Riverdale Collegiate Institute – Toronto District School Board
EVALUATION POLICY and COURSE OUTLINE 2012

Riverdale Collegiate Institute
Course of Study

Grade 10, Foundations of Mathematics, Applied (MFM2P1)

Note 1: All Ontario Ministry of Education curriculum documents with full course content information can be located at http://www.edu.gov.on.ca/eng/curriculum/secondary/math.html

Note 2: Detailed information on Ministry of Education assessment, evaluation, and reporting policy is provided in Ontario Schools, Kindergarten to Grade 12, Policy and Program Requirements (OS), 2011, located at http://www.edu.gov.on.ca/eng/document/policy/os/index.html

1. Course Details

- Program Area: Mathematics
- Curriculum Leader: Mary Card
- Course title: Grade 10, Foundations of Mathematics, Applied. Credit Value: One
- Prerequisites(s) and co-requisite(s):
  Grade 9, Principles of Mathematics, MPM1D1, or Grade 9, Foundations of Mathematics, MFM1P1
- Textbook(s) and resource materials that are essential to the course:

TEXTBOOK(S):	**Replacement Cost (if lost or damaged):**
McGraw-Hill Ryerson, Foundations of Mathematics 10	$75.65
McGraw-Hill Ryerson, Foundations of Mathematics 10 Student Workbook, 1st Edition	$8.14

MATERIALS:	**Replacement Cost (if lost or damaged):**
Graphing Calculator: T183 Plus (Texas Instruments)	$125.00

SUPPLEMENTARY RESOURCES:
Software: The Geometer's Sketchpad (Key Curriculum Press)
Spreadsheets, Fathom

MINISTRY OF EDUCATION CURRICULUM POLICY DOCUMENT:
The Ontario Curriculum, Grades 9 and 10: Mathematics, 2005 (revised)

2. Overall Goals

- 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. Graphing calculators will be used to support learning. All students must have a scientific calculator.

Overall Expectations

Measurement and Trigonometry

By the end of the course, students will:

- 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

By the end of the course, students will:

- 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 $y = ax^2 + bx + c$

By the end of the course, students will:

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

Units/Topics	Timing
Scientific Investigation Skills and Career Exploration	Throughout Course
Unit 1: NUMBER SENSE	4 classes
Unit 2: LINEAR EQUATIONS	10 classes
Unit 3: LINEAR RELATIONS	13 classes
Unit 4: LINEAR SYSTEMS	13 classes
Unit 5: QUADRATIC EXPRESSIONS	10 classes
Unit 6: QUADRATIC RELATIONS	10 classes
Unit 7: TRIGONOMETRY	15 classes
Unit 8: MEASUREMENT – VOLUME AND SURFACE AREA	6 classes
Final Exam Preparation	4 classes

EVALUATION PLAN

As required by the Ministry of Education and Training, each student is evaluated according to the four achievement categories: **Knowledge & Understanding, Thinking, Communication and Application**

	Knowledge & Understanding	Thinking	Communication	Application
TERM (70%)	**25%**	**25%**	**25%**	**25%**
FINAL EVALUATION (30%)	This evaluation is cumulative, containing material from all units and will evaluate all 4 achievement categories.			

70% Term Work

Students must demonstrate achievement of all the overall expectations of the course.

Unit	Task	Achievement Category Focus	Date Due (tentative)
Unit 1: NUMBER SENSE	Quiz	K, T, C, A	September
Unit 2: LINEAR EQUATIONS	Quiz	K, T, C, A	October
	Test	K, T, C, A	October
Unit 3: LINEAR RELATIONS	Quiz	K, T, C, A	November
	Test	K, T, C, A	November
Unit 4: LINEAR SYSTEMS	Quiz	K, T, C, A	December
	Test	K, T, C, A	December
Unit 5: QUADRATIC EXPRESSIONS	Quiz	K, T, C, A	January
	Test	K, T, C, A	February
Unit 6: QUADRATIC RELATIONS	Quiz	K, T, C, A	February
	Test	K, T, C, A	March
Unit 7: TRIGONOMETRY	Quiz	K, T, C, A	March
	Test	K, T, C, A	April
	Assignment	K, T, C, A	April
Unit 8: MEASUREMENT – VOLUME AND SURFACE AREA	Quiz	K, T, C, A	May
	Test	K, T, C, A	May

In addition to the evaluations listed above, individual teachers may include other evaluations.

REPORTING

Four Reports Cards will be issued during the year. All reports will give a numeric grade to each student calculated as indicated above. All reports are cumulative. The November, February and April report cards are snapshots of all course work until that point in time. They will be based on the most consistent level of achievement to that point in time.

LEARNING SKILLS

Learning skills are critical for achievement of the curriculum expectations. On each report card there are 6 learning skills: Responsibility, Organization, Independent Work, Collaboration, Initiative and Self-regulation. Teachers report on the six Learning Skills using the following: E = Excellent, G = Good, S = Satisfactory, N = Needs Improvement.

Learning skills are not used to determine a student's grade in the course.

TEACHING /ASSESMENT AND EVALUATION STRATEGIES

A range of teaching, assessment and evaluation strategies will be used to address the needs of students' learning styles and allow students a variety of methods to demonstrate their achievement of the expectations.

Teaching Strategies
To facilitate the learning of the various concepts, a variety of teaching strategies will be used and might include:

Activity Based Strategies
examples: practical laboratory work, oral presentations, field trip, simulations, activity centres)

Cooperative Learning Strategies
examples: Think-Pair-Share, Teams-Games-Tournament, Group Investigation

Arts Based Strategies **e**xamples: drawing and origami

Direct Instruction Strategies
examples: Socratic dialogue, lecture, demonstration, conferencing, review, tutorial, textbook

Independent Learning Strategies
examples: homework, independent reading/study, memorization, note making, reports

Inquiry/Research Models
examples: inquiry process, research process, scientific process, writing process

Technology Applications
examples: database application, internet websites and research, media presentation

Thinking Skills Strategies
examples: brainstorming, classifying, concept mapping, concept attainment, concept formation, experimenting, expressing another point of view, graphing, issue-based analysis, lateral thinking, oral explanation, problem solving

Assessment
The primary purpose of assessment is to improve student learning. Assessment is ongoing, varied in nature and allows students to assess their own progress and determine next steps.

The following assessment strategies may be used at different times throughout the course:
quizzes, practice tests, conferencing, practical skill checks, written assignments, self-assessment/peer-assessment, reflective summary

Evaluation
Evaluation is varied and is used to determine a student's achievement grade.
The following evaluation strategies may be used at different times throughout the course:
quizzes, tests, written lab reports, practical skill checks, written assignments, presentations, written exams

SUBJECT OR COURSE SPECIFIC INFORMATION:
Students are required to bring a scientific calculator to class every period.