % – late assignments will be penalized by half
- Tests: 50 % (2x25%) – no make-ups, unless with prior notice and documented excuse
- Final Exam: 35 % – cumulative

**Schedule:** Posted and regularly updated on Brightspace. Here is the tentative schedule:

Date	Do in class	Reading for Today	HW for today
11-Jan	Syllabus, Logicola, Pre-test, What is logic; arguments, validity, soundness		
18-Jan	Syllogisms - Easier translations, star test, English Arguments, harder translations	1-19; 3rd 1-17	
25-Jan	Syllogisms - Deriving conclusions, Venn diagrams, idiomatic. Review	20-30; 3rd 18-27	H1: BF, EF, AEM, AET, BH, BS, BE
1-Feb	<b>Test 1</b>		H2: AHM, AHT, BD, BC, BI
8-Feb	Propositional - Easier translations, simple truth-tables, equivalences, truth-evaluations, complex truth-tables	118-128; 3rd 112-121	
15-Feb	Propositional - truth-table test, truth-assignment test; harder translations, idiomatic arguments	129-142; 3rd 122-135	H3: CEM, CET, DTE, DFE, DTH, DTM, DUE, DUM, DUH, DFM, DFH
1-Mar	Proofs - Derivations: S-rules and I-rules	143-152; 3rd 136-145	H4: DAE, DAM, DAH, CHM, CHT, EI, ES, EE
8-Mar	Proofs - Easier proofs and refutations	153-162; 3rd 146-156	
3=15	Proofs - Harder proofs and refutations. Review	167-175; 3rd 161-170	H5: FSE, FSH, FIE, FIH, FCE, FCH, FTE, FTH, GEV, GEI, GEC
22-Mar	<b>Test 2</b>		H6: GHV, GHI, GHC, GMC
29-Mar	Quantificational- Easier translations	182-186; 3rd 182-185	
5-Apr	Quantificational - Easier proofs and refutations	187-194; 3rd 186-193	H7: HEM, HET
12-Apr	Review		H8: IEV, IEI, IEC
	<b>Final Exam: Apr 14-28 (TBD)</b> <a href="https://carleton.ca/ses/exam-schedule/">https://carleton.ca/ses/exam-schedule/</a>		

## Department of Philosophy and Carleton University Policies (Fall/Winter 2021-22)

### **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](mailto: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. 8	Classes start.
Sept. 22	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. 11	Statutory holiday. University closed.
Oct. 25-29	Fall Break – no classes.

Nov. 26	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. 10	Last day of fall term classes. <b>Classes follow a Monday schedule.</b> 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. 11-23	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. 23	All take-home examinations are due.
Jan. 10	Classes begin.
Jan. 24	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. 21	Statutory holiday. University closed.
Feb. 22-25	Winter Break – no classes.
Mar. 29	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. 12	Last day of two-term and winter term classes. <b>Classes follow a Friday schedule.</b> Last day for academic withdrawal from fall/winter and winter 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 two-term and for winter term courses.
Apr. 13	No classes or examinations take place.
Apr. 14-28	Final examinations for winter term and two-term courses. Examinations are normally held all seven days of the week.
Apr. 15	Statutory holiday. University closed.
Apr. 28	All take-home examinations are due.

### **Addresses:**

Department of Philosophy:  
[www.carleton.ca/philosophy](http://www.carleton.ca/philosophy)  
 520-2110

Registrar's Office:  
[www.carleton.ca/registrar](http://www.carleton.ca/registrar)  
 520-3500

Academic Advising Centre:  
[www.carleton.ca/academicadvising](http://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