DEPARTMENT OF MATHEMATICAL AND COMPUTATIONAL SCIENCES
UNIVERSITY OF TORONTO MISSISSAUGA

MAT102H5Y LEC0101
Introduction to Mathematical Proofs
Course Outline - Summer 2014

Class Location & Time	Mon, 04:00 PM - 05:30 PM IB 150
	Wed, 04:00 PM - 05:30 PM IB 150
Instructor	Jacopo De Simoi
Office Location	DV3297
Office Hours	Mon, Wed 3p-4p
Telephone	905-569-4630
E-mail Address	jacopods@math.utoronto.ca
Course Web Site	On Portal
Teaching Assistant	Mark Zietara
E-mail Address	m.zietara@mail.utoronto.ca

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. [36L, 12T]

Prerequisite: Minimum 70% in Grade 12 Advanced Functions (MHF4U)
Exclusion: MAT138H1,246H1,CSC165H1
Recommended: Minimum 70% in Grade 12 Calculus and Vectors (MCV4U) (SCI)
Distribution Requirement: SCI

Students who lack a pre/co-requisite can be removed at any time unless received explicit waiver from department.

Textbooks and Other Materials

Mathematical Thinking: Problem Solving and Proofs, 2nd Edition, by D'Angelo and West.

Note: Calculators are not needed for this course, and will **not** be allowed during quizzes and tests.

Assessment and Deadlines

Type	Description	Due Date	Weight
Assignment	Best 7 assignments out of 8	On-going	15%
Quiz	Quiz 1 (45m in class)	2014-06-04	15%
Quiz	Quiz 2 (45m in class)	2014-07-09	15%
Quiz	Quiz 3 (45m in class)	2014-08-06	15%
Final Exam		TBA	40%

	Total	100%

More Details for Assessment and Deadlines

Problem Sets

There will be a problem set posted on the course website every week, and it will cover the recent material discussed in lectures. You are expected to work on the questions assigned, and if you cannot solve a problem, you are welcome to ask your TA and/or the instructor for help. You will submit Problem Sets **A, B, D, E, G, H, I** and **K** to your TA for grading at the beginning of your tutorial session. The other problem sets will NOT be submitted for grading, but you will be tested on the material they cover on a quiz.

You are encouraged to work with your fellow students while working on questions from the problem sets. However, the writing of your assignment must be done without any assistance whatsoever.
Your Problem Set mark will be determined by the taking the average of the best seven (out of eight) assignments.

Quizzes

There will be three 45-minute quizzes to be held during lecture time. See the course schedule below for dates and times for each quiz. More details about the quizzes will be given later. You must bring your student card to each quiz.

There will be **NO** make-up quizzes. The marking scheme will be adjusted properly for students who have missed the quiz because of illness or any other (approved) legitimate reason.

Penalties for Lateness

Missing a Problem Set.

Late Problem Sets will not be accepted for marking.

Procedures and Rules

Missed Term Work

Missed Quiz

If you cannot show up for a quiz because of illness or any other special reason, you should declare your absence on ROSI and submit your documentation to the course instructor no later than one week after the day of the quiz (for medical notes, you MUST use the official UTM medical certificate, which can be downloaded from the course website).

There will be NO make-up quizzes. The marking scheme will be adjusted properly for students who have missed the quiz because of illness or any other (approved) legitimate reason.

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 Medical Certificate 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 ROSI 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

Tutorials

There will be several tutorial groups for the course. Each student must be registered in one of the tutorials (on ROSI), and attend it regularly every week.

Details regarding the day, time, and location of your tutorial are available online at https://registrar.utm.utoronto.ca/student/timetable/.

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 discussed in lectures, and will present solutions to homework problems.

Tutorials will begin on May 21 (Second week of classes).

E-Mail Policy

E-mails must originate from a utoronto.ca address and contain the course code MAT102 in the subject line. You must include your full name and student number in your e-mail.

E-mails which do not comply with the above policy will be ignored.

Course Content (Tentative)

1. Weeks 1-3:   Chapter 1 - Numbers, Sets, and Functions.

2. Weeks 4-5:   Chapter 2 - Language and Proofs.

3. Weeks 6-7:   Chapter 3 - Mathematical Induction.

4. Weeks 8-9:   Chapter 4 - Bijections and Cardinality.

5. Weeks 10-11: Parts of Chapter 6 - Divisibility.

6. Weeks 11-12: Parts of Chapter 7 - Modular Arithmetic.

Course Schedule

Week	Dates	Topics
1	May 12-14	Classes begin - No Tutorials this week
2	May 21	Victoria Day on May 19 - no classes Tutorials begin on May 21 **Problem Set A** is due this week in tutorials (students who missed their tutorial on May 19 should turn in their HW at the beginning of the lecture)
3	May 26-28	**Problem Set B** is due this week in tutorials
4	June 2-4	**Quiz #1 on Problem set C** (4:00 - 4:45p on June 4)
5	June 9-11	**Problem Set D** is due this week in tutorials
6	June 16-18	**Problem Set E** is due this week in tutorials
7	June 23	No classes on June 25 (study break)
	June 24- July 6	Study Break (no classes)
8	July 7-9	**Quiz #2 on Problem set F** (4:00 - 4:45p on July 9)
9	July 14-16	**Problem Set G** is due this week in tutorials
10	July 21-23	**Problem Set H** is due this week in tutorials
11	July 28-30	**Problem Set I** is due this week in tutorials
12	Aug 6	Civic Holiday on Aug 4 (no classes) **Quiz #3 on Problem set J** (4:00 - 4:45p on Aug 6)
13	Aug 11-13	**Problem Set K** is due this week in tutorials
14	Aug 18	August 18 is the last day of classes

Last Date to drop course from Academic Record and GPA is July 27, 2014.