MCR3U
Functions
Grade 11, University Preparation

General Course Information

Prerequisite:	MPM2D
Teacher:	416-396-6793 Ext 20458
Department:	Mathematics
Extra Help:	After In-Class time or an Online Tutorial planned with your teacher
Textbook and Replacement Cost:	Mathematics 11 McGraw-Hill Ryerson, $75
Required Materials:	binder, paper, scientific calculator, ruler, pencil, eraser, graph paper

Course Description

This course introduces the mathematical concept of the function by extending students' experiences with linear and quadratic relations. Students will investigate properties of discrete and continuous functions, including trigonometric and exponential functions; represent functions numerically, algebraically, and graphically; solve problems involving applications of functions; investigate inverse functions; and develop facility in determining equivalent algebraic expressions. Students will reason mathematically and communicate their thinking as they solve multi-step problems.
http://www.edu.gov.on.ca/eng/curriculum/secondary/math1112currb.pdf

Assessment and Evaluation

To promote student success, ongoing assessment and feedback will be given regularly to the students. A variety of assessment and evaluation strategies will be used in this course and may include tests, quizzes, group work, and presentations. Expectations will be evaluated based on the provincial curriculum expectations and the achievement levels outlined in the ministry document.

Expectations are organized into four categories. The categories and their corresponding weighting is as follows:

Knowledge and Understanding	25%	Thinking	10%
Application	25%	Communication	10%

Each student's final mark will be in the form of a percentage grade based on their achievement in the 4 categories on the achievement chart. The breakdown of the final mark is as followed:

Term Evaluation	70%	Final Culminating Activity	30%

The culminating activity may include a variety of summative activities including an exam, a presentation, a seminar, or an essay or another writing assignment.

In addition to students' performance in the achievement categories, students will also be assessed on their performance in the following learning skills:

Responsibility	Organization	Independent Work
Collaboration	Initiative	Self-Regulation

For specific policies on assessment and evaluation, and academic honesty, please refer to *Code of Conduct*.

The course is organized into the following strands:

Characteristics of Functions • Represent functions algebraically and graphically • Solve problems with quadratic functions • simplify polynomial, rational and radical expressions	**Exponential Functions** • Evaluate with rational exponents • understand properties and representations of exponential functions and solve related problems
Discrete Functions • understand arithmetic and geometric sequences and series and their applications • connect sequences and series with financial applications	**Trigonometric Functions** • Solving problems using trig ratios and triangles • Solving for trig ratios based on given angles • Understanding periodic and sinusoidal functions