FREE SAS E-LEARNING: TRAIN WHEN AND WHERE YOU WANT

Want to gain SAS skills? Here's two free e-course to start learning SAS foundational technologies, boosting your professional career and standing in the job market.

1. SAS PROGRAMMING 1: ESSENTIALS

This course is designed for users who want to learn how to write SAS programmes and start preparing for the following certification exam(s):

- SAS Base Programming Exam for SAS 9
- SAS Certified Clinical Trials Programmer Using SAS 9

The course addresses Base SAS software, SAS/ACCESS interface to PC Files and is a prerequisite to many other SAS courses. However, if you prefer a point-and-click interface, you should attend the SAS Enterprise Guide 1: Querying and Reporting

Benefits

You can learn how to:

- navigate the SAS Studio programming environment
- navigate the SAS Enterprise Guide programming environment
- navigate the SAS windowing environment
- read various types of data into SAS data sets
- create SAS variables and subset data
- combine SAS data sets
- create and enhance listing and summary reports.

PRE-REQUISITES

- To understand file structures and system commands on your operating systems
- To access data files on your operating systems.

If you don't meet the pre-requisites, you can first to attend the SAS Programming Introduction: Basic Concepts, which give you an introduction to computer programming and presents a portion of the SAS Programming 1: Essentials material.

FORMATS AVAILABLE

- Classroom: 3 days
- Live Web Classroom: 6 half-day sessions (system requirements - view demo)
- E-Learning: 24 hours/1-yr license (system requirements - view demo)

COURSE OUTLINE

1. INTRODUCTION
   - Overview of SAS Foundation
   - Course logistics
   - Course data files

2. SAS PROGRAMMES
   - Introduction to SAS programme
   - Submitting a SAS programme
   - SAS program syntax

3. ACCESSING DATA
   - Examining SAS data sets
   - Accessing SAS libraries

4. PRODUCING DETAILED REPORTS
   - Subsetting report data
   - Sorting and grouping report data
   - Enhancing reports

5. FORMATTING DATA VALUES
   - Using SAS formats
   - Creating user-defined formats

6. READING SAS DATA SETS
   - Reading a SAS data set
   - Customizing a SAS data set

7. READING SPREADSHEET AND DATABASE DATA
   - Reading spreadsheet data
   - Reading database data

8. READING RAW DATA FILES
   - Introduction to reading raw data files
   - Reading standard delimited data
   - Reading non-standard delimited data
   - Handling missing data

9. MANIPULATING DATA
   - Using SAS functions
   - Conditional processing

10. COMBINING DATA SETS
    - Concatenating data sets
    - Merging data sets one-to-one
    - Merging data sets one-to-many
    - Merging data sets with nonmatches

11. CREATING SUMMARY REPORTS
- Using the FREQ procedure
- Using the MEANS and UNIVARIATE procedures
- Using the Output Delivery System

12. LEARNING MORE

- SAS resources
- Next steps

2. STATISTICS 1: INTRODUCTION TO ANOVA, REGRESSION, AND LOGISTIC REGRESSION

This course is for statisticians, researchers and business analysts who perform statistical analyses using SAS/STAT software and want to start preparing for the following certification exam(s):

- SAS Certified Clinical Trials Programmer Using SAS 9
- SAS Statistical Business Analysis Using SAS 9: Regression and Modeling

The course addresses Base SAS, SAS/STAT software and touches on SAS/GRAPH software and is a pre-requisite to many of the courses in the statistical analysis curriculum

BENEFITS

You can learn how to:

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

PREREQUISITES

Before attending this course, you should

- have completed an undergraduate course in statistics covering *p*-values, hypothesis testing, analysis of variance, and regression.
- be able to execute SAS programme and create SAS data sets. You can gain this experience by completing the *SAS Programming 1: Essentials* course.

<u>FORMATS AVAILABLE</u>

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- E-Learning: 24 hours/1-yr license (system requirements - view demo)

<u>COURSE OUTLINE</u>

1. <u>INTRODUCTION TO STATISTICS</u>
   - Examining data distributions
   - Obtaining and interpreting sample statistics using the UNIVARIATE and MEANS procedures
   - Examining data distributions graphically in the UNIVARIATE and SGPLOT procedures
   - Constructing confidence intervals
   - Performing simple tests of hypothesis

2. <u>T-TESTS AND ANALYSIS OF VARIANCE</u>
   - Performing tests of differences between two group means using PROC TTEST
   - Performing one-way ANOVA with the GLM procedure
   - Performing post-hoc multiple comparisons tests in PROC GLM
   - Performing two-way ANOVA with and without interactions

3. <u>LINEAR REGRESSION</u>
   - Producing correlations with the CORR procedure
   - Fitting a simple linear regression model with the REG procedure
   - Understanding the concepts of multiple regression
   - Using automated model selection techniques in PROC REG to choose from among several candidate models
   - Interpreting models

4. <u>LINEAR REGRESSION DIAGNOSTICS</u>
   - Examining residuals
   - Investigating influential observations
   - Assessing collinearity

5. <u>CATEGORICAL DATA ANALYSIS</u>
   - Producing frequency tables with the FREQ procedure
   - Examining tests for general and linear association using the FREQ procedure
   - Understanding exact tests
   - Understanding the concepts of logistic regression
   - Fitting univariate and multivariate logistic regression models using the LOGISTIC procedure

Also, don't forget to check out the other free SAS tutorial options which give you tips and tricks for working with SAS software and download the free SAS University Edition Software for learning statistics and quantitative methods.