

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

School	Ursuline College Chatham
Department	Mathematics
Course Title	Foundations of Mathematics (MFM2P0)
Grade and Level	Grade 10 Applied
Credit	One full
Prerequisite	Grade 9 Academic or Applied
Textbook	Foundations of Mathematics (Addison-Wesley)
Department Head	Mrs. M. Taylor-Joyes
Ministry Document	Mathematics Grade 9 and 10 (revised 2005)
Date	September 2011/February 2012

Course Description

This course enables students to consolidate their understanding of key mathematical concepts through hands-on activities and to extend their problem-solving experiences in a variety of applications. Students will consolidate their understanding of linear relations and develop and graph equations in analytic geometry; solve and apply linear systems, using real life examples; and explore and interpret graphs of quadratic relations. Students will investigate similar triangles, the trigonometry of right triangles and the measurement of three dimensional figures. The effective use of technology in learning and in solving problems will be a focus of the course.

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: Measurement and Trigonometry <ul style="list-style-type: none">• Use skills in ratio and proportion to investigate similar triangles and solve problems related to similarity• Calculate the sides and angles of right triangles using the Pythagorean theorem and trigonometric ratios, and apply to problem solving situations• Solve problems involving the surface area and volumes of three-dimensional figures, and use the imperial and metric measurements	Strand 2: Modelling Linear Relations <ul style="list-style-type: none">• Manipulate and solve algebraic equations, as needed to solve problems• Graph a line and write the equation of a line from given information• Solve and interpret the point of intersection of two linear relations using graphical and algebraic methods , and solve related problems that arise form realistic situations
Strand 3: Quadratic Relations of the form $y = ax^2 + bx + c$ <ul style="list-style-type: none">• Manipulate algebraic expressions, as needed to understand quadratic relations by expanding and factoring expressions• Determine the relationships between the graphs and the equations of quadratic functions (identify the characteristics of quadratic relations)• Solve problems involving quadratic relations by interpreting their graphs	

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
Measurement and Trigonometry	25 periods
Modelling Linear Relations	30 periods
Quadratic Relations	20 periods
Unit and Culminating Assessments	10 periods

5) Teaching/Learning Strategies

Instruction in this course will be evaluated according to the following breakdowns:
Group work, pair 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	15	Assessment
Communication	20	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 applied level the homework should require 20-30 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: MFM2P0 (Grade 10 Applied Math)

Student: _____

Date: _____

Parent/Guardian: _____

Date:
