



Course Descriptor Math 105, Business Mathematics

Proposed Academic Year	2021-2022	Last Reviewed Academic Year	2020-2021
Course Code	MATH105	Course Title	Business Mathematics
Credit hours	3 CR	Level of study	Under Graduate
College / Centre	CAHS	Department	BSD
Co-requisites		Pre-requisites	Applied Mathematics

1. COURSE OUTLINE

[Concepts of Business and Financial mathematics are covered in this course. Methods of solving equations are applied to solve break-even and equilibrium points problems. Further applications are covered by the mean of calculus approach using differentiation and integration. Simple and compound interest present and future values are studied. Supplementary applications are considered by the mean of matrices.]

2. AIMS

[This course aims to prepare the students and give them the mathematical information and some economic terms necessary to study the subsequent courses in the College of Business Administration.]

3. LEARNING OUTCOMES, TEACHING, LEARNING and ASSESSMENT METHODS

Learning Outcomes (Definitive)	Teaching and Learning methods (Indicative)	Assessment (Indicative)
Upon successful completion of this course, students will be able to:		
1. Interpret a business problem into a mathematical model and solve it.	Lectures and solving problems	Quizzes, Midterm, Assignment
2. Settle a brief business analysis via mathematics and expect future behavior of the business project.	Lectures and solving problems	Quizzes, Midterm, Assignment
3. Distinguish and compare between simple and compound interest and understand the impact of simple (compound) interest formulae on similar situations from real life	Lectures and solving problems	Quizzes, Midterm, Assignment
4. Interpret a business problem into a mathematical system of equations and solve it via matrices applications	Lectures and solving problems	Quizzes, Midterm, Assignment



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4. ASSESSMENT WEIGHTING

Assessment	Percentage of final mark (%)
Quiz 1	10%
Quiz 2	10%
Midterm	20%
Participation	10%
Assignment	10%
Final	40%
TOTAL	100%

5. ACHIEVING A PASS

Students will achieve 3 credit hours for this course by passing **ALL** of the course assessments [*alternatively, list the compulsory pass assessments**] and achieving a **minimum overall score of 50%**

NB *Ensure that ALL learning outcomes are taken into account

6. COURSE CONTENT (Indicative)

Operations on algebraic terms and Functions.
Solving linear and Quadratic Equations
Supply & Demand Functions.
The equilibrium point.
Business basic Functions.
Modeling business Problems by Mathematics.
The break-even point.
Miscellaneous problems on Break-even points.
The maximum and minimum of quadratic functions.
The maximum and minimum of quadratic business concepts.
Introduction to calculus (Part1: The Derivative).
The maximum and minimum of functions by the mean of the 2 nd Derivative.
The maximum and minimum of non-quadratic business functions.
Introduction to calculus (Part2: The Integration).
Calculus Applications.
Percentage and the Simple Interest Formula
Miscellaneous problems on the Simple interest.
Geometric series and the Compound interest Formula
Miscellaneous problems on the Compound interest.
Exponential and Logarithms.
Exponential and Logarithms applications on The compound interest
The Simple vs. Compound comparison.
Introduction to Matrices
Operations on Matrices.
Miscellaneous Problems on Matrices.
Basic Matrices Applications on Business.



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Supplementary Topics on Matrices (Determinant, Matrix inverse)	
Supplementary Topics on Matrices (Cramer's Rule).	
TOTAL HOURS	45
Plus RECOMMENDED INDEPENDENT STUDY HOURS	
TOTAL COURSE HOURS	

7. RECOMMENDED REFERENCES

Core text/s:

< Mathematics for Economics and Business- Ian Jacques, ISBN: 978027322168 >

Library + online resources:

Open Educational Resources:

www.thomsonlearning.co.uk

<https://open.umn.edu/opentextbooks/textbooks/business-math-a-step-by-step-handbook>