

Title: Business Statistics - I	Code: MGMT 321	
Credit Hours: 3	Year /Semester: I/II	48 Hours

Course Objectives:

The study of business statistics familiarizes the students with various tools to be used in statistical analysis for the purpose of acquiring knowledge about a vast range of measurable issues of managerial concerns and enable them for processing of data to serve business decisions.

Unit 1 Introduction**8 Hours**

Meaning, Scope and Field of Statistics, Uses and Limitations of Statistics, Meaning and Types of Data – Qualitative and Quantitative, Data Collection Techniques – Primary (Interview), Secondary (sources) Presentation of Data-Bar Diagrams (simple, multiple), Histogram, Frequency Polygon, Frequency Curve, Normal Curve, Ogive, Pie Chart

Unit 2 Descriptive Statistics**12 Hours**

Measures of Central Tendency, Arithmetic Mean, Median, Mode, Geometric Mean and Harmonic Mean (Calculation, Uses); Combined Mean, Weighted mean, Quartiles, Deciles, Percentiles, and Requisites of good Measures of Central Tendency

Measures of Dispersion: Range, Quartile deviation, Mean deviation, Standard Deviation, and their Coefficients, Variance, Coefficient of variance, S. D and Normal Curve

Unit 3 Correlation and Regression**8 Hours**

Simple Correlation (Pearsonian and Spearman's) of Bivariate Distribution, Probable Error, Test of Significance, Line of Regression – Least Square Method: Y on X and X on Y

Unit 4 Linear Programming, Matrix and Determinant**10 Hours**

Optimization of LP problems by Graphical Method,

Matrix: Addition, Subtraction, Multiplication, Application

Determinants: Value by Expansion, Sarrus Rule, Properties, Cramer's Rule to Solve the Equations (Up to 3 Variables), Inverse Matrix and its Application

Unit 5 Probability**10 Hours**

Set Operations, Venn Diagram (up to two sets), Types

Factorial Notation, Combinations, Events, Trials, sample space, Basic Definition of Probability, Law of Addition, Multiplication

Reference Books:

1. Gupta, S.P. & Gupta M.P. (2009) *Business Statistics*, 15th edition, Sultan Chand and Sons.
2. Bajracharya, B.C, (2059), *Business Statistics and Mathematics*, M. K Publishers and distributors.
3. Budnick , F.S (1993). *Applied Mathematics for Business and Economics and Social Sciences*, New Delhi: McGraw Hill, INC.
4. Richard Levin and DS Rubin (2009) *Statistics for Management*, 7th edition, Pearson Education.
5. Gupta, S.P. & Gupta M.P. (2009) *Business Statistics*, 15th edition, Sultan Chand and Sons.