



# COURSE OUTLINE

## MTH050

Prepared: Heather Ferguson    Approved: Carolyn Hepburn

<b>Course Code: Title</b>	MTH050: FOUNDATIONS OF MATH						
<b>Program Number: Name</b>	8214: LBS - LEVEL5						
<b>Department:</b>	ACADEMIC UPGRADING/LBS						
<b>Semester/Term:</b>	17F						
<b>Course Description:</b>	This developmental course focuses on basic algebra, solving equations, and basic probability and statistics. Integers, rational numbers, exponents, polynomials, equations, graphing and various aspects of statistics and their application and display are featured.						
<b>Total Credits:</b>	5						
<b>Hours/Week:</b>	5						
<b>Total Hours:</b>	45						
<b>Substitutes:</b>	MTH045						
<b>This course is a pre-requisite for:</b>	CHM 94						
<b>Essential Employability Skills (EES):</b>	#3. Execute mathematical operations accurately. #4. Apply a systematic approach to solve problems. #5. Use a variety of thinking skills to anticipate and solve problems. #6. Locate, select, organize, and document information using appropriate technology and information systems.						
<b>Course Evaluation:</b>	Passing Grade: 70%, B						
<b>Evaluation Process and Grading System:</b>	<table border="1"> <thead> <tr> <th>Evaluation Type</th> <th>Evaluation Weight</th> </tr> </thead> <tbody> <tr> <td>Quizzes and Learning Activities</td> <td>20%</td> </tr> <tr> <td>Unit Tests</td> <td>80%</td> </tr> </tbody> </table>	Evaluation Type	Evaluation Weight	Quizzes and Learning Activities	20%	Unit Tests	80%
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Quizzes and Learning Activities	20%						
Unit Tests	80%						
<b>Books and Required Resources:</b>	Mathematics MFM2P-B Lessons 1-5 by Independent Learning Centre Mathematics MFM2P-B Lessons 6-10 by Independent Learning Centre Mathematics MFM2P-B Lessons 16-19 by Independent Learning Centre						



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Mathematics MEL4E Lessons 1-4 by Independent Learning Centre

### Course Outcomes and Learning Objectives:

#### Course Outcome 1.

Upon successful completion of this course, the student will demonstrate the ability to consolidate various numerical skills, and manipulate first-degree polynomials.

#### Learning Objectives 1.

- Solve mathematical problems involving ratio and percent.
- Use estimation to ensure an answer is reasonable.
- Solve mathematical problems involving integers, rational numbers, exponents and powers.
- Add and subtract algebraic expressions.
- Add, subtract and multiply polynomials .

#### Course Outcome 2.

Upon successful completion of this course, the student will demonstrate the ability to solve and graph linear equations.

#### Learning Objectives 2.

- Solve equations and verify solutions.
- Find the slope of a line.
- Interpret graphs and plot coordinates on a Cartesian plane.
- Graph a linear equation using a table of values, and/or x and y intercepts, and/or slope and y-intercept methods.

#### Course Outcome 3.

Upon successful completion of this course, the student will demonstrate the ability to graph linear and non-linear relationships.

#### Learning Objectives 3.



# COURSE OUTLINE

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3

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- Create a scatter plot and line of best fit.
- Make a table of values and graph a non-linear relationship.
- Recognize linear and non-linear relationships based on table of values and finite differences, or on equations.
- Apply mathematical modeling to analyze existing information and predict future results using table of values and linear or non-linear graphs.

### **Course Outcome 4.**

Upon successful completion of this course, the student will demonstrate the ability to find the perimeter of various shapes using combinations of known formulas.

### **Learning Objectives 4.**

- Use the Pythagorean Theorem to calculate the length of an unknown side in a right triangle, and to solve problems.
- Find the perimeter of simple shapes and composite diagrams using combinations of formulas.

### **Course Outcome 5.**

Upon successful completion of this course, the student will demonstrate the ability to generate basic statistical data and interpret graphs.

### **Learning Objectives 5.**

- Implement random and unbiased sampling techniques.
- Calculate mean, median and mode.
- Interpret and create line and bar graphs, and pie charts.

### **Course Outcome 6.**

Upon successful completion of this course, the student will demonstrate the ability to calculate and express probabilities, and describe results.



# COURSE OUTLINE

## MTH050

4

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### Learning Objectives 6.

- Express the probability of a simple event as a fraction, decimal or percent.
- Interpret probabilities expressed as fractions, decimals or percentages.
- Apply principles of probability to simple experiments.

**Date:**

Thursday, August 31, 2017

Please refer to the course outline addendum on the Learning Management System for further information.