

SHIVAJI UNIVERSITY, KOLHAPUR



Estd. 1962

NAAC 'A' Grade

Faculty of Commerce & Management

Syllabus For

Bachelor of Commerce

B. Com. Part II

(Sem III & IV)

To be implemented from June 2019 onwards.

(Subject to the modifications that will be made from time to time)

Shivaji University, Kolhapur
Syllabus of B. Com. (SEM – III)
(To be introduced from June, 2019)

BUSINESS STATISTICS (PAPER-I)

Credits-4

Course Outcomes

After completion of this course, the student will be able to

1. Explain the scope of statistics in business, perform classification and tabulation, and represent the data by means of simple diagrams and graphs.
2. Explain and apply sampling techniques in real life.
3. Summarize data by means of measures of central tendency and dispersion.
4. Explain the merits and demerits of various measures of central tendency and dispersion.
5. Perform analysis of bivariate data using simple correlation and simple linear regression.

Unit 1: Introduction to Statistics **(15)**

- 1.1 Meaning of Statistics, Scope of Statistics in business.
- 1.2 Primary and secondary data, Discrete and continuous variables, Classification and its basis, Frequency and frequency distribution, Tabulation.
- 1.3 Diagrammatic representation: pie-chart, simple bar diagram, Graphical representation: histogram, ogive curves, Numerical problems.
- 1.4 Sampling: Definitions of population, sample, sampling, and census, Principle steps in sample survey, Advantages of sampling over census, Methods of sampling: simple random sampling (with and without replacement), stratified random sampling.

Unit 2: Measures of Central Tendency **(15)**

- 2.1 Concept of central tendency, Requirements of a good average.
- 2.2 Arithmetic mean (A. M.): Definition, Properties of A. M. (without proof), Combined A. M., Merits and demerits, Numerical problems.
- 2.3 Median and quartiles: Definitions, Merits and demerits of median, Numerical problems.
- 2.4 Mode: Definition, Merits and demerits, Empirical relation among mean, median, and mode, Numerical problems.

Unit 3: Measures of Dispersion **(15)**

- 3.1 Concept of dispersion, Requirements of a good measure of dispersion, Absolute and relative measures of dispersion.
- 3.2 Range, Coefficient of range, Merits and demerits of range, Numerical problems.
- 3.3 Quartile deviation (Q. D.), Coefficient of Q. D., Merits and demerits of Q. D., Numerical problems.
- 3.4 Standard deviation (S. D.), Coefficient of S. D., Coefficient of variation, Variance, Merits and demerits of S. D., Numerical problems.

Unit-4: Analysis of Bivariate Data: Correlation and Regression (15)

- 4.1 Concept of correlation, Types of correlation.
- 4.2 Methods of studying correlation: Scatter plot, Karl Pearson's correlation coefficient (r), Interpretation of r (with special cases $r = -1, 0,$ and 1), Spearman's Rank correlation coefficient (R), Numerical problems on computation of r and R (with and without ties) for ungrouped data.
- 4.3 Concept of regression.
- 4.4 Lines of regression, regression coefficients, relation between correlation coefficients and regression coefficient, Numerical problems on ungrouped data.

Reference Books:

1. Gupta S. P. (2018) *Statistical methods*, Sultan Chand and Sons.
2. Gupta C. B. and Gupta Vijay (2004) *An Introduction to Statistical Methods*, Vikas Publishing House Pvt Limited.
3. Desai S. S.(2017) *Business Statistics*, Jay-Gauri.
4. Kumbhojkar G. V. (2017) *Business Statistics*, Phadke Prakashan.
5. Gupta S. C. (2019) *Fundamentals of Statistics*, Himalaya Publishing House Pvt. Ltd.