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### 2018 – 2019

### Grade 11, College Preparation

### Foundations for College Mathematics

##### MBF3C1

**Evaluation Profile & Outline**

## Earl Haig

SecondarySchool

**Course Description/Rationale/Overview:**

This course enables students to broaden their understanding of mathematics as a problem solving tool in the real world. Students will extend their understanding of quadratic relations; investigate situations involving exponential growth; solve problems involving compound interest; solve financial problems connected with vehicle ownership; develop their ability to reason by collecting, analyzing, and evaluating data involving one variable; connect probability and statistics; and solve problems in geometry and trigonometry. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

**Class Requirements:**

Textbook (supplied):

Foundations for College Mathematics 11

Replacement textbook cost: $90.00

Standard Scientific Calculator

Notebook

Note-taking materials

**Course Requirements/Department Policies**

Late Assignments

Late assignments must be accompanied with a note signed by a parent or guardian stating the reason for late submission. The note must list the due date of the assignment and the actual date of submission.

**Marks will be deducted for late assignments, up to and including the full value of the assignment.** [Growing Success: Assessment, Evaluation, and Reporting in Ontario Schools, Ministry of Ontario, 2010, pg. 43.]

Missed Tests

Arrangements for missed tests for valid reasons must be made ahead of time if known in advance, or the teacher must be contacted on the day of the test by phone (395-3210 ext. 20080) in case of illness or other unexpected absence. The student should be prepared to write the test immediately upon return to school.

#### Assessment Strategies

Diagnostic Quizzes Homework Check

Diagnostic Tests Group Work

In-class Assignments Technology Based Tasks

Peer Assessments Observations

Class Participation/Interaction

Conferences/Interviews

Notebook Check

**Mathematical Process Expectations**

Problem Solving Connecting

Reasoning and Proving Representing

Reflecting Communicating

Selecting Tools and Computational Strategies

**Learning Skills:**

Responsibility; Initiative; Organization;

Independent Work;

Collaboration;

Self-regulation

**Curriculum strands:**

Mathematical Models

Personal Finance

Geometry and Trigonometry

Data Management

**FINAL MARK**

Year’s Work: 70%

Final Summative Evaluation 30% (Summative – 10%)

(Final Exam – 20%)

Achievement Categories and Weighting

Knowledge & Understanding 25%

Application 20%

Thinking 10%

Communication 15%

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**Outline**

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Secondary School

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1. TRIGONOMETRY

* Revisiting the primary trigonometric ratios
* The Sine Law and The Cosine Law
* Problem solving with trigonometry

1. PROBABILITY

* Experimental probability
* Theoretical probability
* Interpreting information involving probability

1. ONE VARIABLE STATISTICS

* Sampling techniques
* Organizing and representing data
* Common distributions
* Measures of central tendency
* Measures of spread

1. QUADRATIC RELATIONS (PART 1)

* Modelling quadratic relations
* Exploring vertex form 
* Graphing parabolas (with and without technology)

1. QUADRATIC RELATIONS (PART II)

* Expanding binomials
* Quadratic relations in standard form
* Quadratic relations in factored form
* Problem solving with quadratics

1. EXPONENTIAL RELATIONS

* Exponent rules, zero and negative exponents
* Graphing exponential relations (with and without technology)
* Applications of exponential relations

1. PERSONAL FINANCE

* Simple interest, compound interest, present value
* Introduction of TVM Solver
* Savings alternatives, investment alternatives
* Debit cards, credit cards
* Car ownership (buying new/used cars, buying versus leasing, fixed and variable operating costs)

1. GEOMETRY

* Investigating geometric shapes and figures
* Imperial and metric system of measurements
* Perspective and orthographic drawings
* Creating nets, plans and patterns