



58/11/A, Panthapath, Dhaka-1205

Summer Semester 2016

Course Profile

Faculty	Business Administration		
Program	BBA		
Course Code	MAT 102		
Course Title	Basic Algebra		
Course Instructor	Fakhrul Islam Lecturer Department of Business Administration E-Mail: romanaiscu@yahoo.com Victoria University of Bangladesh		
Status	Compulsory		
Credit Hours	3 Credit hours		
Teaching Methodology	Class Attendance Work sheet Assignment Mid-Term Final-Term		
Evaluation Method	Class Attendance.....05% Work Sheet/Term Paper.....20% Assignment.....10% Mid-Term.....25% Final-Term.....40%		
Grading System	Numerical Grade	Letter Grade	Grade Point
	80% and above	A+ (A Plus)	4.00
	75% to less than 80%	A (A Regular)	3.75
	70% to less than 75%	A- (A Minus)	3.50
	65% to less than 70%	B+ (B Plus)	3.25
	60% to less than 65%	B (B Regular)	3.00
	55% to less than 60%	B- (B Minus)	2.75
	50% to less than 55%	C+ (C Plus)	2.50
	45% to less than 50%	C (Regular)	2.25
	40% to less than 45%	D (Regular)	2.00
	Less than 40%	F (Fail)	0.00
Course Objective	To help students better understand a solid foundation in the mathematical tools and to stimulate the students' interest in mathematics by emphasizing the practical usefulness of the techniques.		
Book(s)	Basic Texts: 1. Ann. J. Hughes, Applied Mathematics: For Business, Economics and Social Sciences. Reference text : 1. D.C. Sancheti & V.K. Kapoor, Business Mathematics		

Prepared by Fakhrul Islam, Lecturer, Department of Business Administration

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Lecture Plan

Lecture No.	Main Topic	Sub-topics
1 st to 4 th	<p style="text-align: center;"><u>Chapter 01 :</u></p> <p style="text-align: center;">A Review of the Basic Concepts of Mathematics</p>	Today's System of Complex numbers, The real Number Lines, Algebraic Operations on Real Numbers, Working with fractions, Powers and Roots of Real Numbers, Algebraic Expressions, Equations, Inequalities and Their Solution Sets and Logarithms.
5 th to 7 th	<p style="text-align: center;"><u>Chapter 02:</u></p> <p style="text-align: center;">Mathematical Functions and Their Use as Models</p>	The Idea of a Mathematical Function, Ways of Symbolizing the Functional Relationship, Deriving Specific Functions, Finding the Value of the Function, The Domain and Range of a function, Graphical Representation of a function.
8 th to 9 th	<p style="text-align: center;"><u>Chapter 03:</u></p> <p style="text-align: center;">Permutations and Combinations</p>	Definition of Permutations and Combinations, Difference between Permutations and Combinations, Factorials, Joint Selections and Solving Problems Related to Permutations and Combinations.
10 th to 12 th	<p style="text-align: center;"><u>Chapter 04:</u></p> <p style="text-align: center;">A Review of Set Theory and Counting</p>	Concept, Definition, Characteristics of Set, Basic Set Operations, Cartesian Product of Set, Venn Diagram, Business Application.
<u>Mid-Term Exam.</u>		
13 th to 16 th	<p style="text-align: center;"><u>Chapter 05:</u></p> <p style="text-align: center;">Linear Equations, Functions and Inequalities</p>	Linear Functions in Two Variables, Graphing a Linear Function, The Slope of a Linear Function, Deriving the Parameters for a Specific Linear Function, A Market Equilibrium.



17 th to 20 th	<u>Chapter 06:</u> Nonlinear Functions	The Polynomial Functions, The Quadratic Function, Applications of Quadratic Models: Quadratic Cost Function, Quadratic revenue Function; The Graph of a Quadratic Function.
21 st & 23 rd	<u>Chapter 07:</u> Basic Functions of Matrix Algebra	Definition, Types of Matrices, Square and Identity Matrix, Matrix Operations, Addition, Subtraction, Multiplication, Determinants, Scalar Multiplication.
24 th	Case Study Presentation	
<u>Final Exam</u>		

Instructions for Assignments & Term Paper :

To be announced in the class

Examination Rules:

According to the existing Examination Policy of VUB

Others: Any other issues & queries related to the course will be discussed and explained as and when required.