HARBORD COLLEGIATE INSTITUTE
MATHEMATICS DEPARTMENT
Course Outline

Course: MBF 3C, Foundations for College Mathematics, Grade 11, College Level, Credit Value 1.0

Prerequisite(s): MFM 2P, Foundations of Mathematics, Grade 10, Applied Level

Curriculum: Ontario Ministry of Education. The Ontario Curriculum: Grades 11 and 12. Mathematics. 2007

Course Providers: Toronto District School Board. Harbord Collegiate Institute. Mathematics Department Curriculum Leader: L. Fraser

Textbook: None.

Overall Expectations:

Mathematical Models: *make connections between the numeric, graphical, and algebraic representations of quadratic relations, and use the connections to solve problems; demonstrate an understanding of exponents, and make connections between the numeric, graphical, and algebraic representations of exponential relations; describe and represent exponential relations, and solve problems involving exponential relations arising from real-world applications.*
Personal Finance: *compare simple and compound interest, relate compound interest to exponential growth, and solve problems involving compound interest; compare services available from financial institutions, and solve problems involving the cost of making purchases on credit; interpret information about owning and operating a vehicle, and solve problems involving the associated costs.*
Geometry and Trigonometry: *represent, in a variety of ways, two-dimensional shapes and three-dimensional figures arising from real-world applications, and solve design problems; solve problems involving trigonometry in acute triangles using the sine law and the cosine law, including problems arising from real-world applications.*
Data Management: *solve problems involving one-variable data by collecting, organizing, analysing, and evaluating data; determine and represent probability, and identify and interpret its applications.*

Course Content:

Unit 1: Trigonometry
Unit 2: Probability
Unit 3: One-Variable Statistics
Unit 4: Quadratic Relations
Unit 5: Geometry in Design
Unit 6: Exponents
Unit 7: Interest and Finance

Teaching Approaches: The approaches and strategies used in the classroom to help students meet the expectations of this curriculum will **vary according to the object of the learning and the needs of the students**. Successful classroom practices involve students in activities that require **higher-order thinking**, with an emphasis on **problem solving**. The use of concrete learning tools allows students to explore and represent abstract mathematical ideas in concrete, tactile, and visually rich ways. Information and communication **technology** provide a range of tools that can significantly extend and enrich teachers' instructional strategies and support students' learning in mathematics. Technology can also help to reduce the time spent on routine mathematical tasks and to allow students to devote more of their efforts to thinking and concept development.

Assessment and Evaluation: The primary purpose of assessment and evaluation is to improve student learning. Information gathered through **assessment** helps teachers to determine students' strengths and weaknesses in their achievement of the curriculum expectations. **Evaluation** refers to the process of judging the quality of student work on the basis of established criteria, and assigning a value to represent that quality. Assessments and evaluations are varied in nature, administered over a period of time, and designed to provide opportunities for students to demonstrate the full range of their learning. In addition, assessments and evaluations will be related to the learning activities used, correspond to the purposes of instruction, match the needs and experiences of the students, and be fair to all students.

Marks Reporting: Final Marks are calculated as follows: Term Work, 70% Summative Work, 30 %

Term work will be evaluated on the basis of the following four learning categories:

Knowledge and Understanding	35 %	*Content acquired in the course and the comprehension of its meaning and significance*
Application	30 %	*The use of knowledge and skills to make connections within and between various contexts*
Thinking	25 %	*The use of critical and creative thinking skills; planning and processing*
Communication	10 %	*The conveying of meaning through written or visual means*

Each evaluation will have marks allocated to one or more of the above categories. The learning categories are weighted according to the percentages given above.

The **summative work** consists of Performance Tasks completed during class in the final six weeks of school. Material covered in these summative evaluations reflects the overall expectations of the course.

The report card also reports on **learning skills**, which do not form part of the student's achievement mark.

Learning Skill	Sample Behaviours
Responsibility	completes class work, manages own behaviour, commitment to learning
Organization	establishes priorities, completes task according to timelines
Independent Work	follows instruction with minimal supervision, uses class time appropriately
Collaboration	responds positively to ideas, opinions, and values of others
Initiative	demonstrates curiosity and interest in learning, positive attitude to learning
Self-regulation	seeks clarification or assistance as needed, perseveres when challenged

Late or Missed Assignments and Evaluations: Students are expected to submit assignments, do tests or do in-class evaluations on the date set by the teacher. If you need extra time on an assignment, you need to discuss this with your teacher prior to the due date, with the understanding that extra time is not automatically granted. Once an assignment or evaluation has been marked and returned to the class, any student who has not submitted the work may not submit it for evaluation, as they will have had the opportunity to see the corrected work of classmates. It is understood that students must not miss tests or in-class evaluations. *See also pages 5-11 of the Student Planner, 2015-2016.*

Considerations: The mathematics curriculum in all courses attempts to be **unbiased** with respect to culture, experiences, interests and learning styles. Where possible, the content will **reflect a diverse range of cultures and backgrounds**. In planning courses in Mathematics, Harbord Mathematics teachers take into account the **needs of exceptional students** as set out in their Individual Education Plan. Working closely with the Special Education Department, both environmental and assessment accommodations will be made for students with identified needs. This Mathematics course will also provide a wide range of options to address the **needs of ESL/ELD students**. Assessment and evaluation

accommodations, as well as other program accommodations can and will be made to facilitate the success of the English Language Learner.