Cameron Heights Collegiate Institute

Subject	Grade	Level	Code	Prerequisite
Mathematics	10	Academic	MPM2DI	9 Academic

Course Description

This course enables students to broaden their understanding of relationships and extend their problem-solving and algebraic skills through investigation, the effective use of technology, and abstract reasoning. Students will explore quadratic relations and their applications; verify properties of geometric figures using analytic geometry; investigate relationships involved in sequences and series and their applications; and investigate the trigonometry of right and acute triangles. Students will reason mathematically and communicate their thinking as they solve multi-step problems.

Ministry Website

http://www.edu.gov.on.ca/eng/curriculum/secondary/math910curr.pdf

	Unit of Study	Overall Expectations (essential understandings)	Assessment
70%	**Linear Systems**	• Solve systems of two linear equations involving two variables, using the algebraic method of substitution or elimination • Verify a solution to a system algebraically and graphically • Solve problems that arise from realistic situations described in words by choosing an appropriate method	• Variety of formative assessments in the form of quizzes and assignments (1-2%) • Summative unit test (~10%)
	Analytic Geometry	• Solve problems using analytic geometry involving properties of lines and line segments • Verify geometric properties of triangles and quadrilaterals, using analytic geometry	• Variety of formative assessments in the form of quizzes and assignments (1-2%) • Summative unit test (~10%)
	Polynomials	• Demonstrate an understanding of equivalence as it relates to simplifying polynomial, radical and rational expressions	• Variety of formative assessments in the form of quizzes and assignments (1-2%) • Summative unit test (~10%)
	Quadratic Functions and Equations	• Determine the basic properties of quadratic relations • Relate transformations of the graph of $y = x^2$ to algebraic representation $y = (x-h)^2 + k$ • Determine the zeros and the maximum or minimum of a quadratic function, and solve problems involving quadratic functions, including problems arising from real-world applications • Solve quadratic equations and interpret the solutions with respect to the corresponding relations	• Variety of formative assessments in the form of quizzes and assignments (1-2%) • A summative unit test for quadratic functions (~10%) • A summative unit test for quadratic equations (~10%)
	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	• Variety of formative assessments in the form of quizzes and assignments (1-2%) • Summative unit test (~10%)
30%	**Final Exam**	• Will include all of the overall expectations listed within the units of study	• Summative Final Exam (30%)