



PHIL*2110 Formal Logic

Winter 2021

Section(s): C01

Department of Philosophy

Credit Weight: 0.50

Version 1.00 - January 07, 2021

1 Course Details

1.1 Calendar Description

This course studies the basic principles and techniques of formal logic. The analysis of the logical structure of sentences and arguments is explored, together with the fundamental principles of elementary sentential logic and quantification.

Pre-Requisites: 2.00 credits or (1 of PHIL*1000, PHIL*1010, PHIL*1050)

1.2 Course Description

This course introduces the basic principles and techniques of analyzing arguments formally. Topics to be covered include: translating natural language arguments into symbolic notation, testing validity using truth tables and interpretations, and deduction rules for sentential and predicate logic. This course is introductory and assumes no prior familiarity with formal logic and requires no special aptitude in math.

1.3 Timetable

Lectures: M/W 1:00 – 2:20 virtual (i.e. synchronous) lectures on Teams. The Teams link will be posted on CourseLink.

1.4 Final Exam

A (remote) Final Exam is scheduled for **Monday, April 26, 2021, 7pm-9pm.**

2 Instructional Support

- **Instructor:** Karyn Freedman
- **Email:** karynf@uoguelph.ca
- **Phone:** 824-4120 x 53232
- **Office:** 354 MacKinnon
- **Office Hours:** Via Teams, Monday 3-4pm, or by appointment.

2.1 Teaching Assistant

Molly Graham (mgraha14@uoguelph.ca)

3 Learning Resources

Text (required)

Virginia Klenk, *Understanding Symbolic Logic*, Pearson, 5th edition. Note: this text has just gone out of print, but I will make the text available to you online, via Teams.

4 Learning Outcomes

4.1 Course Learning Outcomes

By the end of this course, you should be able to:

1. • *Identify* and *critically evaluate* arguments in a way that is clear and well-reasoned;
 2. • *Skillfully* use formal tools for sound justification and rational persuasion in predicate logic and propositional logic;
 3. • *Simplify* and *clarify* the central assumptions of arguments that are couched in specialized or complex vocabulary.
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5 Teaching and Learning Activities

Remote learning:

Symbolic logic can be a lot of fun, but it requires dedicated effort from the beginning of the semester all the way through. The key to doing well in logic is to keep up with the material. The units are cumulative, with each new lesson building on the previous one. In order to succeed in this class, *you must do the exercises* at the end of each unit. You will not be graded on them, but you will soon discover that you have to practice in order to master the material. I will help you stay on top of the material by quizzing you on it regularly throughout the semester.

With logic, most students depend on classroom instruction; they learn by working through the material and exercises together, during class time. I want to give students the same opportunities to learn as if we were meeting in person, and so I will be holding regularly scheduled classes throughout the semester.

Virtual Classes: unless otherwise indicated on the syllabus, we will meet for our regularly scheduled class every Monday and Wednesday, from 1:00-2:20, on Teams. I will also be posting lecture notes on CourseLink, though these notes are not meant to replace class lectures but should be seen as a supplement. I will post these notes prior to the start of the week (usually on Sunday evening).

Teams Link: a link to our PHIL 2110 W21 Team will be posted on CourseLink.

5.1 Schedule of Readings

| | | |
|------------|-------------------------------|-------------|
| January 11 | Class Mechanics; Introduction | Unit 1 |
| January 13 | Sentential Logic | Unit 2 |
| January 18 | Symbolizing English Sentences | Units 3 & 4 |
| January 20 | (cont'd) quiz #1 | (cont'd) |

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|------------------|-----------------------------------|----------|
| January 25 | WFFs | Unit 21 |
| January 27 | Truth Tables | Unit 5 |
| February 1 | Truth Tables | Unit 6 |
| February 3 | Test #1 | |
| February 8 | Proof Method | Unit 7 |
| February 10 | (cont'd) quiz #2 | (cont'd) |
| February 15 & 17 | READING WEEK - NO CLASSES | |
| February 22 | Replacement Rules | Unit 8 |
| February 24 | (cont'd) quiz #3 | (cont'd) |
| March 1 | CP & IP | Unit 9 |
| March 3 | Predicate Logic | Unit 10 |
| March 8 | Quantifiers | Unit 11 |
| March 10 | Test #2 | |
| March 15 | Categorical Propositions | Unit 12 |
| March 17 | Symbolization for Predicate Logic | Unit 13 |
| March 22 | Quantifier Form | Unit 14 |
| March 24 | (cont'd) quiz #4 | (cont'd) |
| March 29 | Proofs in Predicate Logic | Unit 15 |

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|----------|---------------------------------|----------|
| March 31 | (cont'd) quiz #5 | (cont'd) |
| April 5 | Invalidity in Quantifier Logic | Unit 16 |
| April 7 | <i>Final Exam Review</i> | |

6 Assessments

Summary of Course Requirements*

***If a student is ill, or cannot attend class, or complete an assignment for reasons connected to their health, they will be accommodated; in these cases, please contact me directly.**

1. 5 quizzes (5 x 2%): 10%. These quizzes will consist of a number of exercises (like the ones in the text). You can earn a grade of 1/2 if you complete the quiz and get at least some of it right (that is, show decent comprehension of the material), or 2/2 if you complete the quiz and get most of it right (that is, show very good comprehension of the material). You will get a 0/2 if you don't do the quiz or get it entirely wrong.

- On quiz days, we will meet on Teams as usual, and spend no longer than 20 minutes reviewing the material together, after which time I will post the quiz on CourseLink. The quiz will be designed to be completed within 30 minutes, but you will have 1 hour in which to do it and then turn it in via Dropbox.
- Technically, these will be 'open-book' quizzes, ***but students are required to work independently.***
- Students who are unable to write a quiz due to medical (or other) reasons must contact me directly.

2. 2 Tests (2 x 30%): 60%. The first test will cover all the units preceding it; the second test will cover all the units completed after the first test. Both tests will consist of the kinds of exercises that are in the text. The tests will be designed to be completed in 1 hour 20 minutes (as if they were being written in person, in class), but I will give you 2 hours to do them. There will be no lectures on these days.

- **Test #1** is scheduled for **Wednesday, February 3, 2021**. I will post the test on CourseLink at **1:00pm**, and it will be due (via Dropbox) by **3:00pm**.
- **Test #2** is scheduled for **Wednesday, March 10, 2021**. I will post the test on CourseLink at **1:00pm**, and it will be due (via Dropbox) by **3:00pm**.
- Technically, these will be 'open-book' tests, *but students are required to work independently*.
- Students who are unable to write a quiz due to medical (or other) reasons must contact me directly.

3. Final Exam: 30%. This exam will be on all the material that we will have covered since test #2. It will be the same approximate length as the 2 tests – designed to be completed in about 1 hour 20 minutes, though you will have the full 2 hours to write it.

- **The Final Exam** is scheduled for **Monday, April 26, 2021, 7pm-9pm**.
- Technically, this is an 'open-book' final exam, *but students are required to work independently*.
- Students who are unable to write the exam due *must follow the guidelines set out in Undergraduate Calendar*.

7 Course Statements

7.1 Inappropriate online behaviour will not be tolerated

Examples of inappropriate online behaviour include:

- Posting inflammatory messages about your instructor or fellow students
- Using obscene or offensive language online

- Copying or presenting someone else's work as your own
- Adapting information from the Internet without using proper citations or references
- Buying or selling term papers or assignments
- Posting or selling course materials to course notes websites
- Having someone else complete your quiz or completing a quiz for/with another student
- Stating false claims about lost quiz answers or other assignment submissions
- Threatening or harassing a student or instructor online
- Discriminating against fellow students, instructors and/or TAs
- Using the course website to promote profit-driven products or services
- Attempting to compromise the security or functionality of the learning management system
- Sharing your user name and password
- Recording lectures without the permission of the instructor

8 University Statements

8.1 Email Communication

As per university regulations, all students are required to check their e-mail account regularly: e-mail is the official route of communication between the University and its students.

8.2 When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. The grounds for Academic Consideration are detailed in the Undergraduate and Graduate Calendars.

Undergraduate Calendar - Academic Consideration and Appeals

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Graduate Calendar - Grounds for Academic Consideration

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

Associate Diploma Calendar - Academic Consideration, Appeals and Petitions

<https://www.uoguelph.ca/registrar/calendars/diploma/current/index.shtml>

8.3 Drop Date

Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all students (undergraduate, graduate and diploma) except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available in their respective Academic Calendars.

Undergraduate Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

Graduate Calendar - Registration Changes

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/genreg-reg-regchg.shtml>

Associate Diploma Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/diploma/current/c08/c08-drop.shtml>

8.4 Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

8.5 Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to book their exams at least 7 days in advance and not later than the 40th Class Day.

For Guelph students, information can be found on the SAS website
<https://www.uoguelph.ca/sas>

For Ridgetown students, information can be found on the Ridgetown SAS website
<https://www.ridgetownc.com/services/accessibilityservices.cfm>

8.6 Academic Integrity

The University of Guelph is committed to upholding the highest standards of academic integrity, and it is the responsibility of all members of the University community—faculty, staff, and students—to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff, and students have the responsibility of supporting an environment that encourages academic integrity. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

Undergraduate Calendar - Academic Misconduct
<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Graduate Calendar - Academic Misconduct
<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

8.7 Recording of Materials

Presentations that are made in relation to course work - including lectures - cannot be recorded or copied without the permission of the presenter, whether the instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

8.8 Resources

The Academic Calendars are the source of information about the University of Guelph's procedures, policies, and regulations that apply to undergraduate, graduate, and diploma programs.

Academic Calendars
<https://www.uoguelph.ca/academics/calendars>

8.9 Disclaimer

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings and academic schedules. Any such changes will be announced via CourseLink and/or class email. All University-wide decisions will be posted on the COVID-19 website (<https://news.uoguelph.ca/2019-novel-coronavirus-information/>) and circulated by email.

8.10 Illness

The University will not normally require verification of illness (doctor's notes) for fall 2020 or winter 2021 semester courses. However, requests for Academic Consideration may still require medical documentation as appropriate.
