



Parkland College
Arba Minch
Short Term Trainings Programs

Research Design, Data Management and Statistical Analysis using SPSS

About the Course

Upon completion of this SPSS short course on research design, data management and statistical Analysis , the participants will develop competence in quantitative techniques through hands-on practices in study design, data collection, and management, as well as the analysis and interpretation of data.

Target Participants

This SPSS short course is designed for participants who intend to learn how to plan, implement effective research studies including data management analysis. Those who are working in the private sector, government institutions, research institutions and NGOs.

Course Duration

- 21 Days at 8 hours a day

What you will learn

By the end of this course the participants will be able to:

- Understand and appropriately use statistical terms and concepts
- Design and Implement universally acceptable research
- Develop of functional research protocol
- Design both quantitative and qualitative data collection tools
- Perform data analysis tasks with SPSS
- Perform simple to complex data management tasks using software
- Statistical tests using SPSS software
- Writing reports from survey data

Course Outline

1. Introduction to research
 - 1.1 Introduction to research
 - 1.2 Different types of research
 - 1.3 Formulation of research problem statement
 - 1.4 Formulation of research hypothesis
2. Overview of Evaluation
 - 2.1.Evaluation Objectives
 - 2.2.Evaluation Criteria
 - 2.3.Evaluation Questions



- 3. Research Design**
 - 3.1. Quantitative Research Approaches
 - 3.2. Qualitative Research Approaches
- 4. Sampling**
 - 4.1. Sampling Techniques
 - 4.2. Probability
 - 4.3. Non-probability
 - 4.4. Sample size determination
- 5. Data Collection Methods in Research**
 - 5.1. Quantitative data collection methods
 - 5.2. Qualitative data collection
 - 5.3. Creating an evaluation framework
- 6. Data Collection tools in Research**
 - 6.1. Survey Questionnaire design
 - 6.2. FGD guide design
 - 6.3. KII guide design
- 7. Developing Research Protocol**
 - 7.1. What is a research protocol?
 - 7.2. Basic concepts of a research protocol
 - 7.3. Structure of a research protocol
- 8. Mobile Data Collection and Processing (ODK)**
 - 8.1. Introduction to mobile data gathering
 - 8.2. Design of survey forms using ODK build and XLSForm
 - 8.3. Use ODK collect to gather data
 - 8.4. Use ODK aggregate to upload data to the server
 - 8.5. Work with spatial data (GPS coordinates)
- 9. Introduction to SPSS statistical software**
 - 9.1. SPSS interface and features
 - 9.2. Key terminologies used in SPSS
 - 9.3. Views: Variable, Data views, Syntax editor
 - 9.4. Data file preparation
 - 9.5. Data entry into SPSS
 - 9.6. Data manipulation: merge files, split files, sorting files, missing values
- 10. Basic Statistics using SPSS**
 - 10.1. Descriptive statistics for numeric variables
 - 10.2. Frequency tables
 - 10.3. Distribution and relationship of variables
 - 10.4. Cross tabulations of categorical variables
 - 10.5. Stub and Banner Tables
- 11. Graphics using SPSS**
 - 11.1. Introduction to graphs in SPSS
 - 11.2. Graph commands in SPSS
 - 11.3. Different types of Graphs in SPSS
- 12. Statistical Tests using SPSS**



- 12.1. One Sample T Test
- 12.2. Independent Samples T Test
- 12.3. Paired Samples T Test
- 12.4. One-Way ANOVA
- 13. Statistical Associations in SPSS**
 - 13.1. Chi-Square test
 - 13.2. Pearson's Correlation
 - 13.3. Spearman's Rank-Order Correlation
- 14. Predictive Models using SPSS**
 - 14.1. Linear Regression
 - 14.2. Multiple Regression
 - 14.3. Logistic Regression
 - 14.4. Ordinal Regression
- 15. Longitudinal Analysis using SPSS**
 - 15.1. Features of Longitudinal Data
 - 15.2. Exploring Longitudinal data
 - 15.3. Longitudinal analysis for continuous outcomes
- 16. Qualitative Data Analysis using NVivo**
 - 16.1. Introduction to NVivo
 - 16.2. NVivo workspace
 - 16.3. Uploading qualitative data into NVivo
 - 16.4. Coding and making nodes
 - 16.5. Use of queries
 - 16.6. Project visualization
- 17. Survey Report writing and Dissemination**
 - 17.1. Survey report format
 - 17.2. Survey report content
 - 17.3. Survey findings dissemination
 - 17.4. Use of survey findings for decision making

Training Approach

This SPSS short course is delivered by seasoned trainers who have vast experience as expert professionals interacting with SPSS software. The course is taught through a mix of practical activities, theory, group works and case studies.

Training manuals and additional reference materials are provided to the participants.

Certification

Upon successful completion of this course, participants will be issued with a certificate.

Prerequisites

Basic statistical knowledge and prior working knowledge of SPSS software are required for this course.

Tailor-Made Course



We can also do this as tailor-made course to meet organization-wide needs. A training needs assessment will be done on the training participants to collect data on the existing skills, knowledge gaps, training expectations, and tailor-made needs.