



Course Code: MPM2D1
Course Name: Mathematics 10
Level: Academic
Teacher: Ms. Vrhovsek

Student's Name: _____

Textbook #: _____

Overall Course Expectations and/or Curriculum Strands:

Course Description for Principles of Mathematics Grade 10

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; solve and apply linear systems; verify properties of geometric figures using analytic geometry; and investigate the trigonometry of right and acute triangles. Students will reason mathematically and communicate their thinking as they solve multi-step problems.

Strands/Expectations of Study

Prerequisite: MPM1D1 – Principles of Mathematics Grade 9

- 1. Quadratic Relations of the Form $y = ax^2 + bx + c$**
 - Determine the basic properties of quadratic relations
 - Relate transformations of the graph $y = x^2$ 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.
- 2. 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.
- 3. Trigonometry**
 - Use knowledge of ratio and proportion to investigate similar triangles and solve problems related to similarity.
 - Solve problems involving right triangles, using the primary trigonometric ratio and the Pythagorean theorem.
 - Solve problems involving acute triangles, using the sine law and the cosine law.

Ontario Catholic School Graduate Expectations (Vision of the Learner):

The graduate is expected to be:

- 1. A discerning believer**
- 2. An effective communicator**
- 3. A reflective, creative and holistic thinker**
- 4. A self-directed, responsible, lifelong learner**
- 5. A collaborative contributor**
- 6. A caring family member**
- 7. A responsible citizen**

Efforts will be made to meet the individual learning needs of students to promote student success with respect to meeting the expectations of this course.

My signature below indicates that I have read the Course Handout, and I am in agreement with its contents.

Parent's/Guardian's Signature: _____ **Date:** _____

Student's Signature: _____ **Date:** _____

Units of Study:

Unit 1: Linear Systems of Equations

Unit 2: Analytic Geometry

Unit 3: Geometric Properties

Unit 4: Polynomials

Unit 5: Quadratic Functions

Unit 6: Quadratic Equations

Unit 7: Trigonometry

Resources:

The course will use a variety of resources which will be distributed to students during the first week of the course. The text and all other resources assigned to each student are the responsibility of the student.

Resources for this course include:

Primary Textbook

Principles of Mathematics 10,
McGraw-Hill Ryerson

(include textbooks, required materials such as calculator and/or ruler, course fees, etc.)

Any damage incurred will result in payment for replacement.

\$90

Evaluation Policies

1. Student marks will be determined by evaluating process & product according to 4 categories (see below) & 4 levels of the Achievement Chart as found in the Ministry Policy document for the Mathematics Department.

Evaluation Structure:

Knowledge/Understanding	30%
Application	30%
Communication	20%
Thinking	20%

Term Evaluations	70% of the final mark
Summative Evaluation	30% of the final mark (10% CPT and 20% Final Exam)

2. Feedback will also be provided for student **learning skills:** Responsibility, Organization, Independent Work, Collaboration, Initiative and Self-Regulation are assessed apart from student achievement in the four categories outlined above and will conform to the coding:

E – Excellent G – Good S – Satisfactory N - Needs Improvement

3. **Assignments** submitted after the due date established by the teacher will receive a penalty **in accordance with our Board Assessment & Evaluation Policy Document** as outlined in the student agenda.
4. Should a student miss an evaluation due to a legitimate absence, **in accordance with our Board A&E Policy Document**, the student and teacher will make arrangements to address the missed evaluation in a timely manner. In the cases of **extended vacation** or **prolonged absence**, consultation with the appropriate administrator is required.
5. In the event that the student does not make up the missed evaluation(s), a zero may be assigned. If it is determined that the evaluation(s) has/have been missed as a result of a skip/truancy or has/have been plagiarized, a zero may be assigned.
6. For all other cases of absence and/or missed evaluations (including absence during the final examination period), please refer to our Board A&E Policy as outlined in the student agenda.

St. Joseph – May God bless your efforts this semester!