KU2DSCBBA104:BUSINESS MATHEMATICS

Semester	Course Type	Course Level	Course Code	Credits	Total Hours
II	DSC	100-199	KU2DSCBBA104	4	4

Learning Approach (Hours/ Week)			Marks Distribution			Duration of ESE (Hours)
Lecture	Practical/ Internship	Tutorial	CE	ESE	Total	
4	0	0	30	70	100	2

Course Description: This course aims at making the students realise the possibilities of integrating mathematical equations in business decision making.

Course Prerequisite: NIL

Course Outcomes:

CO No.	Expected Outcome	Learning Domains
1	Understand Commercial Arithmetic and its applications	U
2	• Application of AP and GP in solving commercial application problems.	A
3	• Understand the difference between mathematical equations and inequalities and their solutions	An
4	• Demonstrate the application of matrices in solving business problems.	E
5		

****Remember (R), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C)***

Mapping of Course Outcomes to PSOs

	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7
CO 1	✔			✔			
CO 2		✔			✔		
CO 3			✔				✔
CO 4			✔			✔	
CO 5	✔			✔			

COURSE CONTENTS

Contents for Classroom Transaction:

MODULE	UNIT	DESCRIPTION	HOURS
1	**MODULE TITLE**		
	1	**Commercial Arithmetic**	15
		a)Simple Interest, Compound Interest including yearly and half yearly calculations,	
		b) Concept and problems of present value and amount of sum types of annuities, Continuous Compounding.	
	2	Meaning and applications of appreciation, depreciation and sinking fund.	
		a) Ratios and Proportions Duplicate-triplicate and sub-duplicate of a ratio.	
	3	Proportions- third, fourth and inverse proportion – problems.	

2	**MODULE TITLE**		
	1	**Theory of Equations**	15
	2	Introduction – Meaning - Types of Equations – Simple or Linear Equations and Simultaneous Equations (only two variables), Elimination and Substitution Methods only.	
	3	Quadratic Equation - Factorization and Formula Method ($ax^2 + bx + c = 0$ form only). Simple problems	
	4	Application of equation in business.	

3	**MODULE TITLE**		
	1	**Progression**	15
	2	Meaning-Types of Progression-Arithmetic Progression –	
		a) Finding the 'nth' term of AP and Sum to 'nth' term of AP. Insertion of Arithmetic Mean.	
	3	Geometric Progression – Finding the 'nth' term of GP and sum to 'nth' term of GP and insertion of Geometric Mean-problems	

4	**MODULE TITLE**		
	1	**Matrices & Determinants**	10
		a) Definition, Types of Matrices, Equality of Matrices, Matrix operations: Addition, Subtraction,	
	2	Scalar Multiplication and Multiplication of Matrix; Transpose of Matrix, Determinant of matrix, Inverse of Matrix,	
	3	Solving of Equations by Cramer's Rule, Matrix Inverse method, Rank of a Matrix.	

5	**Teacher Specific Module**	**5**
	Directions Help the students practically apply mathematical concepts to analyse the performance of business organisations.	5

Essential Readings:

1. Sancheti&Kapoor: Business Mathematics and Statistics, Sultan Chand
2. Padmalochan, H. (2015). *A Text Book of Business Mathematics*, New Delhi: Sultan Chand and Sons.
3. G K Ranganath& T V Narasimha Rao. *Business Mathematics.* New Delhi: Himalaya Publishing House.
4. Madappa, Mahadi Hassan, M.IqbalTaiyab –Business Mathematics, Subhash Publications
5. Saha: Mathematics for Cost Accountants, Central Publishers.
6. Azharuddin: Business Mathematics, Vikas Publishers.
7. R.S Bhardwaj: MathematicsforEconomics&Business

Assessment Rubrics:

Evaluation Type		**Marks**
End Semester Evaluation		**70**
Continuous Evaluation		**30**
a)	Test Paper- 1	6
b)	Test Paper-2	6
c)	Assignment	9
d)	Seminar/ Book/ Article Review/ Viva-Voce/ Field Report	9
Total		**100**