

Bishop Macdonell Catholic High School

COURSE OVERVIEW

COURSE TITLE: Principles of Mathematics, Grade 10 Academic

COURSE CODE: MPM 2D1

CREDIT VALUE: 1.0

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; 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.

HOW THIS COURSE SUPPORTS THE ONTARIO CATHOLIC GRADUATE EXPECTATIONS:

Students will apply Christian values to pose and solve problems, to make logical decisions, and to become critical thinkers who share their abilities for the benefit of all in their classroom and school community. A supportive mathematics classroom provides a caring and sensitive environment where the dignity and value of all students is respected and affirmed as they grow in confidence in their mathematical abilities. Throughout this course, emphasis should be placed on moral, ethical, and realistic decision-making in an effort to build responsible citizenship. Please see the Course Calendar/Agenda Book for a listing of the Ontario Catholic Graduate Expectations.

OVERALL EXPECTATIONS: By the end of this course, students will:

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

Quadratic Functions

- 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

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 and cosine laws

UNIT TITLES:

Unit 1	Linear Systems
Unit 2	Analytic Geometry
Unit 3	Geometric Properties
Unit 4	Quadratic Relations
Unit 5	Quadratic Expressions
Unit 6	Quadratic Equations
Unit 7	Trigonometry of Right Triangles
Unit 8	Trigonometry of Acute Triangles

ASSESSMENT and EVALUATION:

Assessment is the process of gathering information from a variety of sources that accurately reflects how well a student is achieving the curriculum expectations. In math these expectations include the knowledge of content, facts and procedural skills or use of tools which may be assessed for Knowledge and Understanding; the ability to apply knowledge and skills to familiar and new contexts as well as the ability to make connections between different contexts for Application; the use of critical and creative thinking skills for Thinking and Inquiry; and the expression and organization of ideas, creating and using representations, and the use of conventions for Communication.

Evaluation refers to the process of judging the quality of student work on the basis of established criteria and then assigning a value to represent that quality. The value assigned is in the form of a percentage grade. The calculation of the final grade will be based on the following chart:

COURSE GRADE WEIGHTING: Term Work 70% Final Assessment 30%	CATEGORY WEIGHTING: Knowledge and Understanding 30% Application 30% Thinking 20% Communication 20%
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Students will be assessed using a variety of techniques including: unit tests, quizzes, assignments, investigations, a culminating activity, and a final exam.

LATE AND MISSED ASSIGNMENTS:

Students are expected to complete all evaluation activities. Special considerations for late or missed assignments will only be given for **legitimate reasons**. Examples of legitimate reasons include sickness (**ONLY if confirmed ahead of the assessment date**) or family emergencies. A doctor's note may be required.

- If you are sick and are missing a test you must confirm your absence before the start of class.
- If you are at school for part of the day but are going home sick, you must still hand in your assignments before you leave, and if it is a test day then you must speak with your teacher before you go home.

Considerations

1. If the evaluation was done during class time, the student will be given an opportunity to complete the activity at a mutually agreed upon time.
2. If the evaluation was required to be submitted on a due date, an extension will be granted to the student, the length of which will be determined by the teacher.
3. If a student has been excused from class due to a school function, considerations will only be given if prior discussion has occurred with the teacher. Always communicate with your teacher, don't assume they know which activities you are involved with and what your schedules are for those activities.

Non-Legitimate Reasons

When a student fails to complete an assessment or evaluation activity because of a non-legitimate reason, an "M" will be recorded in the teacher records indicating that the activity was missed. Examples of non-legitimate reasons include skipping class on the date that an evaluation is done or required to be submitted, not confirming an absence ahead of time, or failing to complete assignments because of poor time management skills. Failure to complete assessment and evaluation activities reduces the body of evidence upon which the teacher can evaluate student achievement of curriculum expectations and could jeopardize the granting of a credit for the course.

Please do not leave your studying and assignment completion to the last minute...always plan ahead!

"It must be made clear to students that they are responsible for providing evidence of their learning within established timelines, and that there are consequences for cheating, plagiarizing, not completing work and submitting work late." (Growing Success, 42)

ACADEMIC HONESTY

Academic honesty is expected of all students. In accordance with the Ontario Catholic School Graduate Expectations, a student will:

- ✓ Achieve excellence, originality and integrity in one's own work and support these qualities in the work of others.
- ✓ Respect the rights, responsibilities and contributions of self and others.

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Cheating is the direct attempt to use another's work as one's own, and act of deliberate dishonesty. Plagiarism is a form of cheating that is a serious legal, unethical and academic offense, be it intentional or unintentional. Students have the responsibility to ensure that all work submitted is their own or appropriately attributed to its source. Responses to academic dishonesty may include:

- a) Repeating the assignment
- b) Completing an alternative assignment
- c) Mark reduction
- d) Mark of zero

GENERAL COURSE INFORMATION:

- Learning Skills: regular attendance, working independently, teamwork, organization, work habits, initiative, risk-taking, time management, perseverance, curiosity and a love of learning are all essential to success in this course.
- A scientific calculator, graph paper, pens, pencils and a memory stick are required for this course.
- Textbook #: _____. **Replacement cost for a lost textbook is \$90.00.**

APPROPRIATE USE OF GRAPHING CALCULATORS:

Students will be provided with graphing calculators to be used at school only. In keeping with Board Policy on Telecommunications: Any malicious attempt to harm or destroy the calculator is prohibited and may result in financial compensation and/or other disciplinary action consistent with the School Code of Behaviour, Board Policy and/or the Education Act. Likewise, **theft or loss, through negligence, of the calculator will result in a cost replacement by the student/parents of \$150.00.**

ASSESSMENT RESULTS:

Each student is asked to keep **ALL** quizzes, tests and assignments neatly organized in their notebooks, and to make any necessary corrections. This can be one way for students to keep track of their progress in the course. All solutions will be posted in the classroom so please make sure you make the necessary corrections.



WEBSITE:

There is a class website where you will find class information such as our weekly schedule, announcements, unit planners, online resources and copies of the handouts and notes from class. I strongly suggest you visit the site daily!

The website is www.petrinmath.weebly.com and the **password** is _____.

TEACHER CONTACT INFORMATION:

If you have any questions or concerns please contact Mrs. Petrin at the school.

Work Phone #: (519) 822-8502 ext. 235

Email: lisanne.petrin@wellingtoncdsb.ca

PARENT/GUARDIAN/STUDENT SIGNATURE:

My signature below indicates that I have read and understood the course overview.

Student Signature: _____ Date: _____

Parent/Guardian Signature: _____ Date: _____

This course overview document must be kept in the student's notebook.