MPM2D
Principles of Mathematics
Grade 10, Academic

General Course Information

Prerequisite:	Principles of Mathematics, Grade 9, Academic
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:	n/a
Required Materials:	binder, paper, scientific calculator, ruler, pencil, eraser, graph paper

Course Description

This course enables students to broaden their understanding of relations, extend their skills in multi-step problem solving, and continue to develop their abilities in abstract reasoning. Students will pursue investigations of quadratic functions and their applications; solve and apply linear systems; solve multi-step problems in analytic geometry to verify properties of geometric figures; investigate the trigonometry of right and cute triangles, and develop algebraic skills.
http://www.edu.gov.on.ca/eng/curriculum/secondary/math910curr.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, including 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	35%	Thinking	5%
Application	20%	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 final Evaluation will be completed during the final 6 weeks of the course and 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:

Quadratic Relations Of The Form $y=ax^2+bx+c$
- determine the basic properties of quadratic relations;
- relate transformations of the graph of $y=x^2$ to the algebraic representation $y=a[(x-h)]^2+k$;
- solve quadratic equations and interpret the solutions with respect to the corresponding relations;
- solve problems involving quadratic relations.

Analytic Geometry
- model and solve problems involving the intersection of two straight lines;
- solve problems using analytic geometry involving properties of lines and line segments;
- verify geometric properties of triangles and quadrilaterals, using analytic geometry.

Trigonometry
- use their knowledge of ratio and proportion to investigate similar triangles and solve problems related to similarity;
- solve problems involving right triangles, using the primary trigonometric ratios and the Pythagorean theorem;
- solve problems involving acute triangles, using the sine law and the cosine law.