

SOUTH CARLETON HIGH SCHOOL
 Ottawa-Carleton District School Board
STUDENT OUTLINE
MPM1D
 PRINCIPLES OF MATHEMATICS
 ACADEMIC 9

Credit Value: 1 credit

Hours: 110

Expectations

This course enables students to develop an understanding of mathematical concepts related to algebra, analytic geometry, and measurement and geometry through investigation, the effective use of technology, and abstract reasoning. Students will investigate relationships, which they will then generalize as equations of lines, and will determine the connections between different representations of a linear relations. They will also explore relationships that emerge from the measurement of 3-dimensional figures and 2-dimensional shapes. Students will reason mathematically and communicate their thinking as they solve multi-step problems.

Overall Expectations

Unit Title	Specific Expectations
Number Sense and Algebra	Understand exponent rules of multiplication and division; simplify expressions; manipulate numerical and polynomial expressions; solve first degree problems
Linear Relations	Investigate relationship between 2 variables; demonstrate understanding of characteristics of linear relation; connect various representations of linear relations
Analytic Geometry	Investigate relationship between equation and shape of its graph(linear and non-linear); properties of slope and y-intercept in linear relation; solve problems involving linear relations
Measurement and Geometry	Investigate optimal values of various measurements; solve problems with measurement of 2-D shapes and surface area/volume of 3-D figures; verify geometric properties and relationships of 2-D shapes and apply to problems

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. Examples may include Zap-a-Graph, MathTrek, Geometer's Sketchpad, and various web applications. 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 **Principles of Mathematics 9**, 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, and Thinking/Inquiry/Problem Solving.	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">Term</td> <td style="text-align: right;">70%</td> </tr> <tr> <td>Summative</td> <td style="text-align: right;">15%</td> </tr> <tr> <td>Final Exam *</td> <td style="text-align: right;"><u>15%</u></td> </tr> <tr> <td></td> <td style="text-align: right;">100%</td> </tr> </table>	Term	70%	Summative	15%	Final Exam *	<u>15%</u>		100%
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	100%								
<i>Assessment tools include tests/quizzes, assignments, performance tasks and rich assessment tasks</i>	* EQAO								

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