



BHARATIYA VIDYA BHAVAN'S
SARDAR PATEL INSTITUTE OF TECHNOLOGY
MUNSHI NAGAR, ANDHERI (WEST), MUMBAI – 400 058.
(Autonomous Institute Affiliated to University of Mumbai)
CSE - MCA Department

Academic Year: 2025-26

Semester: II

Class: FYMCA

Course Code: MC503

Course Name: Probability & Statistics

Innovative Teaching Learning Adopted

Following teaching-learning methods have been adopted to teach Probability & Statistics course.

1) Peer Learning:

For the Probability & Statistics course, students are divided into small groups and assigned topics such as **Probability Distributions, Bayes' Theorem, Correlation, Regression, and Hypothesis Testing**. Each group studies the assigned topic, prepares examples and a short presentation, and explains the concept to the entire class. Students collaboratively solve numerical and application-based problems and discuss different approaches to arrive at the solution. **Outcome:** Improved conceptual understanding, collaborative learning, numerical problem-solving ability, and effective communication.

2) Video Lecture and Flipped Classroom:

Short video lectures are provided on topics such as **Probability, Random Variables, Binomial and Poisson Distributions, Normal Distribution, Correlation and Regression**. Students watch the videos before the classroom session. Classroom time is then used for numerical problem-solving, discussion, and conceptual questions.

Video: https://www.youtube.com/watch?v=qNGDD_Rh8ps&list=PLU6SqdYcYsfJPF-4HphQQ8OceDtqhlSW8

Outcome: Better understanding of statistical concepts and increased student participation in problem-solving activities.

3) Technology-Enabled Statistical Learning:

Students are introduced to digital tools and computational techniques for performing statistical calculations and visualizing data. They use **spreadsheets and suitable computational tools** to construct graphs, analyze datasets, calculate statistical measures, and interpret results. The activity helps students understand the relationship between theoretical concepts and computational implementation.

Outcome: Development of data-handling skills, statistical visualization, computational thinking, and ability to use technology for statistical analysis.