

St. Clair Catholic District School Board
Student Information Sheet/ Outline of Course Study

School	Ursuline College Chatham
Department	Mathematics
Course Title	Principles of Mathematics (MPM1DO)
Grade and Level	Grade 9 Academic
Credit	One full
Prerequisite	None
Textbook	Mathematics 9 (Addison Wesley)
Department Head	Mrs. M. Taylor-Joyes
Ministry Document	Mathematics Grade 9 and 10 (revised 2005)
Date	September 2011/February 2012
Special Dates	EQAO testing will be done in the last two weeks of the semester (a resource booklet will be provided to assist in preparation)

Course Description

This course enables students to develop generalizations of mathematical ideas and methods through the exploration of applications, the effective use of technology and abstract reasoning. Students will investigate relationships to develop equations of straight lines in analytic geometry. They will also determine the connections between different representations of a linear relation. They will also explore relationships between volume and surface area of objects in measurement. Students will engage in abstract extensions of core learning that will deepen their mathematical knowledge and enrich their understanding, and should be able to communicate their thinking as they solve multi-step problems.

How this course supports the Ontario Catholic Graduate Expectations:

The following expectations from the Ontario Catholic Graduate Expectations will be stressed throughout the course: The graduate is expected to be: - An effective communicator who reads, understands and uses written materials effectively; - A reflective, creative and holistic thinker who thinks reflectively and creatively to evaluate situations and solve problems ; - A self-directed , responsible, lifelong learner who sets appropriate goals and priorities in school , work and personal life; - A collaborative contributor who works effectively as an independent team member; - A responsible citizen who accepts accountability for one's one actions.

How this course supports the competencies of Choices Into Action:

Career exploration activities through classroom experience (page 19, Choices into Action)

1) Expectations regarding Learning Skills

It is expected that students will demonstrate the following:

(this is not intended to be an exhaustive list)

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|------------------------------------------|-----------------------------------------|
| * Independent learning ability | * Team work ability |
| * Organizational skills on a daily basis | * Strong work habits during class time |
| * Completed homework and assignments | * Initiative in all areas of the course |

Learning skills will be assessed according to criteria, which have been clearly communicated to students and will be reported separately from student achievement of the curriculum expectations. The student's demonstrated learning skills in each course will be evaluated using the four-point scale, E- Excellent, G- Good, S- Satisfactory, N – Needs Improvement.

2) Overall expectations for student learning

Through this course, the student will be expected to demonstrate knowledge, skills and values related to the following strands:

Strand 1: Number Sense & Algebra <ul style="list-style-type: none">• Solve numerical problems• Use the exponent laws and apply them to simplify expressions• Manipulate numerical and polynomial expressions and solve first degree equations• Use algebraic modeling to solve problems	Strand 2: Linear Relationships <ul style="list-style-type: none">• Apply data-management techniques to investigate relationships between two variables• Demonstrate an understanding of the characteristics of a linear relation• Describe the connections between the various representations of linear relations
Strand 3: Analytic geometry <ul style="list-style-type: none">• Determine the relationship between the equation of a relation and the shape of its graph(linear versus non-linear)• Investigate the properties of the slope and the y-intercept of a linear relation• Use the properties of linear relations to solve problems	Strand 4: Measurement & Geometry <ul style="list-style-type: none">• Investigate the optimal values of various measurements• Solve problems involving surface area and volume of two and three dimensional shapes• Investigate geometric properties of figures and objects, using dynamic software and other models, and the apply these results to problem solving

3) Individual Education Plan

Whenever accommodations are made to address student learning needs, or alternative or modified expectations are identified for a student, these accommodations, modifications, or alternative expectations will be outlined in an IEP and will be communicated to parents.

4) Course breakdown & assessment and evaluation strategies

Unit title/Description	Suggested Timing
Number sense and Algebra	18 periods
Linear Relations	10 periods
Analytical Geometry	10 periods
Measurement Geometry	15 periods
Unit and Cumulating Assessments	5 periods

5) Teaching/Learning Strategies

Instruction in this course will be evaluated according to the following breakdowns:
Group work, pairs activities, individual work, computers and graphical calculators.

6) Assessment and Evaluation

Student achievement of the learning expectations will be evaluated according to the following breakdowns:

Categories of Knowledge, Skills and Values	Weighting (%)	
	Term Evaluation (100%) Evaluation	Final
Knowledge & Understanding	45	Culminating
Thinking, Inquiry, Problem Solving	20	Assessment
Communication	15	And
Applications	20	Final Exam
BREAKDOWN OF FINAL MARK	70% of term mark	30%

7) School, department and classroom policies

a) See student handbook for school rules

b) **HOMEWORK** will be assigned almost every day. Depending on the topic, the time required to complete the assignment will vary, but at the grade nine level the homework should require 25-30 minutes per night. To ensure success, any suggested homework assignments are to be completed for the beginning of the next class. The completion of assignments, neat and orderly notes, and routine correction of problems are essential for success.

c) **REGULAR** and **PROMPT** attendance is required in order to be successful. If a student is absent it is their responsibility to make up for missed work. Notes should be copied from a reliable student, and homework exercises attempted. Extra help is available and can be arranged with the teacher.

c) **TESTS AND ASSIGNMENTS MISSED OR LATE**. The reasons for the absence or late will be taken into account, but a mark of zero can be assigned to the student for circumstances that seem to warrant such a mark. Assignments not submitted within the stated time frame may be cause for the student's overall grade to fall to a lower level.

Every effort should be made to write the test at the scheduled time period. Below are some test and assignment procedures:

- i) If you know that you will be away for a scheduled test and/or assignment due date for some legitimate reason, inform your teacher and make alternate arrangements before you leave.
- ii) If a test is missed due to a legitimate or sudden absence, it will be written at a time determined by the teacher after consultation with the student. The usual date for writing the test would be the first day back after the absence. A note signed by the parent/guardian must support such legitimate absences.
- iii) As a general rule, there will be no make-up tests or assignments. If special circumstances warrant, make-up tests or assignments may be provided to students who have demonstrated that earlier difficulties have been corrected.

To the student, Parent(s) or Guardian(s):

We have read and understand this Students Information Sheet/Outline of Course of Study

Course Code: MPM1D0 (Grade 9 Academic Math)

Student: _____

Date: _____

Parent/Guardian: _____

Date:
