COURSE OUTLINE: BCO105 - BUSINESS MATH 2

Prepared: Mathematics Department
Approved: Bob Chapman, Chair, Health

Course Code: Title	BCO105: BUSINESS MATH 2
Program Number: Name	2035: BUSINESS 2037: BUSINESS FUNDAMENTAL 2050: BUSINESS -ACCOUNTING
Department:	MATHEMATICS
Semesters/Terms:	21W, 21S
Course Description:	In this course, students will develop their skills and understanding of business mathematics involving interest calculations, compound interest, annuities, loan financing, bonds and investment decision-making.
Total Credits:	4
Hours/Week:	4
Total Hours:	60
Prerequisites:	BCO101
Corequisites:	There are no co-requisites for this course.
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 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 Edition: 11 ISBN: 9780134141084

In response to public health requirements pertaining to the COVID19 pandemic, course delivery and assessment traditionally delivered in-class, may occur remotely either in whole or in part in the 2020-2021 academic year.

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

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
1.Identify the variables that are used in compound interest calculations for single cash flows and be able to perform calculations involving compound interest.	1.1 Calculate interest rates and the number of compounding periods. 1.2 Compute future (maturity) values of investments. 1.3 Compute present values of future sums of money. 1.4 Discount long-term promissory notes. 1.5 Solve problems involving equivalent values.
Course Outcome 2	**Learning Objectives for Course Outcome 2**
2. Identify the variables that are used to determine interest rates necessary to calculate compound interest scenarios.	2.1 Determine the number of conversion periods and find equated dates. 2.2 Compute periodic and nominal rates of interest. 2.3 Compute effective and equivalent rates of interest.
Course Outcome 3	**Learning Objectives for Course Outcome 3**
3. Identify the variable associated with ordinary simple annuity calculations and perform calculations with annuities.	3.1 Distinguish between types of annuities based on term, payment date, and conversion period. 3.2 Compute the future value for ordinary simple annuities. 3.3 Compute the present value for ordinary simple annuities. 3.4 Compute the payment for ordinary simple annuities. 3.5 Compute the number of periods for ordinary simple annuities. 3.6 Compute the interest rate for ordinary simple annuities.
Course Outcome 4	**Learning Objectives for Course Outcome 4**
4. Identify the variables associated with ordinary general annuities and perform calculations with annuities.	4.1 Compute the future value (or accumulated value) for ordinary general annuities. 4.2 Compute the present value (or discounted value) for ordinary general annuities. 4.3 Compute the payment for ordinary general annuities. 4.4 Compute the number of periods for ordinary general annuities. 4.5 Compute the interest rate for ordinary general annuities. 4.6 Compute future value and present value for constant-growth annuities.
Course Outcome 5	**Learning Objectives for Course Outcome 5**
5. Calculate annuities due, perpetuities and perpetuities due, and deferred perpetuities.	5.1 Compute the future value, present value, periodic payment term, and interest rate for simple annuities. 5.2 Compute the future value, present value, periodic payment term, and interest rate for general annuities due. 5.3 Compute the future value, present value, periodic payment term, and interest rate for deferred annuities due. 5.4 Compute the present value, periodic payment, and interest rate for ordinary perpetuities, perpetuities due, and deferred perpetuities.

Course Outcome 6	Learning Objectives for Course Outcome 6
6. Perform amortization calculations and develop amortization tables.	6.1 Describe the concept of amortization. 6.2 Prepare a complete amortization table and a partial amortization table. 6.3 Prepare a complete amortization table and a partial amortization table for general annuities. 6.4 Find the size of a payment when all payments except the final payment are equal in size. 6.5 Calculate the principal balance after any payment as well as the principal and interest components of any payment.
Course Outcome 7	**Learning Objectives for Course Outcome 7**
7. Identify the variables dealing with bonds and perform calculations to determine the value of those variables.	7.1 Determine the market price of a bond on any date. 7.2 Determine the premium or discount on the purchase of a bond. 7.3 Calculate the approximate yield rate for bonds bought on the open market.
Course Outcome 8	**Learning Objectives for Course Outcome 8**
8. Identify cash inflows and outflows and use investment decision techniques for decision-making purposes.	8.1 Determine the discounted value of cash flows and choose among alternative investments on the basis of a discounted cash flow criterion. 8.2 Calculate the net present value (NPV) of a capital investment (project) in order to determine if a project is feasible.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Assignments/Quizzes	10%
Class Participation/Attendance	10%
Tests	80%

Date: June 23, 2020

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

In response to public health requirements pertaining to the COVID19 pandemic, course delivery and assessment traditionally delivered in-class, may occur remotely either in whole or in part in the 2020-2021 academic year.