

SARDAR PATEL UNIVERSITY

M.COM. (INTEGRATED) SEMESTER-I		
Paper Code IB01CCOM53	Title of the Paper Business Mathematics & Statistics - I	Total Credit 4
Course Objectives	1. To enhance analytical ability in students for processing data 2. To Familiarize students with applications of Statistical techniques in business decision making.	

Course Description		
Unit	Description	Weightage
1.	Set Theory, Determinants Set Theory: Sets, Subsets, equality of two sets, null set, universal set, power set, complements of a set, union and intersection of sets, difference of two sets. Venn Diagram (Concept only), Laws of algebra of sets, De’Morgan laws and Cartesian Product of two sets. Determinants: Meaning, Determinants and their basic properties of determinant (without Proof, without examples), Cramer’s Method (For two equations)	25%
2.	Matrix Types of matrices: Square, null, identity, transpose of Matrices, Symmetric, skew symmetric, Singular, Non Singular, inverse, adjoin of matrix. Matrices –scalar multiplication, Addition, Subtraction, Multiplication. Solution of a system of two and three linear equations using matrix.	25%
3.	Mathematics in Finance Compound interest, nominal and effective rates of interest, continuous compounding, Concept of Present value and amount of a sum, Annuity (only for a fixed period of time), present value of annuity, sinking funds (with equal payments and equal time intervals)	25%
4.	Interpolation and Extrapolation Meaning of interpolation and Extrapolation, Assumptions, Importance and uses of interpolation and Extrapolation, Operators Δ , E and D (without proof), methods of interpolation and extrapolation; 1. Newton’s Method 2. Binomial expansion method 2. Lagrange’s method, Simple examples on these methods.	25%

*Units will have the same Weightage in the evaluation as suggested in the course outline.

Teaching-Learning Methodology	<ul style="list-style-type: none"> • Lecture Method • Online Lectures • Practical Problem Solving
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Evaluation Pattern		
Sr.No.	Details of the Evaluation	Weightage
1.	Internal/Written Examination	15%
2.	Internal Continuous Assessment in the form of Practical , Viva-Voce, Quizzes, Seminars, Assignments, Attendance	15%
3.	University Examination	70%

* Students will have to score a minimum of 40 (Forty) Percent to pass the course.

Course Outcomes: Having Completed this course, the students will be able to	
1.	Lead to the student to understand how to process and interpret information to arrive at logical conclusions to common business mathematical applications.
2.	Apply the knowledge of mathematics in solving business problems.
3.	Analyze and demonstrate mathematical skills required in intensive areas in Economics and business

Suggested References:	
Sr. No	References
1.	Sancheti&Kapoor: Statistics: Theory, Methods and Applications, Sultan Chand & sons, New Delhi
2.	Kapoor, V.K.:Business Mathematics, sultan Chand and Sons, New Delhi
3.	Soni, R.S.: Business Mathematics, Pitamber Publishing House
On-Line Resources available that can be used as Reference Material	
https://ugcmoocs.inflibnet.ac.in/view_module ug.php/311	