MATB24 Fall 2020
University of Toronto

Midterm-I logistics and rules

(1) **Equipment you will need:**

- Reliable internet connection with capacity for video streaming.
- Computer equipped with webcam and two-way audio.
- UofT ID card.
- Pen and paper.
- Scanner or phone camera to digitize your answers.
- Printer (helpful, not required).

(2) **Time and duration:** Midterm one is on Friday, Oct 9, 15-17 in Zoom. You will get the link to the meeting one day before the exam via Quercus email. You will have 110 minutes to write the exam, and some additional time at the start to set up and at the end to upload your answers. You should log into our lecture Zoom room at least 5 minutes before the starting time. I estimate that we will be done by 17:15pm.

(3) **Material of Responsibility:** You are responsible for knowing the material in the following sections of our course textbook:

Sections 3.1, 3.2, 3.4, 3.3 BA

or

Sections 1.A-1.C, 2.A, 2.B 2.C, 3.A, 3.B, 3.D SA

Moreover, you are responsible for knowing the lecture material up to and including week 4, your tutorial questions including TUT 4, all your quizzes, the graded homework including graded homework 2 and their solutions, webwork questions up to WW4. In particular, you are expected to know the definitions and meaning of every term that is used in lectures, tutorials and graded homework, be familiar with examples seen in lectures and tutorials.

(4) **Your location:** I expect that you will be writing the exam in a private room. If you cannot arrange for this, please let your TA know in advance.

(5) **Zoom meeting:** Throughout the exam you must be connected continuously to a Zoom meeting. This Zoom session will be recorded; the recording will be destroyed as soon as I determine that it is not needed for settling any academic integrity issues that may arise.

(6) **No late arrivals:** Please be sure to connect to the Zoom meeting under your own name. To ensure fairness, once the final exam is emailed (see (9) below) ***no late arrivals to the Zoom meeting will be permitted***.

(7) **Webcam and microphone:** Throughout the exam your camera must be turned on and your microphone must be muted.

Your camera must be positioned so that the exam supervisors can see your face, your hands, and your work desk. This and this are two examples of acceptable camera positions (except that, unlike the

second, you are not allowed to use earphones!). On the other hand, this (one arm not visible), and this (face and one hand not visible) are two examples of unacceptable camera positions. You should set up your camera accordingly before you join the Zoom meeting.

Although the default setting for your microphone is muted, I reserve the right to unmute any individual, or the entire class, at any time.

(8) **Student ID:** At the start of the exam you must be ready to display your UofT student ID on camera.

(9) **Downloading the exam:** Soon after the start, we will email you a link to the final exam on ***Crowdmark***. A copy of the exam is also emailed to you at the same time on Quercus email. You must download the exam and ideally print it, so that you can fill the answers in the spaces provided. If you do not have a printer, you can download the exam and view it on your computer screen. In this case you will write your answers on sheets of paper; you do not need to re-write the questions on these sheets, only your answers.

(10) **Setting up:** You will be given time to set up your work space in such a way that you can see all the questions on your monitor (you can use a second monitor if you wish) or print out the questions if you have access to a printer. You should also see the Zoom chat box on your screen. Once the set up time is over, you are not allowed to work with your digital devices until the end of the exam. There will be different layouts of the exam questions: a print friendly layout, a single page layout for small monitors, a double page layout for larger monitors (you can split your screen to see both pages at the same time) or two monitor set ups. You should choose the one that fits your work space best.

(11) **Use of electronics and aids during the exam:** After downloading the exam paper, and until the end of the exam, you may not use any electronics except, and for limited purposes, your computer. ***The only allowed use of your computer*** is to scroll through the exam document (if you are unable to print the exam) and to contact the exam supervisors on Zoom (see (12) below).

You may not consult your textbook or notes, or other people.

(12) **Questions:** If you have a question during the exam, you must try to get the exam supervisor's attention by physically using the raising your hand. Please do not use audio, as this will distract the entire class. For the same reason, your communication with the exam supervisor must be done over the Zoom chat.

(13) **Uploading your answers:** At the end of the exam you will be allowed to use your electronics to scan or photograph your answers, and to upload them on ***Crowdmark***. This must be done while you are still connected to the Zoom meeting. Leaving the Zoom meeting indicates that you are done, and we will grade only what you have uploaded up to that time.

(14) **Emergencies and technical disruptions:** If you experience a technical difficulty with your internet or computer that is not resolved in a matter of seconds, you must contact me promptly at 7346390674 or email me at camelia.karimian@utoronto.ca. Please use the phone line only for actual emergencies.

If the disruption raises questions about the integrity of the exam, I will decide whether and how to accommodate on a case-by-case basis. An accommodation, if granted, will most likely take the form of an oral exam replacing the full weight of the exam or redistribution of the wight of the exam.

(15) **Academic integrity:** Honour and self-respect are among our most precious possessions as human beings. Do not squander these: they are fragile, damage to them is permanent, and they are far more valuable than your grade in this course. Any instance of cheating that comes to my attention will have severe consequence.

(16) **Test Format and Scope**

1. The exam is valued at 60 points in total and is worth 15% of your entire course grade.

2. The test questions/problems are like those seen or implied in the lectures, in the assignments/solutions, webwork, in the text or in your tutorials.

3. The test is well-balanced in both its coverage of the course material above and in its level of difficulty. Some test questions are very easy, but most are medium and straightforward to solve. You should expect at least one quite difficult question or parts of questions.

Here is a more detailed break down of the questions:

- Definitions: A opposed to past tests, you will be given potential definitions to certain terms and asked to confirm, correct or complete them.
  The best way to prepare for this is to go over the definition document and try to reproduce every definition and meticulously compare your work with the correct definition.
- True/false . Acceptable justification is either a reasoning why the statement is true or an explicit counter example. No formal proof required. Saying true or false without justification gets zero point. These questions are extracted from tutorial questions, or lectures. You may need to remember facts you proved in graded homework or example you seen in homework as well. (Q 2 in past midterms)
- Examples You will be given a description of a mathematical object and asked to give an explicit example that matches the description. You may also be given a false statement and a counter example and get asked to confirm or correct the counterexample. (Q 3 in past midterms)
- Calculation/standard proofs on an explicit example: These questions resembles or inspired from your tutorials or WebWork. It is mostly straight forward. Some parts might be less straightforward and more conceptual. (Q 4 in past midterms serves as a rough template)
- You will be given a statement with a proof and will be asked to carefully and completely justify certain steps. You should have a good understanding of the graded homework for this question.
- You will be given a choice between writing a statement for a given proof or find flaws in a given argument.
- You are asked to carefully prove a statement you haven't seen in class but are well equipped to prove.

(17) **How to Prepare**

(a) Start by learning all the definitions (this is extremely important, you should be able to recite definitions word by word in order to be able to do anything in mathematics, feel free to memorize them).

(b) Make sure you understand everything we did in the lectures (proofs and examples)

(c) Redo all TUT questions (don't read them, use pen and paper and actually work them out) and compare your works against the solution.

(d) While doing this, if you have difficulty with a question, go back and read the lecture notes corresponding to that question.

(e) Redo webwork (on paper)

(f) The next step is to make sure you understand and can do all the graded homework questions, Some questions in the exam resemble your graded homework and tutorial questions but are not identical to them. You will succeed in those only if you UNDERSTAND the tutorial and GHW

questions well. Understanding math means you can explain it to others and can answer to question "why" in every step. Don't shoot yourself in the foot by just reading the questions and solutions. That gives you a false sense of understanding.

(g) Finally, do the practice exams. Note that they differ in difficulty level and are based on the variation of the material offered during the semester the exam was written. Some questions are on material we haven't covered yet. Your exam will be based on the material we saw in class and tutorials, GHW and WW.