(Shri Ramkrishna Seva Mandal's)

ANAND COMMERCE COLLEGE

An Autonomous College (2025-26 to 2034-35)

(Affiliated to Sardar Patel University)

NAAC ACCREDITED 'A' GRADE (3.04 CGPA)

ISO 9001:2015

Syllabus as per NEP 2020 with effect from the Academic Year 2025-26

Bachelor of Business Administration
Information System Management
BBA (ISM) Semester – II

Course Code	UB02IDBBI01	Title of the Course	Business Statistics II
Total Credit of Course	04	Hours Per Week	04

Course Objectives	1. To develop ability to apply fundamental counting principles and understand permutations and combinations 2. To understand concepts of probability, including types of events, probability definitions, and rules, enabling them to analyze random experiments and solve real-life probabilistic problems.. 3. To understand mathematical expectation and variance of discrete random variables, emphasizing their properties and real-world applications. 4. grasp the concept of binomial distribution and utilize it to solve problems involving binary outcomes across multiple trials. 5. To apply Poisson distribution in predicting the occurrence of rare events across consistent time frames or spatial boundaries.

Course Content

Unit	Description	Weightage* (%)
1.	**Permutations and Combinations** : • Meaning, Fundamental Principles of Counting • Theorem based (without proof) on permutation and combination • Permutations when repetition is allowed, Examples of Permutation and combination..	20%
2.	**Probability** • Introduction and definition of random experiment, sample space, different types of events • Mathematical, statistical and axiomatic definitions of probability with their limitations • Addition and multiplication rules of probability • Conditional probability, numerical examples based on all these concepts,	20%
3.	**Mathematical Expectation** • Meaning and definition of random variable and its type • Definition of probability distribution of random variable • Definition of mathematical expectation of discrete random variable and its properties (without proof)	20%

	• Simple applied examples on mathematical expectation • Definition of variance and its properties. • Simple examples based on it.	
4.	**Binomial Distribution** • Meaning and definition of probability distributions and distribution function of random variable • Probability mass function of Binomial distribution • Properties and applications of Binomial distribution • Application base numerical examples. (Mathematical proofs are ignored)	20%
5.	**Poisson Distribution** • Probability mass function of Poisson distribution • Properties, applications and simple • Application base examples. (Mathematical proofs are ignored).	20%

Teaching-Learning Methodology	Lecture-cum-discussion, Group Discussion, Presentations, Seminars, Tutorials, Research Exercises

Internal and / or External Examination Evaluation

Sr. No.	Details of the Evaluation / Exam Pattern	50 Marks (%)	25 Marks (%)
1	Class Test (at least one)	15 (30%)	10 (40%)
2	Quiz (at least one)	15 (30%)	05 (20%)
3	Active Learning	05 (10%)	----
4	Home Assignment	05 (10%)	05 (20%)
5	Class Assignment	05 (10%)	----
6	Attendance	05 (10%)	05 (20%)
Total Internal (%)		**50 (100%)**	**25 (100%)**
College External Examination (%)		**50 (100%)**	**25 (100%)**

Course Outcomes: Having completed this course, the learners will be able to

1.	Apply counting principles to solve real-world problems involving arrangements and selections across various scenarios.
2.	Understand and apply fundamental concepts of probability theory to real-world scenarios.
3.	Evaluate expected values in scenarios involving risk, games, and insurance models.
4.	Apply binomial distribution to solve problems in quality control, genetics, and marketing.
5.	Solve decision-making problems involving Poisson probabilities and expected values.

Suggested References	
Sr. No.	**References**
1	Gupta, S. C. *Fundamentals of statistics*. Himalaya Publishing House.
2	Kachot, K. R. *Business mathematics*. Mahajan Publication House.
3	Kapoor, V. K. *Business mathematics*. Sultan Chand & Sons.
4	Prof. Vyas, H. R., & Others. *Business statistics*. B. S. Shah Prakashan.
5	Sancheti, D. C., & Kapoor, V. K. *Statistics: Theory, methods and applications*. Sultan Chand & Sons.
6	Soni, R. S.. *Business mathematics*. Pitamber Publishing House.
7	Trivedi, M., & Trivedi, M. *Business mathematics*. Pearson India Limited.
8	R P Hooda: Statistics for Business and Economics, Mac Millian Publication, New Delhi
Digital resources to be used if available as reference material	
Digital Resources	
https://www.youtube.com/watch?v=s_LfN4ItCs4	
https://www.youtube.com/watch?v=Az7AQoPdgiQ	
https://www.youtube.com/watch?v=SL0mffVAQH8	
https://www.youtube.com/watch?v=rvg9oUHtX50	
https://www.youtube.com/watch?v=m0o-585xwW0	

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