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Introduction to using SPSS – Complete course 4 days

The days can be taken separately; take one or all four days, as suits your training needs.

Overview

Target Audience
Anyone with little or no experience of using SPSS who wishes to become an efficient and productive SPSS user.

Course Objectives
The course guides you through the fundamentals of using SPSS, and is structured in a logical way so as to provide effective training in the four stages of a typical data analysis process – data input and definition, data modification, data analysis, and data presentation.

By the end of the course you will have learned how to:
- Enter, edit and define data
- Deal with issues relating to questionnaire design
- Access data stored in external files with other data formats
- Manipulate data, and carry out essential data modifications
- Undertake basic exploratory data analysis and interpret the results
- Carry out simple significance testing
- Control the operation of SPSS and manage your files and output
- Use SPSS syntax to automate routines.

Prerequisites
It is recommended that students have basic experience with the Windows operating system. No statistical knowledge is required, but some experience in this area might be helpful.

The course days
The four days cover the different ways in which SPSS can be used. The first day covers the basics, and aptitude with the material covered by this days training is assumed for days 2, 3, and 4. However, each day of the course stands alone, and may be taken separately from the others if appropriate. The days are:

Day One – The Basics

Day Two – Data Manipulation

Day Three – Significance Testing

Day Four – Automatic processes with SPSS Syntax

Course content:

DAY ONE: THE BASICS

A   Introduction
The nature of data
What does data analysis involve?
Survey or Experiment?

B   Data Preparation
Layout
Terminology
Describing the data: overview
Variable labels
Data types
Levels of measurement
Entering the measure
Value Labels
Other variable settings

C   Data manipulation
Calculating new variables
Variable recode

D   Getting Results
Statistics – a simple example
Cross Tabulations
Statistics on subgroups – means
Charts – a simple example

E   The Viewer
Editing charts
Simple Table editing
Using Table properties
TableLooks
Transfer output to a Word document

DAY TWO: DATA MANIPULATION

A   Real-life analysis
The need for validation
Missing values
Weighted variables
Means: revisited
Selecting Cases

B   Taking stock
Data Definition
Creating new variables
Getting results

C   More techniques
Visual Bander
Sets
Split file
File Aggregate

D   Dealing with multi-response questions
Frequency and Crosstabs analyses
Restructuring

E   Data manipulation
Overview
Merge files
Copy Data Properties

F   More specialist techniques
Working with dates, times and durations
The syntax window

G   Chi Square
Chi-square principles
A worked example

DAY THREE: SIGNIFICANCE TESTING

A Statistical basics
What is Statistics?
Why use Statistics?
Mathematical Notation
The techniques in outline
Measures of Location
Measures of Dispersion
Variance and Standard Deviation
Frequency Data
Frequency DistributionS

B Presentation techniques
The techniques in outline
Pie chart
Bar Chart
Histogram
Line chart
Scatter chart
Logarithmic Scales

C More data setup techniques
Importing data
Data manipulation

D Looking at relationships between variables
Terminology
Pearson's Correlation Coefficient: described
Linear Regression: described
A worked example

E Comparing groups
Standard error and Confidence Limits
Chi Square
Student's T-test
Analysis of Variance

F Exporting Output

DAY FOUR: SPSS SYNTAX

A Introduction
In the old days…
A few simple rules
Syntax files

B Automatically-generated syntax
Output-generated
Paste button
Understanding automatically-generated syntax
Diagrammatical representation of command structure
Putting in COMMENTs

C Making the code your own
Error handling
The EXECUTE Command
Variable properties: VARIABLE, VALUE LABELS, FORMATS, MISSING VALUES
Setting up the data: DATA LIST, NEW FILE, GET FILE
Stating your variable set for command operation: ALL, TO, WITH, BY
Scratch variables
System variables
Logical tests EQ, GE, GT, LE, LT, NE, AND, OR and NOT, IF
Selecting cases USE, FILTER, SELECT IF, TEMPORARY

D Toolbars and toolbar buttons

E Programming Structures
Taking alternative pathways DO IF, ELSE IF, END IF
Repeating a process (Looping)

E Macros – DEFINE !ENDEFINE
Defining a variable list
Defining a command sequence
Command sequence with parameters

F The Production Mode facility