

8580 16th Ave, Burnaby, BC, V3N 1S6

<http://online.sd41.bc.ca>

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Registration register.online@sd41.bc.ca

Course:	Foundations Mathematics 12	Course Length: 10 months (approx 120 hours)
Teacher:	Francis Tsen	
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IM:		

Course Description:

This pathway is designed to provide students with the mathematical understandings and critical-thinking skills identified for post-secondary studies in programs that do not require the study of theoretical calculus. Topics include logical reasoning, finances, probability, relations and functions, and mathematics research project. The seven mathematical process (communication, connections, mental mathematics and estimation, problem solving, technology and visualization) are interwoven throughout the mathematical topics..

Resources: There is no textbook required for this course.

Course Layout

Unit	Topic
1	Finance: Investing Money
2	Finance: Borrowing Money
3	Set Notation
4	Combinatorics
5	Probability
6	Polynomial Functions
7	Exponential and Logarithmic Functions
8	Sinusoidal Functions

Each of unit consists of:***Lessons***

Each lesson is designed to take you between 40 and 75 minutes depending on the content covered and activities involved. Lessons are presented as video clips.

Note taking tool

This is a printable tool that you can use to create study notes

Lesson and assignment tracker

This checklist includes the number of lessons and assignment in the unit. Use it to track your progress in each unit

Practice Questions

Practice questions with solutions are included with each lesson. It is a self assessment tool so that you can determine whether you fully understand the concepts taught in each lesson.

Hand-in Assignment

This is an assignment at the end of the unit which you must submit to your teacher for marks.

Unit Test

There is one test per unit

Midterm Exams

There are two midterms. Midterm I covers units 1-4 and Midterm II covers units 5-8

How will your mark be calculated?

First Assignment (Submitted with registration)	5%
Assignments	20 %
Unit Tests	45 %
Midterms	30 %

Learning Outcomes:**Prescribed Learning Outcomes: Foundations of Mathematics and Pre-calculus 10**

It is expected that students will:

FINANCIAL MATHEMATICS

- A1. Solve problems that involve compound interest in financial decision making.
- A2. Analyze costs and benefits of renting, leasing and buying.
- A3. Analyze an investment portfolio in terms of:
 - interest rate
 - rate of return
 - total return.

LOGICAL REASONING

- B1. Analyze puzzles and games that involve numerical and logical reasoning, using problem-solving strategies.
- B2. Solve problems that involve the application of set theory..
- B3. Solve problems that involve conditional statements.

PROBABILITY

- C1. Interpret and assess the validity of odds and probability statements.
- C2. Solve problems that involve the probability of mutually exclusive and non-mutually exclusive events.
- C3. Solve problems that involve the probability of two events.
- C4. Solve problems that involve the fundamental counting principle.
- C5. Solve problems that involve permutations.
- C6. Solve problems that involve combinations.

RELATIONS AND FUNCTIONS

- D1. Represent data, using polynomial functions (of degree ≤ 3), to solve problems.
- D2. Represent data, using exponential and logarithmic functions, to solve problems.
- D3. Represent data, using sinusoidal functions, to solve problems.

MATHEMATICS RESEARCH PROJECT

- E1. Research and give a presentation on a historical event or an area of interest that involves mathematics.

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Students are expected to:

- contact the teacher by instant messaging, email or phone when help is needed or questions arise
- be actively engaged and submitting work on a regular basis
- inform the teacher when they will be inactive for two or more weeks.
- be aware that if they are inactive in a course for four or more weeks they may be removed from that course
- check their email at least twice a week
- create and submit completed solutions for all activities in the unit/chapter before requesting a test.
- cite all sources properly
- answer in their own words
- check that their work and tests have been marked.
- make time available to come in to Burnaby Online to write tests.
- make appointments to write tests at least 2 school days in advance.