COURSE OUTLINE: BCO101 - BUSINESS MATH

Prepared: Mathematics Department
Approved: Sherri Smith, Chair, Natural Environment, Business, Design and Culinary

Course Code: Title	BCO101: BUSINESS MATH
Program Number: Name	2035: BUSINESS 2037: BUSINESS FUNDAMENTAL 2050: BUSINESS -ACCOUNTING
Department:	MATHEMATICS
Semesters/Terms:	19F, 20W
Course Description:	In this course, students will begin with a review of basic arithmetic and algebraic manipulations, continuing with the following topics: ratios and proportions, percentages and the percentage formula, discounts, markups and markdowns, payroll scenarios, break-even analysis, and simple interest.
Total Credits:	4
Hours/Week:	4
Total Hours:	60
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
Substitutes:	OEL629
This course is a pre-requisite for:	BCO105
Vocational Learning Outcomes (VLO's) addressed in this course: Please refer to program web page for a complete listing of program outcomes where applicable.	**2035 - BUSINESS** VLO 4 Apply basic research skills to support business decision making. VLO 8 Use accounting and financial principles to support the operations of an organization. **2037 - BUSINESS FUNDAMENTAL** VLO 4 Apply basic research skills to support business decision making. VLO 5 Perform basic accounting procedures and financial calculations to support the operations of an organization.
Essential Employability Skills (EES) addressed in this course:	EES 3 Execute mathematical operations accurately. EES 4 Apply a systematic approach to solve problems. EES 5 Use a variety of thinking skills to anticipate and solve problems. EES 10 Manage the use of time and other resources to complete projects.
Course Evaluation:	Passing Grade: 50%, D
Books and Required Resources:	Contemporary Business Mathematics with Canadian Applications by Hummelbrunner Publisher: Pearson Edition: 11 ISBN: 9780134141084

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Calculator -
Sharp EL-520XTB (available in the bookstore)

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
1. Apply knowledge of basic math skills as they relate to general business applications.	1.1 Simplify arithmetic expressions using the basic order of operations. 1.2 Determine equivalent fractions and convert fractions to decimals. 1.3 Perform calculations using fractions, decimals and percentages. 1.4 Through problem solving, compute simple arithmetic and weighted averages. 1.5 Determine gross earnings for employees remunerated by the payment of salaries, hourly wages or commissions. 1.6 Through problem solving, compute Goods and Services Tax, Harmonized Sales tax, sales taxes and real property taxes.
Course Outcome 2	**Learning Objectives for Course Outcome 2**
2. Apply the basic formula rearrangement concepts for the simplification and solving of algebraic equations.	2.1 Simplify algebraic expressions by extracting common factors and applying rules of exponents. 2.2 Solve a linear equation in one variable. 2.3 Solve two linear equations in two variables. 2.4 Rearrange a formula or equation to isolate a particular variable. 2.5 Solve word problems that lead to a linear equation in one unknown or two linear equations in two unknowns. 2.6 Given any two of the three quantities: percent rate, portion and base, solve the third. 2.7 Solve problems involving percent change.
Course Outcome 3	**Learning Objectives for Course Outcome 3**
3. Set up and solve ratios and proportions as they relate to business applications.	3.1 Set up and manipulate ratios. 3.2 Set up and solve proportions. 3.3 Use proportions to allocate or prorate an amount on a proportionate basis. 3.4 Use quoted exchange rate movement to currency appreciation or depreciation. 3.5 Interpret and use index numbers.
Course Outcome 4	**Learning Objectives for Course Outcome 4**
4. Solve integrated word problems involving discounts, markups and markdowns.	4.1 Calculate the net price of an item after single or multiple trade discounts. 4.2 Calculate a single discount rate that is equivalent to a series of discounts. 4.3 Understand the ordinary dating notation for the terms of payment of an invoice. 4.4 Calculate the amount of the cash discount for which a payment qualifies. 4.5 Solve merchandise pricing problems involving markup and markdown.

Course Outcome 5	Learning Objectives for Course Outcome 5
5. Compute break-even values.	5.1 Compute break-even values using cost-volume-profit relationships,contribution margin and contribution rate. 5.2 Construct break-even graphs. 5.3 Calculate the effects of changes to cost, volume and profit.
Course Outcome 6	Learning Objectives for Course Outcome 6
6. Determine values for simple interest applications.	6.1 Calculate interest, maturity value (future value) and present value in a simple interest environment. 6.2 Present details of the amount and timing of payments in a time diagram. 6.3 Calculate the equivalent value on any date of a single payment or a stream of payments.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Assignments/Quizzes	20%
Tests	80%

Date: June 17, 2019

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