(B.Com) (Business Studies)
(B.COM) (Programme Name) Semester (I)

Course Code	UB01CCOM73	Title of the Course	Business Mathematics & Statistics - I
Total Credits of the Course	03	Hours per Week	03

Course Objectives:	1. This course aims to furnish the students with the Mathematical and Statistical foundation required for business management and to know the function of Mathematics and Statistics in theManagement field. 2. To provide college students with reinforcement of Mathematical and Statistical computations.

Course Content

Unit	Description	Weightage* (%)
1.	**Function Limit and Continuity:** Concept of a single variable (linear, quadratic and exponential function only) Domain, co-domain, and range of a function, Concept of real function, Application of function to cost, demand, revenue, profit function, concept of limit of a function, Rules of limit, Simple examples where $f(x)$ is in a polynomial or rational function of two polynomials. Continuity of x, where $f(x)$ is a polynomial of x, rational function of 'two polynomials of (x)	25%
2.	**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%
3.	**Matrix** Type 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%
4.	**Interpolation and Extrapolation** Meaning of Interpolation and Extrapolation, Assumptions, Importance and uses of interpolation and Extrapolation, Operators $\triangle$, E and D (without proof), methods of interpolation and extrapolation; 1. Newton's Method 2. Binomial expansion method 3. Lagrange's method, Simple examples on these methods.	25%

Teaching-Learning Methodology	Lecture, Assignment, Quiz, Seminars, Content- Focused Methods and Interactive / Participative Methods.

Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learnerwill 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 and statistical applications.
2.	Apply the knowledge of mathematics and statistics in solving business problems.
3.	Analyse and demonstrate mathematical and statistical skills required in intensive areas in Economics and business

Suggested References:	
Sr. No.	References
1.	Sancheti&Kapoor: Statistic: 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
4	Trivedi and Trivedi: Business Mathematics, Pearson India Limited. New Delhi

On-line resources to be used if available as reference material
On-line Resources:

*****