SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar, Gujarat
(Reaccredited with 'A' Grade by NAAC (CGPA 3.25)
Syllabus with effect from the Academic Year 2021-2022

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

Course Code	UB02DCOM86	Title of the Course	ADVANCED STATISTICS -IV
Total Credits of the Course	03	Hours per Week	03

Course Objectives:	The objectives will be to achieve a deep understanding of particular statistical methods and to learn to use some advanced tools for analyzing and developing statistical methods.

Course Content		
Unit	Description	Weightage* (%)
1.	**Sampling Methods** Concept of survey and sample survey, Characteristic of good sample. The importance of size of a sample. Meaning of sampling (with replacement and without replacement). Method of sampling- Simple random sampling and its simple numerical example up to 3 strata.	25%
2.	**Analysis Of Variance** Definition Of ANOVA, uses of ANOVA, only one- way classification.	25%
3.	**Probability Distribution-1** Concept of probability mass function and probability density function: Binomial Distribution, Poisson distribution, Mean and Variance, application and its properties of these distributions without proof. and simple examples based onthese distributions.	25%
4.	**Probability Distribution-2** Normal Distribution, Mean and variance, application, properties of Normal Distribution (without proof) and simple examples based on this distributions.	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 learner will be able to	
1.	• Use the basic probability rules, including additive and multiplicative laws, using the terms, independent and mutually exclusive events.
2.	• Translate real-world problems into probability models. Analyze statistical data graphically using frequency distributions and cumulative frequency distributions.
3.	• Derive the probability density function of transformation of random variables.
4	• Calculate probabilities, and derive the marginal and conditional distributions of bivariate random variables.
5	. Uses of proper Sampling methods in real situation.

Suggested References:	
Sr. No.	References
1.	**S. C. Gupta and V. K. Kapoor:** Fundamental Of applied statistics Sultan Chand and sons, New Delhi.
2.	**D. S. Sancheti and V. K. Kapoor: Statistics:** Theory, Method and Application, Sultan Chand and Sons.
3	**Goon, Gupta, Dasgupta**: An outline of Statistical Theory Volume 1 and 2, world press Calcutta

*****