

**C P PATEL AND F H SHAH COMMERCE (AUTONOMOUS)
COLLEGE, ANAND**

(Managed by **SARDAR PATEL EDUCATION TRUST, ANAND**)

AFFILIATED TO SARDAR PATEL UNIVERSITY, V V NAGAR

An ISO 9001 2015 Certified / An ISO 14001-2015 Certified / An ISO 21001-2018 Certified
GUJARAT INSTITUTIONAL RATING FRAMEWORK (4 STAR)

AAA Reaccredited CGPA 3.56 – GRADE **A⁺** KCG-Dept of Edu. Got of Gujarat-April 2017

NAAC Reaccredited - CGPA 3.30 - GRADE **'A⁺'** UGC – MHRD, Govt of India – June 2022

Syllabus as per NEP 2020 with effect from the Academic Year 2025-2026

Bachelor of Commerce (B Com)

Semester -V

Course Code	UB5MICOM02	Title of the Course	Business Statistics-II
Total Credits of the Course	04	Hours per Week	04

Course Objectives	1. To develop an understanding of mathematical expectation enabling students to analyse probability distributions and their applications in commerce.
	2. To familiarize students with Poisson and Hypergeometric distributions, their properties, and their relevance in business and industrial applications.
	3. To enable students to apply Negative Binomial and Geometric distributions in modelling probability-based decision-making in commerce and business analytics.
	4. To equip students with the ability to use the Normal distribution for statistical analysis, decision-making in business.

Course Content		
Unit	Description	Weightage (%)
1.	(a) Mathematical Expectation: Concept of a discrete random variable, Probability mass function of a discrete random variable and its properties, Definition of mathematical expectation of a discrete random variable, Mathematical expectation of some and product of two independent random variables, variance of random variable, Properties of mathematical expectation and variance, Applications of Mathematical expectation in commerce.	25%
2.	Discrete Distribution-I: Meaning and definition of Poisson distribution, Properties and uses of poison distribution, Application of Poisson distribution in commerce, Meaning and definition of Hypergeometric distribution, Properties of Hypergeometric distribution, Application of Hypergeometric distribution in commerce.	25 %

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3.	Discrete Distribution-II: Meaning and definition of Negative Binomial distribution, Properties and uses of Negative Binomial distribution, Application of Negative Binomial distribution in commerce, Meaning and definition of Geometric distribution, Properties of Geometric distribution, Application of Geometric distribution in commerce	25 %
4.	Continuous Distribution: Meaning and definition of Normal distribution, Properties of Normal distribution, Importance of Normal distribution, Standard normal variate, Standard Normal distribution, Application of Normal distribution in commerce	25 %

Teaching-Learning Methodology	Lectures, Assignment, Quiz, Seminars, Content- Focused Methods, Interactive / Participative Methods and online lectures.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal (Mid Semester) Examination (CCE0	30%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Viva voce, Attendance (CCE)	20%
3.	Semester End Examination (SEE)	50%

Course Outcomes	
1.	Understand and apply the concept of mathematical expectation to analyse probability distributions and solve practical problems in commerce.

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2.	Demonstrate proficiency in Poisson and Hypergeometric distributions by analysing their properties and applications in business scenarios such as risk assessment and inventory management.
3.	Apply Negative Binomial and Geometric distributions to model real-world problems, such as predicting the number of trials before success in sales forecasting and marketing analytics.
4.	Utilize the Normal distribution for statistical inference, decision-making, and predictive analytics in business and finance.

Suggested References	
Sr. No.	References
1	Sancheti & Kapoor (2010): Statistics Theory, Methods and Applications, Sultan Chand & Sons, New-Delhi.
2	Kapoor V. K (1991): Business Mathematics, Sultan Chand and Sons, New Delhi.
3	D. N Elhance (2019): Fundamental of Statistics, Kitab Mahal, New Delhi.
5	Gupta S P (1998): Statistical Methods (28 th Ed), Sultan Chand & Sons, New Delhi.
6	Gupta S C (2010): Fundamentals of Statistics (6 th Ed) Himalaya Publishing House
7	Vyas H R (2010): Business Statistics, B S Shah Prakashan, Ahmedabad.
8	R P Hooda (2013): Introduction to Statistics (1 st Ed), Mac Millian Publication Ltd, New Delhi.
9	Jani B B (2011) Business Statistics (1 st Ed), Himalaya Publishing House, Ahmedabad

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

On-line Resources

<https://atozmath.com/default.aspx>

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<https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=ZLCHeZEhCZ8yCri36nSF3A==>

<https://www.youtube.com/watch?v=UnzbuggU2LE>

<https://www.youtube.com/watch?v=gI5y3RZe9fk>

<https://www.youtube.com/watch?v=4EPMcvC2ROA>

<https://www.youtube.com/watch?v=uzN7U88KSx8>

<https://www.youtube.com/watch?v=Jt4UtzanP40>
