LORETO COLLEGE
TIME PLAN JANUARY 2022-JUNE 2022

2nd Semester Topic-wise Time Plan
Paper: STSG-CC-2-2-TH
Elementary Probability Theory

Name of the teacher: Somdutta Roy
Initials: SR

Teaching Objective:
• To introduce fundamentals of probability theory and its importance.
• To help students learn basic concepts of random variables and its properties.
• To introduce the various probability distributions and its applications.

Units	**Hours Alloted**	**Topics (as per curriculum)**	**Learning outcomes (Output)**	**Teaching method**	**Assessment**
Unit 1	20 Hours	**a)**Introduction to Probability and different definitions of probability. **b)**Conditional probability **c)**Total probability. **d)**Bayes' theorem and its applications.	**a)**Knowledge of probability theory and several related concepts **b)**Understanding the different laws of probability **c)**Knowledge of Bayes' theorem.	a)Interactive-Lecture b)Problem-solving c)Real life application	Problem solving and Assignments
Unit 2	15 Hours	**a)**Introduction to Random variables (Discrete and Continuous). **b)**P.m.f, p.d.f, c.d.f **c)**Illustrations and properties of random variables. **d)**Expectation, variance, moments.	**a)**Knowledge of discrete and continuous random variable. **b)**P.m.f, p.d.f, c.d.f knowledge. **c)**Understanding properties of random variables and concept of mean and moments.	a)Interactive-Lecture b)Problem-solving c)Real life application	Problem solving and Assignments
Unit 3	25 Hours	**a)**Standard probability distributions (discrete and continuous). **b)**Weak law of large numbers. **c)**Lindeberg-Levy Central Limit Theorem(C.L.T)	**a)**Understanding the concept of several probability distributions and their applications in real life.	a)Interactive-Lecture b)Problem-solving c)Real life application	Problem solving and Assignments

LORETO COLLEGE
TIME PLAN JANUARY 2022-JUNE 2022

2nd Semester Topic-wise Time Plan
Paper: STS-G-CC-2-2-P
Elementary Probability Theory Lab

Name of the teacher: Somdutta Roy
Initials: SR

Teaching Objective:
To help students learn practical problem solving skill based on datasets arising from various real life scenarios.

Units	**Hours Alloted**	**Topics (as per curriculum)**	**Learning outcomes (Output)**	**Teaching method**	**Assessment**
Unit 1	*NA*	**a)** Practical on fitting of binomial and poisson. **b)** Application problems based on binomial, poisson and normal distribution. **c)** Fitting of normal distribution (with parameters known and unknown) **d)** Practical on fitting of binomial, poisson and normal. **e)** Application problems based on binomial, poisson and normal distribution.	**a)**Using the theoretical concepts to solve real-life problems. **b)**Grow practical problem skills.	Demonstration of Problem solving	Practical Problem solving and Assignments