

**SOUTH CARLETON HIGH SCHOOL**

Ottawa-Carleton District School Board

**STUDENT OUTLINE****MFM2P****FOUNDATIONS OF MATHEMATICS****APPLIED 10**

Credit Value: 1 credit

Hours: 110

Prerequisite: MFM1P

**Expectations**

This course enables students to consolidate their understanding of linear relations and extend their problem-solving and algebraic skills through investigation, the effective use of technology, and hands-on activities. Students will develop and graph equations in analytic geometry; solve and apply linear systems, using real-life examples; and explore and interpret graphs of quadratic relations. Students will investigate similar triangles, the trigonometry of right triangles, and the measurement of 3-D figures. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

**Course Expectations**

Strand	Overall Expectations
Measurement and Trigonometry	Use knowledge of ratio and proportion to investigate similar triangles and solve problems related to similarity; solve right triangles using trig ratios and Pythagorean theorem; solve problems involving surface area/volume of 3-D figures; use imperial and metric measurement
Modelling Linear Relations	Manipulate and solve algebraic equations to solve problems; graph a line and write the equation of a line from given information; solve system of 2 linear equations; solve related problems
Quadratic Relations of the form $y = ax^2 + bx + c$	Manipulate algebraic expressions as needed to understand quadratic equations; identify characteristics of quadratic relations; solve problems by interpreting graphs of quadratic relations

**Accommodations for Exceptional Students**

The Mathematics department makes every effort to accommodate the identified needs of exceptional (IPRC'd) students and will attempt to differentiate curriculum delivery methods, student modes of expression, and assessment methods as recommended by the student's individual education plan (EIP).

**Career Planning**

The Mathematics department makes every effort to ensure students are aware of career opportunities related to various fields of Mathematics. In particular, the teacher will help the student to be aware of "real world" applications of the topics presented in this course.

**Technology and Textbooks**

Students will have the opportunity to use available software in Mathematics appropriate to the course including software packages: Zap-a-Graph, MathTrek and Geometer's Sketchpad. Graphing calculators will also be available to the students.

**Calculators**

Each student requires a **scientific calculator** that will be used on a daily basis. Graphing calculators will be supplied when required.

**Resources**

**Mathematics 10 Applying the Concepts**, McGraw-Hill Ryerson

**Evaluation**

Term Reports	Final Report	
Students will be evaluated on the overall expectations listed above. Evaluations will cover a balance of Knowledge & Understanding, Application, Communication, Thinking, Inquiry and Problem Solving.	Term Work	70%
	Summative Task*	10%
	Final Exam*	<u>20%</u>
		<b>100%</b>
<i>Assessment tools include tests/quizzes, assignments, performance tasks and rich assessment tasks</i>	* Board-wide	

More information on South Carleton High School's policy on Assessment and Evaluation and on Academic Integrity can be accessed on our school website.

Please see **Student Planner** for policies on punctuality, absenteeism and examinations, and other student responsibilities.