

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

Telephone: (604)664-2526 Toll free 1-888-479-8882

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

Email: Information online.info@sd41.bc.ca

Registration register.online@sd41.bc.ca

Course:	Foundations Mathematics 11	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, geometry, measurement, relations and functions, statistics 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

Module	Unit	Topic
1	1	Inductive and Deductive Reasoning
	2	Properties of Angles and Triangles
2	3	Non-Right Angle Triangle Trigonometry
	4	Systems of Linear Inequalities
3	5	Quadratic Functions and Equations
4	6	Proportional Reasoning
	7	Statistical Reasoning

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Each of the four modules is comprised of:

Units, featuring:

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.

Module Test

At the end of each module there will be a module exam. These exams are to be written under the supervision of teachers at Burnaby Online.

Final Exam

At the end of the course will be final exam which you will be required to complete

How will your mark be calculated?

First Assignment (Submitted with registration)	5%
Assignments	25 %
Unit Exams	40 %
Final Exam	30 %

Learning Outcomes:

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

It is expected that students will:

MEASUREMENT

- A1. Solve problems that involve the application of rates.
- A2. Solve problems that involve scale diagrams, using proportional reasoning.
- A3. Demonstrate an understanding of the relationships among scale factors, areas, surface areas and volumes of similar 2-D shapes and 3-D objects.

GEOMETRY

- B1. Derive proofs that involve the properties of angles and triangles.
- B2. Solve problems that involve the properties of angles and triangles.
- B3. Solve problems that involve the cosine law and the sine law, including the ambiguous case.

LOGICAL REASONING

- C1. Analyze and prove conjectures, using inductive and deductive reasoning, to solve problems.
- C2. Analyze puzzles and games that involve spatial reasoning, using problem-solving strategies.

STATISTICS

- D1. Demonstrate an understanding of normal distribution, including:
 - standard deviation
 - z-scores.
- D2. Interpret statistical data, using:
 - confidence intervals
 - confidence levels
 - margin of error.

RELATIONS AND FUNCTIONS

- E1. Model and solve problems that involve systems of linear inequalities in two variables.
- E2. Demonstrate an understanding of the characteristics of quadratic functions, including:
 - vertex
 - intercepts
 - domain and range
 - axis of symmetry.

MATHEMATICS RESEARCH PROJECT

- F1. 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.