

# Introduction to Logic: PHIL 150

Fall 2020

Instructor: Kobi Finestone

Email: [kobi.finstone@duke.edu](mailto:kobi.finstone@duke.edu)

## Course Description

This course is intended to provide you with the skills to evaluate and create arguments, both in formal logical languages and in ordinary English. We will begin the course by running through general aspects of logic and connecting it to everyday reasoning. The bulk of the course will be devoted to the construction and use of various formal logic languages. This will include translations between the formal languages and English as well as the construction of logical proofs. The final section of the course will deal with the Philosophy of Logic and examine the nature of formal languages and logical inference.

## Asynchronous Sessions

There will be asynchronous lectures of varying length recorded ahead of time. These lectures will be uploaded to Sakai along with PowerPoint slides, when applicable, and instructor notes, when applicable. All lectures will be uploaded at the beginning of the course in order to ensure maximum student flexibility.

## Synchronous Sessions

There will be a small number of **optional** synchronous sessions throughout the semester which are meant to act as a supplement to the asynchronous course. These will include: (I) Introductory Meeting, (II) Midterm Review Session, and (III) Final Review Session. All synchronous sessions will be conducted via Zoom and will be recorded with recording uploaded to Sakai after the end of the sessions. Moreover, the review sessions will be scheduled via doodle polls in order to maximize attendance.

## Office Hours

Students will have the opportunity to schedule one-on-one office hours throughout the week. During these **optional** supplementary meetings, students and instructor can review past concepts, course progress, and future assessment.

These sessions will be arranged via **email** at either the student or instructor initiation and will be conducted over Zoom. Time and date will be arranged over email in order to maximize student and instructor flexibility. If requested, joint office hours are possible and are encouraged. Moreover, students are encouraged to email instructor with questions and concerns at any time. This can include both questions about content or about assessment or scheduling.

## **Assessment**

### Homework

There will be **seven** homework assignments spread throughout the semester (see due dates below on calendar) and will correspond to the seven formal topics covered in the course. These homework assignments will be assessed on **good faith effort** and **completion**. As long as a student has demonstrated a genuine effort to do the assignment and all questions are attempted, full points will be awarded.

Homework assignments will face **late penalties**. If an assignment is turned in *after* the due date and time then there will be a 50% late penalty automatically installed. If a student is unable to turn in an assignment on time, the student is encouraged to contact the instructor to arrange an extension.

All homework assignments will be uploaded to Sakai at the beginning of the course and will be turned in on Sakai under the assignments tab. All uploads must be a **single PDF** file. Further concerns about the turn-in procedure should be directed to the instructor.

### Exams

There will be **two** exams during the semester. The midterm will take place on **September 28<sup>th</sup>** and the final will take place on **November 20<sup>th</sup>**. The midterm will roughly cover the Sentence Logic Language while the final will cover the Predicate Logic (with identity) Language.

Each exam will be composed of *both* formal proof exercises and short answer sections where students will have to engage in the underlying philosophical topics. Questions about exam content and structure should be directed to the instructor.

Exams will be distributed by email directly to students on the day and time of the exam. Students will have the prespecified time to complete the exams and email answers directly back to the instructor. More details about the exact procedures will be provided by the instructor in the run-up to the exam.

To ensure fairness, there will be multiple versions of each exam. If students attempt to share answers electronically during the exam period, this will be detected by instructor and will result in an **automatic zero** for the exam.

### Grade Breakdown

- Homework – 20%
- Midterm Exam – 30%
- Final Exam – 50 %

## Textbook and Resources

The primary textbook is *A Modern Formal Logic Primer* by Paul Teller which is available for free download on Sakai. All other texts and articles are also available on Sakai. There is no need to buy any textbook or materials for this course.

## Schedule

<u>Topics</u>	<u>Dates</u>
(1) SL Basics	August 17 <sup>th</sup> – August 30 <sup>th</sup>
(2) SL Natural Deduction	August 31 <sup>st</sup> – September 13 <sup>th</sup>
(3) SL Truth Trees	September 14 <sup>th</sup> – September 20 <sup>th</sup>
(4) Philosophy of Logic 1	September 21 <sup>st</sup> – September 27 <sup>th</sup>
(5) PL Basics	September 28 <sup>th</sup> – October 11 <sup>th</sup>
(6) PL Natural Deductions	October 12 <sup>th</sup> – October 25 <sup>th</sup>
(7) PL Truth Trees	October 26 <sup>th</sup> – November 1 <sup>st</sup>
(8) PL Identity	November 2 <sup>nd</sup> – November 8 <sup>th</sup>
(9) Philosophy of Logic 2	November 9 <sup>th</sup> – November 15 <sup>th</sup>

<u>Assignment</u>	<u>Due Date</u>
Assignment 1	August 30 <sup>th</sup>
Assignment 2	September 13 <sup>th</sup>
Assignment 3	September 20 <sup>th</sup>
Assignment 4	October 11 <sup>th</sup>
Assignment 5	October 25 <sup>th</sup>
Assignment 6	November 1 <sup>st</sup>
Assignment 7	November 8 <sup>th</sup>

<u>Synchronous Meeting</u>	<u>Date</u>
Midterm Review Session	September 24 <sup>th</sup>
Midterm Exam	September 28 <sup>th</sup>
Final Review Session	November 16 <sup>th</sup>
Final Exam	November 20 <sup>th</sup>

## Academic Integrity

The Duke Honor Code applies to this class, as it does for all other courses.