
Carleton University, School of Mathematics and Statistics
Math 4802A • Introduction to Mathematical Logic
Course Outline • Winter Term 2020

TIME OF LECTURES: Mon Wed 8:35 – 9:55 a.m. **ROOM:** PA 129

INSTRUCTOR: Brandon Fodden *brandon.fodden@carleton.ca*
Office: 4356HP Twitter: *@math_brandon*
Office hours: to be announced

PREREQUISITES: Math 2100 or permission of the school.

TEXT: *An Introduction to Mathematical Logic*
by Richard E. Hodel

GRADING SCHEME:

Assignments (5)	25%
Midterm	25%
Final exam	50%

Topics (time permitting): Propositional logic and first order (predicate) logic: the soundness theorem, deduction theorem, model existence theorem, and adequacy theorem for each. Gödel's completeness theorems, decidability and listability. The Löwenheim-Skolem theorem and compactness theorem. Gödel's incompleteness theorems.

Pregnancy or religious obligation: Write me 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, see the Student Guide.

Students with disabilities requiring academic accommodations in this course must register with the Paul Menton Centre for Students with Disabilities (PMC) for a formal evaluation of disability-related needs. Documented disabilities include but are not limited to mobility/physical impairments, specific Learning Disabilities (LD), psychiatric/psychological disabilities, sensory disabilities, Attention Deficit Hyperactivity Disorder (ADHD), and chronic medical conditions. Registered PMC students are required to contact the PMC every term to have a Letter of Accommodation sent to the Instructor by their Coordinator. In addition, students are expected to confirm their need for accommodation with the Instructor no later than two weeks before the first assignment is due or the first in-class test/midterm. If you require accommodations only for formally scheduled exam(s) in this course, you must request accommodations by the official accommodation deadline published on the PMC website.

COMMENTS:

- Assignments will be posted on Wednesday January 15, January 29, February 26, March 11, and March 25, and are due a week later (in class or in my mail slot by 4pm). A list of practice problems will be updated after each class; the assignment exercises will mostly be selected from these.
- The midterm test will be held during the class on **Wednesday February 12**.
- The final exam is a three hour test to be scheduled by the University. The date, time, and location will be announced in at some point during the term.
- Both the midterm and final exam are closed book, but students will be allowed to bring a small amount of handwritten notes (the exact amount to be decided).
- Students who miss the final exam may be eligible for a deferred exam. Application for a deferral must be made, with appropriate documentation, to the Registrar's Office within five working days after the examination.
- Plagiarism and cheating will not be tolerated and can lead to severe penalties – consult the undergraduate calendar.
- You are expected to attend all lectures. If you miss a lecture, it is your responsibility to obtain the notes and any handouts or information given.
- Student or professor materials created for this course (including any posted notes, tutorials, assignments, quizzes, and tests) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s).