

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

School	Ursuline College Chatham
Department	Mathematics
Course Title	Principles of Mathematics
Grade and Level	Grade 10 Academic (MPM2D0)
Credit	One full
Prerequisite	Grade 9 Academic
Textbook	Mathematics 10 (Nelson)
Department Head	Mrs. M. Taylor-Joyes
Ministry Document	Mathematics Grade 9 and 10
Date	September 2011/February 2012

Course Description

This course enables students to broaden their understanding of relations, extend their skills in multi-step problem solving, and continue to develop their abilities in abstract reasoning. Students will pursue investigations of quadratics functions and their applications; solve and apply linear systems; solve multi-step problems in analytic geometry to verify properties of geometric figures; investigate the trigonometry of right and acute triangles; and develop supporting algebraic skills.

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)

- 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: Analytic Geometry <ul style="list-style-type: none">• Model and solve problems involving the intersection of two straight lines• Determine the point of intersection of two linear relations using graphical and algebraic methods• Solve problems involving the analytical geometry concepts of line and segments (length, midpoint, slope, right bisectors)• Verify geometric properties of triangles and quadrilaterals, using analytical geometry	Strand 2: Quadratic Relations <ul style="list-style-type: none">• Expand and factor polynomial expressions• Determine the basic properties of quadratic functions• Determine the relationships between the graphs and the equations of quadratic relations• Express the equation of a quadratic function in the form $y = a(x - h)^2 + k$ using the method of completing the square• Solve quadratic equations and interpret the solutions with respect to the corresponding relation• Solve problems involving quadratic relations (max/min, intercepts)
Strand 3: Trigonometry <ul style="list-style-type: none">• Solve problems involving similar triangles by using knowledge of ratio and proportion• Solve trigonometric problems involving right triangles (using primary trig ratios and Pythagorean theorem)• Solve trigonometric problems involving acute triangles (using sine law and cosine law)	

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

Evaluation strategies will include checklists, quizzes, assignments, tests

Unit title/Description	Suggested Timing
Linear systems and Analytical Geometry	25 periods
Quadratic Relations	30 periods
Trigonometry	25 periods
Unit and Culminating 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 ten academic level the homework should require 30-40 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 students, 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: MPM2D0 (Grade 10 Academic Math)

Student: _____

Date: _____

Parent/Guardian: _____

Date:
