B. Com. I: Semester II
Business Statistics Paper II
Compulsory Component
Computer Code: 240108
Marks: 100 Lectures: 60

Objectives: 1. Tomake the students to get acquainted with the basic statistical analytical Skills.

2. To make students to get acquainted about Statistical tools and techniques to be used for managerial decisions.

Unit	Contents	Lectures	Credits	Marks
1	**Statistical Data and Descriptive Statistics:** a. Nature and Classification of data: univariate, bivariate and multivariate data; time-series and cross-sectional data b. Measures of Central Tendency i. Mathematical averages including arithmetic mean, geometric mean and harmonic mean. Properties and applications. ii. Positional Averages Mode and Median (and other partition values including quartiles, deciles, and percentiles) (including graphic determination) c. Measures of Variation: absolute and relative. Range, quartile deviation, mean deviation, standard deviation, and their coefficients, Properties of standard deviation/variance d. Skewness: Meaning, Measurement using Karl Pearson and Bowley's measures; Concept of Kurtosis	20	1.5	30
2	**Simple Correlation and Regression Analysis:** a. Correlation Analysis: Meaning of Correlation: simple, multiple and partial; linear and non-linear, Correlation and Causation, Scatter diagram, Pearson's co-efficient of correlation; calculation and properties (Proof not required). Correlation and Probable error; Rank Correlation b. Regression Analysis: Principle of least squares and regression lines, Regression equations and estimation; Properties of regression coefficients; Relationship between Correlation and Regression coefficients; Standard Error of Estimate and its use in interpreting the results.	20	1.5	30
3	**Index Numbers :** Meaning and uses of index numbers; Construction	10	0.5	20

	of index numbers: fixed and chain base: univariate and composite. Aggregative and average of relatives – simple and weighted Tests of adequacy of index numbers, Base shifting, splicing and deflating. Problems in the construction of index numbers; Construction of consumer price indices: Important share price indices, including BSE SENSEX and NSE NIFTY			
4	**Time Series Analysis:** Components of time series; Additive and multiplicative models; Trend analysis: Fitting of trend line using principle of least squares – linear, second degree parabola and exponential. Conversion of annual linear trend equation to quarterly/monthly basis and vice-versa; Moving averages; Seasonal variations: Calculation of Seasonal Indices using Simple averages, Ratio-to-trend, and Ratio-to-moving averages methods. Uses of Seasonal Indices	10	0.5	20

Suggested Readings:

1. Gupta, S.P., and Archana Gupta, Statistical Methods, Sultan Chand and Sons, New Delhi.
2. Gupta, S.C. Fundamentals of Statistics. Himalaya Publishing House.
3. Anderson Sweeney and William, Statistics for Students of Economics and Business, CengageLearning.
4. Thukral J. K., Business Statistics.
5. Levin, Richard, David S. Rubin, Rastogi, and Siddiqui. Statistics for Management.7th Edition.Pearson Education.
6. Berenson and Levine. Basic Business Statistics: Concepts and Applications. Pearson Education.
7. Siegel Andrew F. Practical Business Statistics.McGraw Hill.
8. Vohra N. D., Business Statistics, McGraw Hill.
9. Spiegel M.D. Theory and Problems of Statistics. Schaum's Outlines Series. McGraw Hill Publishing Co.