#### LORETO COLLEGE TIME PLAN MARCH 2023-JULY 2023

#### 2<sup>nd</sup> Semester Topic-wise Time Plan Paper: STS-G-CC-2-2-TH Elementary Probability Theory

Name of the teacher: Daita Lahiri Initials: DL

#### **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 Allotted	Topics (as per curriculum)	Learning outcomes (Output)	Teaching method	Assessment
Unit 1	20 Hours	<ul> <li>a)Introduction to Probability and different definitions of probability.</li> <li>b)Conditional probability</li> <li>c)Total probability.</li> <li>d)Bayes' theorem and its applications.</li> </ul>	<ul> <li>a)Knowledge of probability theory and several related concepts</li> <li>b)Understanding the different laws of probability</li> <li>c)Knowledge of Bayes' theorem.</li> </ul>	a)Interactive- Lecture b)Problem- solving c)Real life application	Problem solving and Assignments
Unit 3	20 Hours	<ul> <li>a)Standard probability distributions (discrete and continuous).</li> <li>b) Weak law of large numbers.</li> <li>c)Lindeberg-Levy Central Limit Theorem(C.L.T)</li> </ul>	<ul><li>a) Understanding the concept of probability distributions and their applications.</li><li>b)Knowledge of WLLN and CLT.</li></ul>	a)Interactive- Lecture b)Problem- solving c)Real life application	Problem solving and Assignments

#### LORETO COLLEGE TIME PLAN MARCH 2023-JULY 2023

## 2<sup>nd</sup> Semester Topic-wise Time Plan Paper: STS-G-CC-2-2-P Elementary Probability Theory Lab

Name of the teacher: Daita Lahiri Initials: DL

# **Teaching Objective:**

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

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

#### LORETO COLLEGE TIME PLAN MARCH 2023-JULY 2023

# 2<sup>nd</sup> Semester Topic-wise Time Plan Paper: STS-G-CC-2-2-TH Elementary Probability Theory

# Name of the teacher: Shreemoyee Chakraborty Initials: SC

## **Teaching Objective:**

- To help students learn basic concepts of random variables and its properties.
- To introduce the various probability distributions and its applications.

Units	Hours Allotted	Topics (as per curriculum)	Learning outcomes (Output)	Teaching method	Assessment
Unit 2	15 Hours	<ul> <li>a)Introduction to Random variables</li> <li>(Discrete and Continuous).</li> <li>b)P.m.f, p.d.f, c.d.f</li> <li>c)Illustrations and properties of random variables.</li> <li>d)Expectation, variance, moments.</li> </ul>	<ul> <li>a)Knowledge of discrete and continuous random variable.</li> <li>b) P.m.f, p.d.f, c.d.f knowledge.</li> <li>c)Understanding properties of random variables and concept of mean and moments.</li> </ul>	a)Interactive- Lecture b)Problem- solving c)Real life application	Problem solving and Assignments
Unit 3	5 Hours	<b>a</b> )Standard probability distributions (discrete and continuous).	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 MARCH 2023-JULY 2023 2<sup>nd</sup> Semester Topic-wise Time Plan Paper: STS-G-CC-2-2-P Elementary Probability Theory Lab

Name of the teacher: Shreemoyee Chakraborty Initials: SC

#### **Teaching Objective:**

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

Units	Hours Allotted	Topics (as per curriculum)	Learning outcomes (Output)	Teaching method	Assessment
Unit 1	NA	<ul> <li>a) Practical on fitting of Binomial, Poisson and Normal.</li> <li>b) Application problems based on binomial, poisson and normal distribution.</li> </ul>	<ul> <li>a) Using the theoretical concepts to solve real-life problems.</li> <li>b) Grow practical problem skills.</li> </ul>	Demonstration of Problem solving	Practical Problem solving and Assignments