



COURSE TITLE: BUSINESS MATHEMATICS- I

COURSE CODE: QAM102

CREDIT UNITS: 03

COURSE LEVEL: UG

L	T	P/S	SW/F W	TOTAL CREDIT UNITS
2	1	-	-	3

Course Objectives:

- To familiarize the students with basic mathematical tools and the application of the same to business and economic situations.

Pre-requisites: Knowledge of basic calculation methods.

Student Learning Outcomes:

- The students after completion of the program will be able to understand the mathematical concepts and terminology involved in Algebra, Derivatives and basic arithmetic operations on Matrices.
- The students will be able to interpret and solve business related problems.

	Course Contents/ Syllabus:	Weightage (%)
1	Module I : Set Theory	10%
	Definition of Set, Subset, Types of sets operations on sets; Venn diagram, DE Morgan's Laws, Applications of set theory.	
2	Module II : Algebra	35%
	Business mathematics: Scope and Importance; Functions of real variables, Linear, Exponential Logarithmic, and Inverse functions with graph and illustrative examples; Arithmetic Progressions (A.P.), Geometric progressions(G.P.) with simples examples	
3	Module III : Compound Interest and Annuities	20%
	Different types of interest rates, Concept of present value and amount of a sum, Types of annuities; Types of annuities, Present value and amount of annuity including the case of continuous compounding, Valuation of loans, and debentures, Sinking funds.	
4	Module IV : Matrices and Determinants	35%
	Definition of a matrix; Types of matrices; Algebra of matrices; properties of determinants; calculation of values of Determinants up to third order; Adjoint of a matrix, Finding inverse of a matrix; Rank of a matrix, Solution of system of linear equations by Cramer's Rule and Matrix Inverse Method (including not more than three variables).	

Pedagogy for Course Delivery:

- Instructional materials and resources, including technology
- Ways to represent mathematics concepts and procedures

- Instructional strategies and classroom organizational models
- Ways to promote discourse and foster a sense of mathematical community
- Means for assessing student understanding of mathematics

Lab/ Practical details, if applicable : NA

Assessment/ Examination Scheme:

Theory L/T (%)	Lab/Practical/Studio (%)	End Term Examination
30%	NA	70%

Theory Assessment (L&T):

Continuous Assessment/Internal Assessment					End Term Examination
Components (Drop down)	A	CT	CP	HA	EE
Weightage (%)	5	15	5	5	70

Lab/ Practical/ Studio Assessment:

	Continuous Assessment/Internal Assessment				End Term Examination
Components (Drop down)					
Weightage (%)					

References:

- Sharma J. K, Business Mathematics: Theory and Applications, Ane Pub. House, Delhi,
- Soni R.S., Business Mathematics, Pitamber Publishing House
- Kapoor V.K., Business mathematics, Sultan Chand & Sons, Delhi.