



COURSE OUTLINE: BCO101 - BUSINESS MATH

Prepared: Mathematics Department

Approved: Bob Chapman, Chair, Health

Course Code: Title	BCO101: BUSINESS MATH
Program Number: Name	2035: BUSINESS 2037: BUSINESS FUNDAMENTAL 2050: BUSINESS -ACCOUNTING
Department:	MATHEMATICS
Academic Year:	2023-2024
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:	56
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:	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.
<small>Please refer to program web page for a complete listing of program outcomes where applicable.</small>	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 A minimum program GPA of 2.0 or higher where program specific standards exist is required



for graduation.

Books and Required Resources:

Contemporary Business Mathematics with Canadian Applications by Hummelbrunner
Publisher: Pearson Education Canada Edition: 12th
ISBN: 9780135285015
or ebook 9780135406380

Calculator -
Sharp EL-516XG (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. Review Algebraic concepts and operations and apply them to solving a variety of first-degree equations in one variable.	2.1 Review integers and their operations. 2.2 Define variables, algebraic expressions, monomials, binomials, polynomials, and like terms. 2.3 Add, subtract, multiply, and divide algebraic expressions. 2.4 Simplify powers with integral and rational exponents. 2.5 Simplify algebraic expressions by extracting common factors and applying rules of exponents. 2.6 Define logarithms using a variety of bases. 2.7 Solve a variety of linear equations in one variable including those with fractions. 2.8 Rearrange a formula or equation to isolate a particular variable. 2.9 Solve word problems that lead to a linear equation in one unknown.
Course Outcome 3	Learning Objectives for Course Outcome 3
3. Review percentages, ratios and proportions and use these concepts in a variety of 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 percentages as ratios in proportional statements. 3.5 Use proportions to solve business problems involving increases or decreases, markup, markdown, and discounts. 3.6 Use proportions in currency conversions.



		3.7 Apply ratios and proportions to index numbers. 3.8 Apply percentages to personal income tax and property tax.
	Course Outcome 4	Learning Objectives for Course Outcome 4
	4. Use the Cartesian coordinate system to model business applications involving the linear relations in two variables.	4.1 Review the Cartesian coordinate system. 4.2 Solve linear equations in two variables. 4.3 Graph special linear equations. 4.4 Define intercepts and slope of linear relations. 4.5 Determine the slope of a line passing through any two points using their coordinates. 4.6 Determine the equation of a line given its slope and one point. 4.7 Use a system of two linear relations to determine the break even point in business applications, apply to cost-volume-profit using graphical and algebraic solution strategies. 4.8 Model simple interest as a linear relation to visualize investment earnings.
Evaluation Process and Grading System:	Evaluation Type	Evaluation Weight
	Assignments/Quizzes/Participation	30%
	Tests	70%
Date:	June 26, 2023	
Addendum:	Please refer to the course outline addendum on the Learning Management System for further information.	