

Mathematics Preparedness Summer Learning Institute

Summer 2014

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Course Web Site: <http://www.cs.utoronto.ca/~dmdang/teaching/SLI/Summer14.html>

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Course Objectives

Many programs at University of Toronto Scarborough such as Biology, Chemistry, Management, or Computer Science require you to take Mathematics or Statistics, or expect you to demonstrate an ability to analyze and communicate data. This non-credit course in Mathematics Preparedness, Summer Learning Institute, will help you build a mathematics skill set you need to succeed in your university studies.

Course Description

This course will cover topics such as: algebraic manipulations, equations and inequalities, analytic geometry, functions, and trigonometry. The following course schedule is tentative.

Lectures	Dates	Topics	Assignments
1	Tue., Aug. 12	Algebraic manipulations 1. intervals 2. numbers 3. exponents 4. radicals and rational exponents 5. polynomials	Assignment 1 out
2	Wed., Aug. 13	Equations and inequalities 1. quadratic equations 2. radical equations 3. absolute value equations 4. inequalities (linear and non-linear) 5. modeling with equations	
3	Thu., Aug. 14	Analytical geometry 1. Cartesian coordinate system 2. equations of lines 3. graph of second degree equations Functions (first part) 1. definitions 2. examples 3. polynomial and rational functions	Assignment 1 due Assignment 2 out
4	Tue., Aug. 19	Functions (second part) 1. combining functions 2. symmetry of functions 3. shifts and stretches 4. inverses	Assignment 2 due Assignment 3 out
5	Wed., Aug. 20	Trigonometry (first part) 1. radians and degrees 2. trigonometry of right angles 3. trigonometry of angles 4. trigonometry functions	
6	Thu., Aug. 21	Trigonometry (second part) 1. basic trigonometry graphs 2. addition and subtraction formulas 3. inverse trigonometry functions 4. trigonometric equations	Assignment 3 due
Monday, August 25, 1:30am-3:30pm, IC130		FINAL ASSESSMENT	

Lecture times

Section number	Day	Time	Location
Section 1	Tuesdays, Wednesdays, Thursdays	10am-noon	see course website
Section 2	Tuesdays, Wednesdays, Thursdays	2pm-4pm	see course website
Section 3 (canceled)	Tuesdays, Wednesdays, Thursdays		

TA office hours

Date	TA	Time	Location
Tuesday, August 12	Natalia	noon-1pm, 4pm-5pm	see course website
Wednesday, August 13	Natalia	noon-1pm, 4pm-5pm	see course website
Thursday, August 14	Natalia	noon-1pm, 4pm-5pm	see course website
Tuesday, August 19	Natalia	noon-1pm, 4pm-5pm	see course website
Wednesday, August 20	Natalia	noon-1pm, 4pm-5pm	see course website
Thursday, August 21	Natalia	noon-1pm, 4pm-5pm	see course website

Marking scheme

There will be three marked assignments worth 45% of the final mark. All assignments weighted equally. All the assignments are due at the beginning of lecture.

The final assessment is worth 55% of the final mark, and is scheduled for 1:30pm-3:30pm, Monday, August 25 in IC130. The final assessment is closed-book.

Course references

- Stewart S., “Calculus”, 7th edition, Brooks/Cole. (For students who will take MATA30 in the Fall term)
- Haeussler, Paul and Wood , “Introductory Mathematical Analysis”, 13th edition, Prentice Hall (For students who will take MATA32 in Fall term)