



**Enterprise Computing Solutions - Education Services**

## **TRAINING OFFERING**

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# Advanced Statistical Analysis Using IBM SPSS Statistics (V25)

CODE:	LENGTH:	PRICE:
0G09AG	16 Hours (2 days)	£1,300.00

## Description

This course provides an application-oriented introduction to advanced statistical methods available in IBM SPSS Statistics. Students will review a variety of advanced statistical techniques and discuss situations in which each technique would be used, the assumptions made by each method, how to set up the analysis, and how to interpret the results. This includes a broad range of techniques for predicting variables, as well as methods to cluster variables and cases.

## Objectives

- Introduction to advanced statistical analysis
- Group variables: Factor Analysis and Principal Components Analysis
- Group similar cases: Cluster Analysis
- Predict categorical targets with Nearest Neighbor Analysis
- Predict categorical targets with Discriminant Analysis
- Predict categorical targets with Logistic Regression
- Predict categorical targets with Decision Trees
- Introduction to Survival Analysis
- Introduction to Generalized Linear Models
- Introduction to Linear Mixed Models

## Audience

Anyone who works with IBM SPSS Statistics and wants to learn advanced statistical procedures to be able to better answer research questions.

## Prerequisites

- Experience with IBM SPSS Statistics (navigation through windows; using dialog boxes)
- Knowledge of statistics, either by on the job experience, intermediate-level statistics oriented courses, or completion of the Statistical Analysis Using IBM SPSS Statistics (V25) course.

## Programme

Introduction to advanced statistical analysis• Taxonomy of models• Overview of supervised models• Overview of models to create natural groupingsGroup variables: Factor Analysis and Principal Components Analysis• Factor Analysis basics• Principal Components basics• Assumptions of Factor Analysis• Key issues in Factor Analysis• Improve the interpretability• Use Factor and component scoresGroup similar cases: Cluster Analysis• Cluster Analysis basics• Key issues in Cluster Analysis• K-Means Cluster Analysis• Assumptions of K-Means Cluster Analysis• TwoStep Cluster Analysis• Assumptions of TwoStep Cluster AnalysisPredict categorical targets with Nearest Neighbor Analysis• Nearest Neighbor Analysis basics• Key issues in Nearest Neighbor Analysis• Assess model fitPredict categorical targets with Discriminant Analysis• Discriminant Analysis basics• The Discriminant Analysis model• Core concepts of Discriminant Analysis• Classification of cases• Assumptions of Discriminant Analysis• Validate the solutionPredict categorical targets with Logistic Regression• Binary Logistic Regression basics• The Binary Logistic Regression model• Multinomial Logistic Regression basics• Assumptions of Logistic Regression procedures• Testing hypothesesPredict categorical targets with Decision Trees• Decision Trees basics• Validate the solution• Explore CHAID• Explore CRT• Comparing Decision Trees methodsIntroduction to Survival Analysis• Survival Analysis basics• Kaplan-Meier Analysis• Assumptions of Kaplan-Meier Analysis• Cox Regression• Assumptions of Cox RegressionIntroduction to Generalized Linear Models• Generalized Linear Models basics• Available distributions• Available link functionsIntroduction to Linear Mixed Models• Linear Mixed Models basics• Hierarchical Linear Models• Modeling strategy• Assumptions of Linear Mixed Models

## Session Dates

On request. Please [Contact Us](#)

## Additional Information

[This training is also available as onsite training. Please contact us to find out more.](#)