



(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**  
**BBA (GENERAL) Semester – II**

<b>Course Code</b>	<b>UB02IDBBA01</b>	<b>Title of the Course</b>	<b>Business Statistics II</b>
<b>Total Credit of Course</b>	<b>04</b>	<b>Hours Per Week</b>	<b>04</b>

<b>Course Objectives</b>	<ol style="list-style-type: none"> <li>1. To develop ability to apply fundamental counting principles and understand permutations and combinations</li> <li>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..</li> <li>3. To understand mathematical expectation and variance of discrete random variables, emphasizing their properties and real-world applications.</li> <li>4. grasp the concept of binomial distribution and utilize it to solve problems involving binary outcomes across multiple trials.</li> <li>5. To apply Poisson distribution in predicting the occurrence of rare events across consistent time frames or spatial boundaries.</li> </ol>
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<b>Course Content</b>		
<b>Unit</b>	<b>Description</b>	<b>Weightage* (%)</b>
1.	<b>Permutations and Combinations :</b> <ul style="list-style-type: none"> <li>• Meaning, Fundamental Principles of Counting</li> <li>• Theorem based (without proof) on permutation and combination</li> <li>• Permutations when repetition is allowed, Examples of Permutation and combination..</li> </ul>	20%
2.	<b>Probability</b> <ul style="list-style-type: none"> <li>• Introduction and definition of random experiment, sample space, different types of events</li> <li>• Mathematical, statistical and axiomatic definitions of probability with their limitations</li> <li>• Addition and multiplication rules of probability</li> <li>• Conditional probability, numerical examples based on all these concepts,</li> </ul>	20%
3.	<b>Mathematical Expectation</b> <ul style="list-style-type: none"> <li>• Meaning and definition of random variable and its type</li> <li>• Definition of probability distribution of random variable</li> <li>• Definition of mathematical expectation of discrete random variable and its properties (without proof)</li> <li>• Simple applied examples on mathematical expectation</li> <li>• Definition of variance and its properties.</li> </ul>	20%

	<ul style="list-style-type: none"> <li>Simple examples based on it.</li> </ul>	
4.	<b>Binomial Distribution</b> <ul style="list-style-type: none"> <li>Meaning and definition of probability distributions and distribution function of random variable</li> <li>Probability mass function of Binomial distribution</li> <li>Properties and applications of Binomial distribution</li> <li>Application base numerical examples. (Mathematical proofs are ignored )</li> </ul>	20%
5.	<b>Poisson Distribution</b> <ul style="list-style-type: none"> <li>Probability mass function of Poisson distribution</li> <li>Properties, applications and simple</li> <li>Application base examples. (Mathematical proofs are ignored ).</li> </ul>	20%

<b>Teaching-Learning Methodology</b>	Lecture-cum-discussion, Group Discussion, Presentations, Seminars, Tutorials, Research Exercises
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### 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%)
<b>Total Internal (%)</b>		<b>50 (100%)</b>	<b>25 (100%)</b>
<b>College External Examination (%)</b>		<b>50 (100%)</b>	<b>25 (100%)</b>

**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.

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



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