
Carleton University, School of Mathematics and Statistics
Math 1800B • Introduction to Mathematical Reasoning
Course Outline • Winter Term 2020

TIME OF LECTURES: Mon Wed 10:05 – 11:25 am **ROOM:** UC 282

INSTRUCTOR: Brandon Fodden *brandon.fodden@carleton.ca*
Office: 4356HP Twitter: @math_brandon
Office hours: Mon Wed 12:30 – 2:00

TUTORIAL: Wednesday 4:35 – 5:25 pm **ROOM:** various

PREREQUISITES: Ontario Grade 12 Mathematics: Advanced Functions,
or MATH 0005, or equivalent.

OPTIONAL TEXTS: *Mathematical Proofs: A Transition to Advanced Mathematics*
(third or fourth edition) by Chartrand, Polimeni & Zhang
Book of Proof (second edition) by Hammack (free online)

GRADING SCHEME:

Quizzes (7 out of 10)	25%
Midterm	25%
Final exam	50%

Topics: Sets; logic; methods of mathematical proof including direct, contraposition, contradiction, and induction; equivalence relations; functions; finite and infinite cardinality.

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 every Wednesday, but they are not to be handed in. Solutions to the assignments will be posted soon after the assignments are posted.
- During the tutorial sessions, students will work on the tutorial problems. Your TA will be present to provide assistance, answer questions, and work out selected problems on the board. Quizzes will take place during the final 15 minutes of tutorial, and will be on the material covered on the assignments posted the previous week.
- The midterm test will be held in class on **Wednesday February 26**.
- The final exam is a three hour closed book test to be scheduled by the University. The date, time, and location will be announced by the university at some point during the term.
- Tests and quizzes must be written at the scheduled time; no provision is made for make-up tests or quizzes. If you must miss a test or quiz for a valid reason, please contact me.
- 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.
- No calculators are permitted (or needed) on the tests or quizzes.
- 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 understand all material from that lecture, and to get any handouts or information given. It is best to avoid missing class, if possible.
- 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).

EXTRA HELP:

There is help available for this course. It is up to you to seek any help you may need. Please do not hesitate to take advantage of the help being offered – that's why it's there! Here is a summary of the help available:

- Class tutorial (see front of sheet)
- Your TA (office hour or email)
- My office hours, or email, or Twitter (@math.brandon)
- MS-LAP¹
- Math Tutorial Centre in 3422 HP; See <https://carleton.ca/math/math-tutorial-centre/> for the schedule.
- Your classmates

¹The Math & Stats Learning Assistance Program is a free of charge program that helps students in achieving their goals. It provides learning support and solutions to homework questions through assistance videos. These services are available on cuLearn. MS-LAP gives students tools to succeed while explaining step-by-step particular problem strategies and associated theory. The program is for anyone who wants to deepen their understanding at their own pace, and in the comfort and privacy of their home.