



York Region District School Board  
BUR OAK SECONDARY SCHOOL  
Mathematics Department  
Course Outline

<b>COURSE:</b>	Functions and Applications, <i>Grade 11</i>
<b>CODE:</b>	MCF3M1
<b>TEXTBOOK:</b>	Functions and Applications, Grade 11, McGraw-Hill Ryerson (\$85.00)
<b>CREDIT VALUE:</b>	One
<b>PREREQUISITES:</b>	Principles of Mathematics, Grade 10 Academic, or Foundations of Mathematics, Grade 10, Applied
<b>DEPARTMENT HEAD:</b>	B. Merchant
<b>COURSE TEACHERS:</b>	ABC

**COURSE DESCRIPTION:**

This course introduces basic features of the function by extending students' experiences with quadratic relations. It focuses on quadratic, trigonometric, and exponential functions and their use in modelling real-world situations. Students will represent functions numerically, graphically, and algebraically; simplify expressions; solve equations; and solve problems relating to applications. Students will reason mathematically and communicate their thinking as they solve multi-step problems. <http://www.edu.gov.on.ca/eng/curriculum/secondary/math1112currb.pdf>

**COURSE EXPECTATIONS:**

This course is based on curriculum expectations found in the Ontario Curriculum: *Grades 11 and 12 Mathematics 2007 (Revised)*. A copy of this document is available in the Math Office as well as on-line at <http://www.edu.gov.on.ca/eng/curriculum/secondary/math1112currb.pdf>

**COURSE TOPICS:**

1. Quadratic Functions
2. Factoring Quadratic Functions
3. Representing Quadratic Functions
4. Trigonometry
5. Sine Functions
6. Exponential Functions
7. Compound Interest & Annuities

**ASSESSMENT AND EVALUATION:**

Assessment **for/as** Learning may include, but is not limited to the following: diagnostic assessments, quizzes, conversations, observations, exit cards, cooperative learning strategies. Assessment **of** Learning may include, but is not limited to the following: critical thinking problem sets, performance tasks, culminating projects, presentations, assignments, tests.

Knowledge & Understanding	25%
Application	25%
Communication	10%
Thinking & Inquiry	10%
Final Summative Assessment	10%
Final Exam	20%

Refer to the *Bur Oak Secondary School Assessment, Evaluation and Communication Policy*

## **STUDENT WELL BEING:**

The Mathematics Department is committed to providing programming which accommodates students of all backgrounds. The department actively promotes classroom environments in which deep learning occurs, and in which the mental health and well-being of students is a priority.

- Teachers as “lead learners” will pay consistent attention to equity, inclusivity and mental health, while overall well-being will be at the forefront of modern learning<sup>1</sup>.
- The role of students:
  - Honouring principles of differentiation in instruction, assessment and evaluation.
  - Student voice and involvement in the assessment process with emphasis on equity and inclusivity<sup>2</sup>.
  - Student ownership of learning, using a model of gradual release of responsibility, with awareness of student mental health and well-being<sup>3</sup> throughout.

<sup>1</sup>Modern Learning is authentic and relevant deep learning that enables learners to create, connect, communicate, and share their learning with the world and be future ready.

<sup>2</sup>Equity and inclusive education:

- is a foundation of excellence;
- meets individual needs;
- identifies and eliminates barriers;
- promotes a sense of belonging;
- involves the broad community;
- builds on and enhances previous and existing initiatives;
- is demonstrated throughout the system.

<sup>3</sup>Well-being is a positive sense of self, spirit and belonging that we feel when our cognitive, emotional, social and physical needs are being met. Healthy development of the mind, body and spirit is contingent on balance and interconnectedness.

## **NOTES:**

It is really important to us that you learn the material and that you enjoy and do well in the course. Please make every effort to keep up with the work, to be present and on time for class, and to participate every day.

Please bring a pencil, an eraser, a scientific calculator, a ruler, a protractor, a binder with lined paper and graph paper, and a textbook to class with you every day.

You will get homework on a regular basis. If you are having trouble with the homework or with ideas covered in class, please see your teacher for help.

If you know that you are going to be away on the day of an assessment, you must make arrangements prior to the assessment. If you are ill on the day of an assessment, one of your parents must leave a message with your teacher (905-202-1234) and provide verification of illness. You should be prepared to complete the assessment on the day you return.

Enjoy!