

## **MGN909:WORKSHOP ON STATISTICAL ANALYSIS**

L:0 T:0 P:3 Credits:2

**Course Outcomes:** Through this course students should be able to

CO1 :: devise ability to create, edit and manage data sets using SPSS windows

CO2 :: develop ability to create data visualisation using appropriate graphs and charts.

CO3 :: practice effective use of cross tabulation, frequency distribution to gain insights from data

CO4 :: develop skills to use hypotheses testing procedure as per the data type/research question.

CO5 :: compute and interpret data using parametric and non parametric tests to draw the inference

### **List of Practicals / Experiments:**

#### **Creating and managing data with SPSS**

- SPSS windows processes
- creating data file
- editing a data file
- managing data

#### **Creating graphs and charts**

- creating and editing graphs
- creating and editing charts

#### **Frequencies and descriptive statistics**

- frequencies
- bar charts
- histograms
- percentiles
- measures of central tendency

#### **Cross tabulation and means procedure**

- computing cross tabulation
- computing means

#### **Bivariate correlation**

- bivariate correlation and matrix

#### **Testing of hypothesis**

- one sample hypothesis tests
- two sample hypothesis tests
- linear regression

#### **Multivariate analysis**

- one way ANOVA
- two way ANOVA
- multiple regression
- factor analysis

**Non-parametric procedures**

- Chi Square test (Test of Independence)
- Mann Whitney U-test
- Wilcoxon Sign rank test
- Kruskal-Wallis h-test
- Spearman's rank order-correlation

**Text Books:**

1. DOING DATA ANALYSIS WITH SPSS by ROBERT H. CARVER AND JANE GRADWOHL NASH, CENGAGE LEARNING
2. DATA ANALYSIS USING SPSS by LOKESH JASRAI, SAGE PUBLICATIONS

**References:**

1. SPSS FOR WINDOWS STEP BY STEP by DARREN GEORGE AND PAUL MALLERY, PEARSON