Course Staff

Instructors:

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Teaching Assistants: TBA

Name	Sections	E-mail	Office Hours
Candy Chou	0101 & 0106 & 0108	candy.chou@mail.utoronto.ca	TBA
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Course Description

Understanding, using, and developing, precise expressions of mathematical ideas, including definitions and theorems. Set theory, logical statements and proofs, induction, topics chosen from combinatorics, elementary number theory, Euclidean geometry.

Prerequisites: Minimum 70% in Grade 12 Advanced Functions (MHF4U)
Recommended: Minimum 70% in Grade 12 Calculus and Vectors (MCV4U)
Distribution Requirement: SCI

Students who do not have the prerequisite(s) are allowed to take the course **at their own risk**, and are expected to learn certain relevant high school topics independently. There is **no need** to fill out and/or submit a "waiver of prerequisite" form.

Textbook. *Mathematical Thinking: Problem-Solving and Proofs*, 2nd Ed, by D'Angelo and West. Students are expected to have access to the textbook throughout the course, since exercises from the book will be given as part of the homework assignments.

Course Website. You can access the MAT 102 course website through the University of Toronto Portal (https://portal.utoronto.ca/). After logging in, click on the course title under My Courses to enter the website. Homework assignments, messages, handouts and other important information will be posted on the website, so you should check it regularly. You will also be able to see your marks for the written homework assignments and term tests online.

Office Hours. Please do not be hesitant to come ask us for help. The staff of MAT 102 are available for extra help outside of class, during our scheduled office hours (see course page for dates/times). In addition to these hours, before tests and exams we will hold extra office hours. The times and locations of these hours will be posted on the course webpage. If you cannot make any of the scheduled office hours, please let the instructor know, and hopefully an alternate meeting can be arranged.

Marking Scheme

Your final grade will be determined as follows:

Homework (Best 4 of 5 @ 2.5%)	10%
Term Test (February 25)	20%
Quizzes (Best 3 of 4 @ 10%)	30%
Final Exam	40%
Course Grade	100%

Tutorials

Tutorials will begin the week of January 12. All students must be enrolled in a tutorial section (on ROSI). You should only attend the tutorial you are enrolled in. The main purpose of the tutorial is to give you an opportunity to ask questions and work through examples together with your TA. To get the most from your tutorial, you should review the lecture material and try the assigned problems ***before*** your tutorial, so that you come prepared with questions. You will also be submitting your homework assignments in tutorial, and this is where you will get all work returned to you. Please learn your tutorial number.

Final Exam

The final exam of the course will take place during the examination period in April, and will be 2 hours long. It will cover all the material presented in lectures. The date, time, and location of the

exam will be arranged by the Exam's Office, and posted sometime during the Winter semester.

Term Tests

There will be one term test on Wednesday, February 25 @ 6pm. (Tests will take place during the PRA, or "Practical", section on your timetable, which is scheduled Wednesday 6-7pm.) Please be punctual - you won't receive extra time if you're late. Please bring your TCard to the test.

Missing a Term Test. There will be NO make-up test. If you cannot show up for the test because of illness or any other (approved) special reason, you should declare your absence on ROSI and submit your documentation ***in person*** to the course coordinator (J. Thind), within one week of the test. Please use the relevant forms for your documentation. For medical notes, you MUST use the official **UTM Verification of Illness or Injury** form, which can be downloaded from the course website. Please keep a copy of the form for your own records.

Homework Assignments

Every week there will be a homework assignment posted. You are expected to work on the assignment, and if you can't solve a problem, you should ask in tutorial or come to office hours for help.

There will be 5 submitted homework assignments (Problem Sets A,C,E,G,I) and only the best 4 will count towards your final grade. Each assignment will be worth 2.5% of our final grade. The assignments will be posted on the course page in the "Assignments" section of the page. You must submit your assignment ***at the beginning of your tutorial***. There will be no extensions, or "make-up" assignments given.

The other assignments (Problem Sets B,D,F,H,J) are ***not*** to be submitted, but the quizzes and tests will be based on the assignments, so you will be responsible for completing these assignments.

It is ok (and you are encouraged) to work together on material related to the course, including discussing the written assignments. ***HOWEVER***, you must write up your own solutions independently. It is an academic offence to copy someone's solution, or to let someone copy yours. Please see the links below concerning UTM's code of behaviour and academic honesty.

Quizzes

There will be four (4) quizzes throughout the course. Only the best 3 will count towards your final grade. They will take place during our PRA section, Wednesdays 6-7pm. (See the course outline for the dates of the quizzes.) Please be punctual - you won't receive extra time if you're late. Please bring your TCard to quizzes. Rooms will be posted on the course page, as the dates approach. The quizzes will cover material from the assignments.

There are ***NO*** make up quizzes. If you miss one quiz, you do not need documentation, since only the best 3 quizzes count. If you miss more than one quiz, please bring your documentation to the course coordinator (J. Thind) within one week of the quiz, and your course grade will be adjusted accordingly. Please use the relevant forms for your documentation. For medical notes, you MUST use the official **UTM Verification of Illness or Injury** form, which can be downloaded from the course website. Please keep a copy of the form for your own records.

Help

If you need help there are many resources available to you. Please come and ask us for help as soon as you need it. Do your best not to let yourself fall behind. All course staff have office hours, which are posted on the course page, and at the top of this handout. You will have opportunities to ask questions in Tutorials. You may find working in a small study group can be very helpful. The Academic Skills Centre also has much to offer. They are located in the Library, and have many useful tools and resources.

Code of Behaviour / Plagiarism

Students should become familiar with, and are expected to adhere to, the Code of Behaviour on Academic Matters which can be found at: `http://www.governingcouncil.utoronto.ca/policies/behaveac.htm`

More links concerning academic integrity to familiarize yourself with:

`http://www.artsci.utoronto.ca/osai` (Office of Student Academic Integrity)

`http://www.utoronto.ca/academicintegrity/` (Academic Honesty)

`http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize`
(Advice on avoiding plagiarism)

http://www.artsci.utoronto.ca/current/exams/reminder

Course Outline

Week	**Dates**	**Topics & Sections**	**Info**
1	Jan 5–9	Numbers, Sets and Functions - Chapter 1	No Tutorial
2	Jan 12–16	Numbers, Sets and Functions - Chapter 1	Problem Set A due in tutorial.
3	Jan 19–23	Numbers, Sets and Functions - Chapter 1	January 21 - Quiz #1 based on Problem Set B.
4	Jan 26–30	Language and Proofs - Chapter 2	Problem Set C due in tutorial.
5	Feb 2–6	Language and Proofs - Chapter 2	February 4 - Quiz #2 based on Problem Set D.
6	Feb 9–13	Mathematical Induction - Chapter 3	Problem Set E due in tutorial.
	Feb 16–20	**Reading Week**	**No Classes**
7	Feb 23–27	Mathematical Induction - Chapter 3	February 25 - Term Test based on Problem Sets A-F
8	Mar 2–6	Bijections and Cardinality - Chapter 4	Problem Set G due in tutorial.
9	Mar 9–13	Bijections and Cardinality - Chapter 4	March 11 - Quiz #3 based on Problem Set H.
10	Mar 16–20	Divisibility - Parts of Chapter 6	Problem Set I due in tutorial.
11	Mar 23–27	Divisibility - Parts of Chapter 6	March 25 - Quiz #4 based on Problem Set J.
12	Mar 30–Apr 3	Modular Arithmetic - Parts of Chapter 7	Problem Set K ***discussed*** in tutorial, but ***not*** submitted.