

[SAS-EGBS71]: SAS Enterprise Guide: ANOVA & Regression

Length : 3 Days
Delivery Method : Instructor-led (Classroom)

Course Overview

This course is designed for SAS Enterprise Guide users who want to perform statistical analyses. The course is written for SAS Enterprise Guide 7.1 along with SAS 9.4, but students with previous SAS Enterprise Guide versions will also get value from this course. An e-course is also available for SAS Enterprise Guide 5.1 and SAS Enterprise Guide 4.3.

Audience Profile

Statisticians and business analysts who want to use a point-and-click interface to SAS

At Course Completion

Learn how to

- generate descriptive statistics and explore data with graphs
- perform analysis of variance
- perform linear regression and assess the assumptions
- use diagnostic statistics to identify potential outliers in multiple regression
- use chi-square statistics to detect associations among categorical variables
- fit a multiple logistic regression model.

Pre-Requisites

Before attending this course, students should understand how to do the following:

- Be familiar with both SAS Enterprise Guide and basic statistical concepts
- Have completed an undergraduate course in statistics covering p-values, hypothesis testing, analysis of variance, and regression
- Be able to perform analyses and create data sets with SAS Enterprise Guide software. You can gain this experience by completing the SAS Enterprise Guide 1: Querying and Reporting course.

This course addresses SAS Enterprise Guide, SAS/STAT, SAS Analytics Pro software.

This course also addresses Base SAS software and touches on SAS/GRAPH and SAS/STAT software. You benefit from this course even if SAS/GRAPH software is not installed at your location.

Course Outline

Module 1: Prerequisite Basic Concepts

Lessons

AVANTUS TRAINING PTE LTD

80 Jurong East Street 21 #04-04 Devan Nair Institute Singapore 068897

Main Line: +65 6661 0888 | Fax: +65 6661 0886

Email: enquiries@AvantusTraining.com

www.AvantusTraining.com

- Discussing descriptive statistics
- Discussing inferential statistics
- Listing steps for conducting a hypothesis test
- Discussing basics of using your SAS software

Module 2: Getting Started in Enterprise Guide 7.1

Lessons

- Introducing to the SAS Enterprise Guide 7.1 environment

Module 3: Introduction to Statistics

Lessons

- Discussing fundamental statistical concepts
- Examining distributions
- Describing categorical data
- Constructing confidence intervals
- Performing simple tests of hypothesis

Module 4: Analysis of Variance (ANOVA)

Lessons

- Performing one-way ANOVA
- Performing multiple comparisons
- Performing two-way ANOVA with and without interactions

Module 5: Regression

Lessons

- Using exploratory data analysis
- Producing correlations
- Fitting a simple linear regression model
- Understanding the concepts of multiple regression
- Building and interpreting models
- Describing all regression techniques
- Exploring stepwise selection techniques

Module 6: Regression Diagnostics

Lessons

- Examining residuals
- Investigating influential observations and collinearity

Module 7: Categorical Data Analysis

Lessons

- Describing categorical data
- Examining tests for general and linear association
- Understanding the concepts of logistic regression and multiple logistic regression
- Performing backward elimination with logistic regression

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