SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar, Gujarat
(Reaccredited with 'A' Grade by NAAC (CGPA 3.11)
Syllabus as per NEP 2020 with effect from the Academic Year 2023-2024

(B.Com) (Business Studies)
(B.COM) Semester (II)

Course Code	UB02 MACOM 05	Title of the Course	ADVANCED STATISTICS-II
Total Credits of the Course	04	Hours per Week	04

Course Objectives:	This course aims to furnish the students with the Mathematical foundation required for business management and to know the function of Mathematics and Statistics.

Course Content		
Unit	Description	Weightage* (%)
1.	**Permutation and Combination:** Basic idea of permutation and combinations with simple Examples. Formula for $^{n}P_{r}$ And $^{n}c_{r}$ without proof.	25%
2.	**Probability** Definition of Random Experiment, Sample Space, Event, Mutually Exclusive Events, Exhaustive events, Dependent and independent Events, Mathematical And Statistical Definition of probability, Theorems of addition and multiplication law of probability without proof, conditional probability with Simple sums.	25%
3.	**Mathematical Expectation** Concept of Mathematical expectation of a discrete random variable with sum and product Of two independent and Random variable without proof and its properties with simple Examples based on E(X) and V(X).	25%
4.	**Moments** Definition of row and central moments of a discrete random Variable up to order four. The relationship of row and central moments without proof and with simple sums.	25%

Teaching-Learning Methodology	These are teacher-centred methods, learner-centred methods, 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.	• Uses the problem of arrangement and selection problems.
2.	• Use the basic probability rules, including additive and multiplicative laws, using the terms, independent and mutually exclusive events.
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Suggested References:

Sr. No.	References
1.	**S.C Gupta and V.K.Kapoor**: Fundamental of applied statistics, Sultan Chand and sons, New Delhi.
2.	**Kapoor V**.K.: Business Mathematics, Sultan chand and sons, New Delhi.
3	**Parimal Mukhopadhay:** Mathematical Statistics, Books and allied P.Ltd.
4	**Sancheti And Kapoor** : Business Mathematics, Sultan Chand and sons, New Delhi.

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