

PHL 340: Advanced Symbolic Logic

Spring 2021

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Office Hours: Webex only:
<https://cmich.webex.com/meet/katz1ma>
MW 12:30-1:30 and by appt.

Course Description: This course is an introduction to first-order quantificational logic, including both monadic and polyadic predicates, and the identity function. Attention will be given to proof theory, model theory, and meta-theoretical results. Requirements will include regular homework assignments, three regular exams, and one final exam.

Required Course Materials:

- Hurley, Patrick and Lori Watson. *A Concise Introduction to Logic, 13th ed.* (Wadsworth, 2018). ISBN: 9781305958098
- Mind Tap
 - Mind Tap offers online problem sets to help you master the material. These problem sets will comprise a large portion of your homework grade, so access to Mind Tap is required.
 - Mind Tap also includes a digital copy of the textbook.
 - To access MindTap, you must register with them. Here's how:
 1. Go to the "Text and Assignments" page in Blackboard.
 2. Read the file entitled "Getting Started Guide for Students".
 3. Click on the link to "PHL 340, Spring 2021".
 4. Follow the prompts and provide the relevant information.

Note that you will only need to register once. Should you require assistance registering, contact Cengage support at support.cengage.com.

Inclusive Access: This class has adopted the textbook and Mind Tap in Inclusive Access format. This means that all students enrolled have already had their CMU accounts charged for Mind Tap, which includes a digital version of the textbook. If you do not want a digital copy of the text and would prefer a hard copy, you must opt out of Inclusive Access and then purchase a hard copy elsewhere, as the CMU bookstore will not be stocking them. However, Mind Tap is required to complete the homework for the course, so you will still need to register for it. Please let me know if you have any questions.

Requirements:

Homework: 15%; Three regular exams: 20% each; Comprehensive Final Exam: 25%

HyFlex: This course will be taught in Hyflex mode. This means that it will be synchronously streamed so that students not in the classroom may participate. Please be patient as managing both hardware and software, and being able to facilitate discussion and respond to students both inside the classroom and online will require a learning curve on the part of the instructor, as well as the usual potential technology issues.

Social Distancing: This course will observe all social distancing protocols. This includes but may not be limited to:

- There will be a limited number of students in the classroom each day. The instructor will assign each student a day of the week when the student will be allowed to attend class in person. If it is not your day to attend in person, you are allowed to participate online. When it is your day to attend in person, you are allowed to either attend in person or to participate online.
- Desks in the classroom will be positioned so as to maintain six feet of separation between people. Desks will not be moved.
- Materials will be provided so that students are able to disinfect their own desks upon arrival to class. It is strongly recommended that students make use of these materials upon arrival to class.
- Students will wear masks in class at all times. Masks must completely cover nose and mouth. This will be enforced – no student will be allowed to attend class without appropriately wearing an appropriate mask, ever. The only exception to this rule is if the student has a health-related intolerance to wearing masks that has been approved and documented through Student Disability Services.
- The instructor will wear a mask in class at all times, unless it becomes impossible for students to understand what the instructor is saying. In that case the instructor will temporarily remove his mask, making sure to maintain more than six feet of distance from students.
- No materials will be physically exchanged, ever – syllabi and any other materials will be provided online; homework assignments and exams will be completed and graded online.

Academic Integrity: Cheating, plagiarism, and other forms of academic dishonesty will be dealt with in accordance with CMU's Policy on Academic Integrity, which can be found at: http://academicsenate.cmich.edu/NonCad/ACADEMIC_INTEGRITY_POLICY.pdf.

Accommodations for students with disabilities: CMU provides students with disabilities reasonable accommodation to participate in educational programs, activities, or services. Students with disabilities requiring accommodations to participate in class activities or meet course requirements should first register with the office of Student Disability Services (Park Library 120, telephone 989-774-3018, TDD #2568), and then contact the professor as soon as possible.

Electronics: During class, please do not use laptops or tablets for anything other than participating in class (i.e., if you are participating online) or for taking notes (e.g., please do not read email, surf the web, watch movies, etc.) Please refrain from using cell phones during class.

Maintaining Privacy and Integrity of Course Materials:

Summary: The materials and interactions in our course are intended for the learning of those enrolled in the class. Do not record or share any materials or interactions from this course with people who are not enrolled in the class.

In order to protect the intellectual property interests of the instructor, the academic integrity of the course for current and future students, the privacy interests of student members of the class, and to encourage an open and fair exposition of all student views in the classroom without fear that student views expressed will be recorded and possibly posted in another forum, students are not permitted to do any of the following without prior written consent of the instructor:

- recording of classroom lectures and conversations;
- recording or capturing online interactions among the instructor and/or students;
- sharing, transmitting, or publishing class materials (including lectures, slides, and recordings provided by the instructor) to individuals or entities not enrolled in the course.

Unauthorized recording, sharing, or transmitting of classroom activity and materials may be considered (a) a violation of the CMU Student Code of Rights, Responsibilities, and Disciplinary Procedures as disruptive of a student's right to learn under 3.2.3 Disruption of Learning, (b) a violation of the Academic Integrity Policy, and/or (c) grounds for grading penalties up to and including failure in the course.

Tentative Schedule: Please keep in mind that the following schedule will need to be highly flexible.

Week	Reading	Topics
1–4	Hurley/Watson, Chapters 6, 7	Introduction; Review of sentential logic: translations; truth tables; proofs; meta-theory; REVIEW AND FIRST EXAM
5–9	Hurley/Watson Chapter 8.1–8.4	Monadic predicate logic: predicates, quantifiers, translation; models; proofs; REVIEW AND SECOND EXAM
10–12	Hurley/Watson, Chapter 8.6	Polyadic predicate logic, part I: translations; models; REVIEW AND THIRD EXAM
13–16	Hurley/Watson, Chapter 8.6-8.7	Polyadic predicate logic, part II: proofs; meta-theory; identity; REVIEW AND FINAL EXAM