Big Data Executive Program

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Data science using Big Data (DS)

SAS Business Analytics along with visual analytics brings in the capability to support the business and management with clear and insightful analyses on the data at hand. This includes data mining skills, advanced modelling techniques, business visualizations testing and creating and explaining results in clear and concise reports

Duration: 96 hours / 12 days (RM9,490) Total Savings 35%

What you get: Aspirants who want to become Business analysts /experts, Business Visualization Analysts or experts and build a strong SAS programming foundation to manipulate data, perform queries and analyses, and generate analytical insights. Additionally, wants to access the power of SAS for analysis for complex business problems through data mining and predictive modelling using the point-and-click interface.

Who should attend: Business, Data, and Statistical Analyst

Prerequisites: Flair of any programming language is preferred however not necessary. Candidates with Engineering/MBA/MCA /Science/ Statistics degree or Analytics experience preferred.

Subjects:

- SAS Programming I: Essentials (3 days)
- SAS Programming II: Data Manipulation Techniques (3 days)
- Applied Analytics Using SAS Enterprise Miner (3 days)
- SAS Visual Analytics: Fast Track (3 days)

SAS Programming 1: Essentials

Duration: 3 days

This course is for users who want to learn how to write SAS programs. It is the entry point to learning SAS programming and is a prerequisite to many other SAS courses.

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.

Who should attend: Anyone starting to write SAS programs

Prerequisites

Before attending this course, you should have experience using computer software. Specifically, you should be able to understand file structures and system commands on your operating systems access data files on your operating systems.

No prior SAS experience is needed.

Course Contents

Introduction
- overview of SAS Foundation
- course logistics
- course data files

SAS Programs
- introduction to SAS programs
- submitting a SAS program
- SAS program syntax

Accessing Data
- examining SAS data sets
- accessing SAS libraries

Producing Detail Reports
- subsetting report data
- sorting and grouping report data
- enhancing reports

Formatting Data Values
- using SAS formats
- creating user-defined formats

Reading SAS Data Sets
- reading a SAS data set
- customizing a SAS data set

Reading Spreadsheet and Database Data
- reading spreadsheet data
- reading database data

Reading Raw Data Files
- introduction to reading raw data files
- reading standard delimited data
- reading nonstandard delimited data
- handling missing data

Manipulating Data
- using SAS functions
- conditional processing

Combining Data Sets
- concatenating data sets
- merging data sets one-to-one
- merging data sets one-to-many
- merging data sets with nonmatches

Creating Summary Reports
- using the FREQ procedure
- using the MEANS and UNIVARIATE procedures
- using the Output Delivery System

Learning More
- SAS resources
- next steps

SAS Programming 2: Data Manipulation Techniques

Duration: 3 days

This course is for those who need to learn data manipulation techniques using SAS DATA and procedure steps to access, transform, and summarize SAS data sets. The course builds on the concepts that are presented in the SAS Programming 1: Essentials course and is not recommended for beginning SAS software users.

Learn how to

- control SAS data set input and output
- combine SAS data sets
- summarize, read, and write different types of data
- perform DO loop and SAS array processing
- transform character, numeric, and date variables.

Who should attend: Business analysts and SAS programmers

Prerequisites

Before attending this course, you should have completed the SAS Programming 1: Essentials course and used SAS for at least one month. Specifically, you should be able to

- submit a SAS program
- diagnose and correct syntax errors
- examine descriptor and data portions of a SAS data set
- access SAS data libraries
- read and create SAS data sets
- read Excel spreadsheets
- read delimited raw data files
- examine data errors when reading raw data files
- use SAS procedures to validate data
- clean invalid data
- create variables
- combine SAS data sets
- use global statements
- use labels and formats, including user-defined formats
- subset observations
- produce summary reports using the FREQ and MEANS procedures.

Course Contents

Introduction
- course logistics
- creating course data files

Controlling Input and Output
- writing observations explicitly
- writing to multiple SAS data sets
- selecting variables and observations

Summarizing Data
- creating an accumulating total variable
- accumulating totals for a group of data

Reading Raw Data Files
- reading raw data files with formatted input
- controlling when a record loads

Data Transformations
- manipulating character values
- manipulating numeric values
- converting variable type

Debugging Techniques
- using the PUTLOG statement

Processing Data Iteratively
- DO loop processing
- conditional DO loop processing
- SAS array processing
- using SAS arrays

Restructuring a Data Set
- rotating with the DATA step

Combining SAS Data Sets
- using data manipulation techniques with match-merging

Creating and Maintaining Permanent Formats
- creating permanent formats

Other SAS Languages
- an overview of other languages
- using the SQL procedure
- the SAS macro language

Learning More
- SAS resources
- next steps

Applied Analytics Using SAS Enterprise Miner

Duration: 3 days

This course covers the skills that are required to assemble analysis flow diagrams using the rich tool set of SAS Enterprise Miner for both pattern discovery (segmentation, association, and sequence analyses) and predictive modeling (decision tree, regression, and neural network models).

Learn how to

- define a SAS Enterprise Miner project and explore data graphically
- modify data for better analysis results
- build and understand predictive models such as decision trees and regression models
- compare and explain complex models
- generate and use score code
- apply association and sequence discovery to transaction data.

Who should attend: Data analysts, qualitative experts, and others who want an introduction to SAS Enterprise Miner

Prerequisites

Before attending this course, you should be acquainted with Microsoft Windows and Windows software. In addition, you should have at least an introductory-level familiarity with basic statistics and regression modeling. Previous SAS software experience is helpful but not required.

Course Contents

Introduction
- introduction to SAS Enterprise Miner

Accessing and Assaying Prepared Data
- creating a SAS Enterprise Miner project, library, and diagram
- defining a data source
- exploring a data source

Introduction to Predictive Modeling: Predictive Modeling Fundamentals and Decision Trees
- cultivating decision trees
- optimizing the complexity of decision trees
- understanding additional diagnostic tools (self-study)
- autonomous tree growth options (self-study)

Introduction to Predictive Modeling: Regressions
- selecting regression inputs
- optimizing regression complexity
- interpreting regression models
- transforming inputs
- categorical inputs
- polynomial regressions (self-study)

Introduction to Predictive Modeling: Neural Networks and Other Modeling Tools
- introduction to neural network models
- input selection
- stopped training
- other modeling tools (self-study)

Model Assessment
- model fit statistics
- statistical graphics
- adjusting for separate sampling
- profit matrices

Model Implementation
- internally scored data sets
- score code modules

Introduction to Pattern Discovery
- cluster analysis
- market basket analysis (self-study)

Special Topics
- ensemble models
- variable selection
- categorical input consolidation
- surrogate models
- SAS Rapid Predictive Modeler

Case Studies
- banking segmentation case study
- website usage associations case study
- credit risk case study
- enrollment management case study

SAS Visual Analytics: Fast Track

Duration: 3 days

This course teaches how to explore data and build reports using SAS Visual Analytics. You will learn how to build queries in SAS Visual Data Builder and you will also learn the basics of SAS Visual Analytics Administrator.

Learn how to use SAS Visual Analytics to
- interact with the environment via the SAS Visual Analytics Hub
- access and prepare data for exploration, analysis, and reporting
- explore data using the SAS Visual Analytics Explorer
- create reports with the SAS Visual Analytics Designer
- use the SAS Visual Data Builder and understand the capabilities of the SAS Visual Analytics Administrator
- view reports using the SAS Visual Analytics Viewer and SAS Mobile BI.

Who should attend: Business analysts who need to learn how to use the functionality provided by SAS Visual Analytics

Prerequisites

No SAS experience or programming experience is required, although you should have some computer experience. Specifically, you should
- be able to log on and off a computer and use a keyboard or mouse
- know how to use a Web browser to access information.

Course Contents

Getting Started with SAS Visual Analytics
- exploring SAS Visual Analytics concepts
- using the SAS Visual Analytics home page
- discussing the course environment and scenario

Administering the Environment and Managing Data
- exploring SAS Visual Data Builder
- exploring SAS Visual Analytics Adminstrator

Using SAS Visual Analytics Explorer
- examining Visual Analytics Explorer
- selecting data and defining data item properties
- creating visualizations
- enhancing visualizations with analytics
- interacting with visualizations and explorations

Designing Reports with SAS Visual Analytics
- examining the SAS Visual Analytics Designer interface
- creating a simple report
- creating data items and working with graphs
- working with filters and report sections
- establishing interactions, links, and alerts
- working with gauges and display rules
- working with tables
- working with other objects

Viewing SAS Visual Analytics Reports
- viewing reports on the Web
- viewing reports on a mobile device
- viewing reports with SAS Office Analytics

Case Study: Creating Analyses and Reports with SAS Visual Analytics
- demonstration: managing LASR tables
- exercises

Learning More
- SAS resources
- beyond this course