DEPARTMENT OF MATHEMATICAL AND COMPUTATIONAL SCIENCES
UNIVERSITY OF TORONTO MISSISSAUGA

MAT202H5F LEC0101
Introduction to Discrete Mathematics
Course Outline - Fall 2019

Class Location & Time	Tue, 03:00 PM - 05:00 PM MN 1270 Fri, 05:00 PM - 06:00 PM MN 1270
Instructor	Timothy Yusun
Office Location	DH 3058
Office Hours	T 11-13, Th 12-14
E-mail Address	tj.yusun@utoronto.ca
Course Web Site	https://q.utoronto.ca
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Course Description

Mathematics derives its great power from its ability to formulate abstract concepts and techniques. In this course, students will be introduced to abstraction and its power through a study of topics from discrete mathematics. The topics covered will include: Sets, relations and functions; Basic counting techniques: subsets, permutations, finite sequences, inclusion-exclusion; Discrete probability: random variables paradoxes and surprises; Basic number theory: properties of the integers and the primes. The course will emphasize active participation of the students in discussion and written assignments. [36L, 12T]

Prerequisite: MAT102H5, MAT134H5/MAT136H5/MAT134Y5/MAT135Y5/MAT137Y5/MAT157Y5/MAT233H5 (SCI)
Distribution Requirement: SCI

Students who lack a pre/co-requisite can be removed at any time unless they have received an explicit waiver from the department. The waiver form can be downloaded from here.

Textbooks and Other Materials

Primary reference: Instructor-provided notes (to be posted on Quercus)

Suggested textbook: Mathematical Thinking: Problem-solving and Proofs (2nd ed.) by D'Angelo and West

Assessment and Deadlines

Type	Description	Due Date	Weight
Final Exam		TBA	40%
Term Test	Term Test 1	2019-10-04	19%
Term Test	Term Test 2	2019-11-08	19%
Assignment	4 assignments	On-going	10%
Other	4 tutorial activities	On-going	4%
Quiz	12 weekly pre-class quizzes	On-going	6%
Other	2 student surveys	On-going	2%
		Total	100%

More Details for Assessment and Deadlines

Student Surveys

At the beginning of the term you will be asked to answer a short survey about yourself so I can find out a bit more about you, your mathematics background, and your beliefs about mathematics. At the end of the term you will be asked to answer another short survey about the active learning aspect of the course. Each will count for 1% of your grade.

Weekly Pre-class Quizzes

Readings will be assigned each week and will typically be a combination of a section from the course notes and/or textbook. Every Monday from 8:00AM to 11:00PM a quiz will be made available on Quercus that covers the reading material for that week. These quizzes will cover only basic concepts, definitions and examples from the assigned readings, and will be graded for correctness.

Tutorial Activities

Throughout the semester there will be 4 tutorial activities; these are meant to give you an opportunity to check your understanding of the material in a low-stakes environment, as practice for the term tests and final exam. These will typically be done in groups.

Assignments

There will be a total of four assignments that are to be submitted by **11:59PM** on the following Thursdays: Sept 26, Oct 24, Nov 14, Nov 28. Assignments are to be submitted online, on **Crowdmark**. More details can be found on Quercus.

Term Tests

We will have two term tests (Oct 4 and Nov 8, both Fridays) to assess your understanding of the material during the term. Term tests will be 50 minutes each, and will be held during the regular class time.

Final Exam

The final exam will be 2 hours. No aids will be permitted. It will take place during the final examination period for Fall 2019, which is **December 7-19, 2019**. Students should not make any travel plans on these dates.

Penalties for Lateness

No late assignments will be accepted.

Procedures and Rules

Missed Term Work

There will be no make-up term tests; a missed term test will be given a grade of zero (0).

If you miss a term test for a medical reason or an extenuating circumstance, you must alert your instructor via email **within 24 hours of the missed test**, and:

- If the test was missed for **a medical reason**, please bring a completed **Verification of Student Illness or Injury form** to your instructor within one week of the missed term test.
- If the test is missed for **another valid reason**, please bring a completed **Verification of Extenuating Circumstances** form to your instructor within one week of the missed term test.

In either case, if valid documentation is provided, the weight of the missed term test will be transferred to the final exam. These forms should specify the exact period during which you were unable to carry out your academic work and must be dated within 1 day of the missed term test. Note that submission of these forms does not guarantee approval.

Missed Final Exam

Students who cannot write a final examination due to illness or other serious causes must file an online petition **within 72 hours of the missed examination**. Original supporting documentation must also be submitted to the Office of the Registrar **within 72 hours of the missed exam**. Late petitions will **NOT** be considered. If illness is cited as the reason for a deferred exam request, a U of T Verification of Student Illness or Injury Form must show that you were **examined and diagnosed at the time of illness and on the date of the exam, or by the day after at the latest**. Students must also record their absence on ACORN on the day of the missed exam or by the day after at the latest. Upon approval of a deferred exam request, a non-refundable fee of $70 is required for each examination approved.

Academic Integrity

Honesty and fairness are fundamental to the University of Toronto's mission. Plagiarism is a form of academic fraud and is treated very seriously. The work that you submit must be your own and cannot contain anyone elses work or ideas without proper attribution. You are expected to read the handout How not to plagiarize (http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize) and to be familiar with the Code of behaviour on academic matters, which is linked from the UTM calendar under the link Codes and policies.

Final Exam Information

Duration: 2 hours
Aids Permitted: None

Additional Information

This offering of MAT202 will be implemented using an active learning approach, in which you will read about basic definitions and examples before coming to class, so that time in the classroom will be spent working in groups to practice and engage with the material more meaningfully. We will be meeting in an Active Learning Classroom (ALC) this term, where each group will have their own round table, projector, and smartboard.

The course has the following weekly rhythm:

	Week 1	Week 2	Week 3
Mon	Week 1 pre-class online quiz due	Week 2 pre-class online quiz due	Week 3 pre-class online quiz due
Tue	Week 1 LEC	Week 2 LEC	Week 3 LEC
Wed	Tutorials Reading for Week 2 posted	Tutorials Reading for Week 3 posted	Tutorials Reading for Week 4 posted
Thu			
Fri	Week 1 LEC	Week 2 LEC	Week 3 LEC

(and so on until Week 12)

Note: First class is on Friday September 6, 2019, which is "Week 0."

Tutorials

Each student must be registered in one of the tutorials (on ACORN), and attend it regularly every week. In tutorials, you will have the opportunity to work on problems and get help and guidance from your TA. Occasionally, the TA will review some of the material covered in the lectures, and will present solutions to homework problems.

Tutorials will begin on September 11, 2019. Tutorial activities are scheduled on Weeks 2, 5, 7, and 10. (Sept 18, Oct 9, Oct 30, Nov 20)

Email Policy

All emails to the instructor or TAs should contain [MAT202] in the subject line and must originate from a utoronto.ca email address.

Course Schedule and Topics

Please check the course page on Quercus for the most up-to-date course schedule.

Last Date to drop course from Academic Record and GPA is November 7, 2019.