

RICHVIEW COLLEGIATE INSTITUTE

PROGRAM AREA: <i>Mathematics</i>	COURSE NAME: <i>Foundations of Mathematics</i>
COURSE CODE: <i>MFM -2P1</i>	GRADE/LEVEL: 10
PREREQUISITE: Grade 9 Applied	CREDIT VALUE: 1.0

Cost of Textbook/equipment replacement: _____ Text \$ 85 _____ **Additional Course Costs:** _____
(if lost or damaged)

Textbooks(s)/Resources: *Mathematics Applying the Concepts ; McGraw-Hill Ryerson*

COURSE DESCRIPTION:

This course enables students to consolidate their understanding of linear relations and extend their problem-solving and algebraic skills through investigation, the effective use of technology, and hands-on activities. Students will 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. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

CURRICULUM STRANDS (UNITS) and OVERALL EXPECTATIONS:

Measurement and 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 the surface areas and volumes of three - dimensional figures, and use the imperial and metric systems of . measurement.

Modelling Linear Relations

- manipulate and solve algebraic equations, as needed to solve problems;
- graph a line and write the equation of a line from given information;
- solve systems of two linear equations, and solve related problems that arise from realistic situations.

Quadratic Relations of the Form
 $y = ax^2 + bx + c$

- manipulate algebraic expressions, as needed to understand quadratic relations
- identify characteristics of quadratic relations;
- solve problems by interpreting graphs of quadratic relations

CURRICULUM STRANDS (UNITS) and OVERALL EXPECTATIONS: (continued)

Throughout this course students will

- **PROBLEM SOLVING**
- **REASONING AND PROVING**
- **REFLECTING**
- **SELECTING TOOLS AND COMPUTATIONAL STRATEGIES**
- **CONNECTING**
- **REPRESENT AND DETERMINE THROUGH INVESTIGATION**
- **COMMUNICATING**

Assessment and Evaluation

Assessment and Evaluation are based on the expectations and levels of achievement outlined in the provincial curriculum document for each subject. A wide range of assessment and evaluation opportunities allows students to demonstrate their learning in a variety of ways. This information provides the basis for reporting student grades on the Provincial Report Card. A final mark will be calculated using the following categories or strands.

Formative Evaluation: (70% of the final mark will be based on evaluations conducted throughout the course)
All four achievement categories/strands do not need to be evaluated in each evaluation task.

Communication (20 %)	Knowledge/Understanding (30 %)	Thinking and Inquiry (20 %)	Application/Making Connections (30 %)
<i>Tests/quizzes</i> <i>Journal entries</i> <i>Presentation/reports</i> <i>Mathematical/ conventions</i> <i>Assignments</i>	<i>Tests/quizzes</i> <i>Assignments</i> <i>Reports</i>	<i>Tests/quizzes</i> <i>Mathematical Conventions</i> <i>Assignments</i> <i>Reports</i>	<i>Tests/quizzes</i> <i>Mathematical Conventions</i> <i>Assignments</i> <i>Reports</i>

Summative Evaluation: (30% of the final mark will be based on a final evaluation in the form of culminating activities).

- Components of Summative Evaluation:*
1. Examination (30%)
 2. _____ (%)

All four categories (knowledge, communication, applications, and TIPS) will be represented on the exam

**** A detailed explanation of the culminating activity/activities will be distributed to students in the class.
 No student is exempt from the final evaluation.**

Summer school is available to any student who achieves between 35% and 49%.

Learning Skills: *The report card provides a record of the learning skills, demonstrated by the student in every course in the following six categories: Responsibility, Independent Work, Initiative, Organization, Collaboration, Self-Regulations. The learning skills are evaluated using a four-point scale (E-Excellent, G-Good, S-Satisfactory, N-Needs Improvement).*

Please refer to the Student Agenda Planner for details regarding the Achievement Chart and Learning Skills.

We believe that there is a correlation between homework completion and student success.