

Course Name: **Statistics for Data Analysis Using Software Packages** (MS  
Excel/ SPSS/ R programming/ Minitab/ MatLab)

Credit: 03

Credit Distribution: Theory: 02; Practical: 01

**Content:**

Target Group: Students from all disciplines of Semester-III

**Learning Objective:**

This course is designed to provide students with an understanding of the concept of data, how to plan, collect, organize and have the knowledge of project preparation using statistical software.

**Learning outcomes:**

After studying this course students will

- Acquaint with the basic concepts of data, different techniques of presentation.
- Be able to perform different Statistical tests necessary for data analysis using software packages.
- Be able to draw statistical inference and interpret the result in an applied context.

**Syllabus:**

**Theory:**

**Unit-1: (04 classes)**

**Presentation of Data:** Concept of data, Primary and Secondary data, Classification and Tabulation, Diagrammatic and Graphical presentation of data.

**Unit-2:(06classes)**

**Sample Survey:** Concept of sample and population, complete enumeration versus sampling, Sampling and Non-sampling errors, Probability and Non-Probability sampling.

**Unit-3:(08classes)**

**Simple Sample Random Sampling:** Simple Random Sampling with Replacement and Without Replacement. Idea of Stratified Random Sampling.

**Unit-4:(08classes)**

**Testing of Hypothesis:** Concept of sampling distribution, standard error, type I and type II error, level of significance, test for small sample, test for large sample, Chi-square test using both classical and p-value method.

**Unit-5:(04classes)**

**Bivariate Data:** Concept of Correlation and Simple Linear Regression.

**Practical:(30 classes)**

**Analysis and Report preparation:** Drafting of Questionnaire, Data Collection through survey method, Analysis and report preparation using statistical packages.

**2. Recommended books:**

1. Gupta S.C., Kapoor V.K.; Fundamental of Mathematical Statistics, Sultan Chand and Sons.
2. Bhattacharjee D. and Bhattacharjee D.; B.Sc. Statistics Theory and Practical, Kalyani Publishers
3. Gupta S., Statistical Methods, Sultan Chand and Sons.

**3. Paper Offered by: Department of Statistics, L.C.B. College, Maligaon, Ghy—11**