



Faculty Development Programme

On

“Advanced Data Analysis Through SPSS and AMOS”

About the Program

Comprehensive knowledge about statistical techniques is important to achieve success at workplace, especially if you are an academician, or deal with primary or secondary data in your organization. Traditional text books on statistics teach the subject dryly from formulae/statistical table's perspective which is difficult to digest for professionals from non mathematical background. In this FDP we will give comprehensive statistical orientation on all fundamental concepts using everyday examples and at the same time progress to analyze data using advanced multivariate tools such as regression, cluster analysis and factor analysis using popular statistical software.

The purpose of the FDP is to develop participants into competent and confident users of SPSS in order to enable them to conduct independent data analysis for their own research needs. The programme would provide the participants hands-on experience in interpreting output from software packages like SPSS and AMOS and working with Structure Equation Modeling (SEM). The basic focus area of this FDP is

- To provide a detailed understanding of basic concepts, techniques and tools associated with performing SEM analysis.
- To Provide balance mix of the theoretical concepts and hands on experience with application of various basic and advanced SEM techniques with the help of case studies.

Learning Outcome

The programme shall be carried out in a workshop module using hands on lab sessions with valid data sets. After attending the programme the participants will be able to

- Create structural and measurement models.
- Determine the reliability and validity of the constructs
- Analyze the structural relationships between the constructs
- Integrate and post the results of the analysis appropriately in are search paper

Target Audience



Ph.D Scholars, researchers, faculty taking courses on Research Methodology, Statistics or Marketing Research, faculty members working on UGC/AICTE projects.

Content

- Research Process, types of research, types of data, introduction to statistical tools/packages
- Research Design, measurement and scaling, Univariate and Bivariate Data Analysis.
- Simple & Multiple Linear Regression, Exploratory Factor Analysis (EFA) , Various statistics of EFA, Practical sessions on EFA, Concept of Validity & Reliability, Basics Confirmatory Factor Analysis.
- Introduction to AMOS
- Path Analysis in AMOS
- Practical Sessions on Regression (in MS-Excel, SPSS) and Path Analysis (in AMOS)
- Practical Sessions on CFA(in AMOS)
- Various statistics of CFA: Model fit, Validity measures Zero-order, First-order.
- Pre-requisites of SEM:
 - In variance test
 - Mediation analysis
- Impute Working on SEM (in AMOS)
- Higher order effects: Moderation, Mediation, Interaction & Control variables Practical sessions of SEM with Case Studies