

**4th Semester**

**Course Title: Business Statistics**

**Course Code: COMC4D**

**Nature of the Course: CORE**

**Course Credit: 04**

**Distribution of Marks: 60 (End Sem) + 40 (In-Sem)**

**Course Objective:** To familiarise students with the basic concepts of statistical methods.

**Course Outcome:**

CO1: Understand various methods of measures of central tendency.

- Understanding the process of measuring various central values for different kinds of data.
- Understanding the importance of skewness and kurtosis in statistics.
- Understanding the concept of population and sample in statistics.

CO2: Understand various methods of data analysis.

- Understanding various how Understanding is performed and elaborate how their results can be analysed and applied in real life situations.

CO3: Understand the concept of probability and various theories under probability.

CO4: Understand the concept of index numbers and its types.

- Understanding how index numbers can be generated and justify their significance in economic transactions.
- Understanding what are time series data and its relevance in statistics
- Understanding what is forecasting and different methods of forecasting.

<b>UNIT</b>	<b>CONTENTS</b>	<b>L</b>	<b>T</b>	<b>P</b>
I (15 Marks)	Descriptive Statistics: Measures of Central Tendency; Measures of Dispersion; Concept of Skewness and Kurtosis. Concept of Sampling: Population and Sample, Parameter and Statistic.	14	2	1
II (15 Marks)	Simple Correlation and Regression Analysis: Meaning of Correlation and its different types, Scatter diagram, Pearson's co-efficient of correlation; Rank Correlation. Concept of Regression, Regression equations and estimation; Properties of regression coefficients.	14	2	1
III (15 Marks)	Fundamentals of Probability and Probability Distributions: Definitions of Probability, Addition and multiplication laws of probability, Conditional probability and Bayes' Theorem. Mathematical Expectation and variance of a random variable. Standard probability distributions: Binomial, Poisson and Normal.	12	2	1
IV (15 Marks)	Index Number: Meaning, types and uses, Methods of constructing price and quantity indices (simple and aggregate).  Time Series Analysis: Components of time series; Additive and multiplicative models; Moving averages; Determination of Trend: Fitting of trend line (only linear trend).	12	2	1
	<b>Total</b>	<b>52</b>	<b>8</b>	<b>4</b>

L = Lectures, T = Tutorials, P = Practicals

MODES OF IN-SEMESTER ASSESSMENT:

(40 Marks)

- Home Assignment
- Presentation: Oral / Poster / Power Point
- Assignments
- Group Discussion
- In Semester examination
- Attendance

**Suggested Readings:**

1. Sharma, J.K., Business Statistics, Pearson India.
2. Gupta, S.C. and Kapoor, V.K., Fundamentals of Mathematical Statistics, Sultan Chand and Sons, New Delhi.
3. Gupta, S.C. and Kapoor, V.K., Fundamentals of Applied Statistics, Sultan Chand and Sons, New Delhi.
4. Hazarika, P., A Textbook of Business Statistics, S Chand & Company.
5. Vohra N. D., Business Statistics, McGraw Hill Education.
6. Siegel Andrew F. , Practical Business Statistics, McGraw Hill Education.
7. K.R. Gupta, Business Statistics, Atlantic Publishers & Distributors (P) Ltd.
8. Tulsian Bharat & Jhunjhunwala Bharat, Business Statistics, S Chand.
9. P.R Vittal, Business Statistics, Margham Publications.
10. Amir Aczel, Jayavel Sounderpandian & P Saravanan, Complete Business Statistics (7th Edition), , McGraw Hill Education.