



**Bharati College**  
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## Lesson Plan (CORE, Semester II, Jan to June 2023)

<b>Name of Teacher</b>	Dr Loveleen Gupta	<b>Department</b>	Economics
<b>Course</b>	BA Prog (Major)	<b>Semester</b>	II
<b>Paper</b>	Basic Statistics for Economic Analysis	<b>Academic Year</b>	2022-23

### Learning Objectives

The Learning Objectives of this course are as follows:

- This course focuses on techniques for statistical inference.
- The main objective of the course is to help students understand how to draw inference from samples regarding the underlying populations using point estimation, interval estimation and hypothesis testing.

### Learning Outcomes

The Learning Outcomes of this course are as follows:

- An important learning outcome of the course will be the capacity to use and analyse statistics in everyday life.
- The course will improve students' ability to analyse data, make decisions, form predictions, and conduct research.

## Lesson Plan

Week No.	Theme/Curriculum	Any Additional Information
Week 1-4	Unit-1 : Introduction and overview Populations and samples; sample statistics; Descriptive Statistics.	

Week 5-8	Unit 2 Basic concepts of probability Spaces and events; probability concepts, conditional probabilities	Test 1 scheduled
Week 8-10	Unit 3 Probability distributions and Sampling Random variables – discrete and continuous, various probability distributions - functions and characteristics; Commonly used distributions - uniform, binomial, exponential, Poisson, hypergeometric and Normal random variables. Jointly distributions- conditional distributions and expectations, covariance and correlation	Test 2 scheduled
Week 11-15	Unit 4 Estimation and Hypothesis testing Estimation of population parameters - methods of moments and maximum likelihood procedures; properties of estimators; confidence intervals; Defining statistical hypotheses; distributions of test statistics; testing hypotheses related to population parameters; Type I and Type II errors; power of a test	Test 3 scheduled and Continuous Assessment

**References**

1. Larsen, R., Marx, M. (2011). An Introduction to Mathematical Statistics and its Applications, Prentice Hall.
2. James McClave, P. George Benson, Terry Sincich (2017), Statistics for Business and Economics, Pearsons Publication.
3. Anderson D. R, Sweeney D.J. et. al (2019), Statistics for Business & Economics, 13th ed. Cengage Learning.
4. Sheldon Ross (2017), Introductory Statistics, 4th Edition, Academic Press

**Additional Resources**

- 1.

<b>Online Resources (If Any)</b>	
<b>Assignment and Class Test Schedule for Semester</b>	Link the assignment and Test (optional)