

**ADD-ON COURSE 2023
PROGRAMME: CERTIFICATE IN DATA ANALYSIS USING SPSS
PROGRAMME CODE: PGDCM-2306**

Number of Teaching Hours: 30

Course Objectives:

- ✓ Familiarize students with the SPSS software interface and basic functions
- ✓ Enable students to input, clean, and manipulate data effectively using SPSS
- ✓ Introduce students to common statistical analyses and their application in SPSS
- ✓ Develop students' ability to interpret and communicate results from SPSS output

Module 1: Introduction to SPSS. (6 House)

- Overview of SPSS software and its applications in data analysis
- Understanding the SPSS interface: data editor, variable view, and output viewer
- Data entry and data import: entering data manually, importing data from Excel, CSV, etc.
- Descriptive statistics: calculating mean, median, mode, standard deviation, and frequency distributions.

Module 2: Data Manipulation and Transformation. (7 Hours)

- Data cleaning: identifying and handling missing values, outliers, and inconsistencies.
- Data transformation: recoding variables, creating new variables, and computing derived variables.
- Data filtering: selecting cases based on specific criteria.
- Data sorting and grouping: arranging data for analysis and creating summary tables

Module 3: Statistical Analysis. (17 Hours)

- Parametric vs. non-parametric tests: understanding the difference.
- t-tests: independent samples t-test and paired samples t-test
- Analysis of Variance (ANOVA): one-way ANOVA and post hoc tests
- Correlation analysis: Pearson correlation coefficient and scatter plots

COURSE OUTCOME

1. Navigate and utilize the SPSS interface for data entry, manipulation, and analysis
2. Perform descriptive statistics, t-tests, ANOVA, and correlation analysis using SPSS

3. Apply regression analysis techniques to make predictions and analyze relationships
4. Interpret and communicate the results of their statistical analyses using SPSS output

Reference Books:

1. "Discovering Statistics Using IBM SPSS Statistics" Andy Field
2. IBM Knowledge Center : <https://www.ibm.com/docs/en/spss-statistics>