Sree Narayana Mangalam College Maliankara

(Affiliated to Mahatma Gandhi University, Kottayam)

CERTIFICATE COURSE SYLLABUS

STATISTICAL ANALYSIS USING SPSS

Sree Narayana Mangalam College
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Certificate Course on Statistical Analysis

Objectives of the Course:

- ➢ Introducing students to the SPSS software, its interface, data entry, and basic functions.
- ➢ Teaching students to calculate and interpret measures like Mean, Median, Mode, Standard deviation, and Variance.
- ➢ Providing Practical examples and exercises that stimulate real – world scenarios where SPSS can be applied.
- ➢ Showing students how to create effective graphs, charts and plots visually represent data.

Course Overview:

The "Statistical Analysis Using SPSS" course offers a comprehensive exploration of data analysis through the lens of the SPSS software. Covering essential topics such as data entry, manipulation and visualization. Participants will master techniques in data interpretation, learn to navigate ethical considerations and develop critical skills for effective decision making. With real world applications, case studies and hands on projects, this course equips learners to confidently interpret and communicate analysis results while fostering a deep understanding of statistical concepts and SPSS functionality.

Duration of the course: 35 Hours (10 hours theory + 25 hours practical)

Module I: Introduction to SPSS

Starting SPSS, Entering Data, Defining Variables, Loading & Saving Datafiles, Running your first analysis, Examining & Printing Output files, Modifying Datafiles. **(6 Hours)**

Module II: Working with Data

Variables and Data Representation, Transformation and Selection of Data - Selecting a subset, Computing a new variable, Recording a variable - Different variable. **(8 Hours)**

Module III: Graphing Data

Graphing Basics, Bar Charts, Pie Charts & Histograms, Scatterplots, Advanced Bar Charts. **(6 Hours)**

Module IV: Exploring Data

Descriptive Statistics - Frequency Distribution and Percentile Ranks for Single & Multiple Variables, Measures of Central Tendency and Measures of Dispersion for Single Group and Multiple Groups, Standard Scores, Pearson correlation, Simple linear regression. **(15 Hours)**

Suggested Readings

1. Arthur Griffith.(2007) Statistics for Dummies, Second Edition, Wiley Publishing, Indiana.
2. Brian C. Cronk.(2006) HOW TO USE SPSS : A Step-By-Step Guide to Analysis and Interpretation, Tenth Edition, Pyrczak Publishing, Glendale.