SAS Advanced Programming Training Curriculum

STRUCTURE

SAS Advanced Programming Certification Training Curriculum

"Become a SAS Certified Specialist in Advanced programming and set new heights for your career like never before."

Course Objectives:

- Learn to use additional functions and perform pattern matching using PRX functions.
- Process repetitive code, rotate data, and perform table lookups using arrays.
- Perform table lookups and sort data using hash and hash iterator objects.
- Create numeric templates using the FORMAT procedure.
- Create custom functions using the FCMP procedure.
- Learn using macro variable, macro functions, customising SAS code, and micro programming essentials.
- Learn how to process SAS data using Structured Query Language (SQL)

Course Description:

This course is for SAS programmers who want to learn advanced techniques within the DATA step and procedures. Further, the course focuses on using the SAS macro facility to design, write, and debug macro programs, with an emphasis on understanding how programs that contain macro code are processed.

You will Perform text substitution in SAS code, learn to use macro variables and macro functions, automate and customize the production of SAS code, conditionally or iteratively construct SAS code, write self-modifying, data-driven programs. Moving ahead, you will also learn how to process SAS data using Structured Query Language (SQL).

Your will get a sound understanding of Querying and sub-setting data, summarize and present data, combine tables using joins and set operators, create and modify tables and views, create data-driven macro variables using a query, access DBMS data with SAS/ACCESS technology, and more.

All the best for a new beginning and successful career ahead!

Certification Details:

- Certification Name: SAS Certified Professional: Advanced Programming Using SAS 9.4
- Number of Questions – 10 to 15 programming projects and 10-15 standard exam questions. The programming projects will be assessed by a SAS scoring macro
- Total Time – 2 hours, 30 minutes
- Passing Score – 725 out of 1000
- Certification Exam Content: SAS programming advanced techniques, SAS MACRO Essentials, and SAS SQL Essentials

Course Content:

Module 1: SAS Programming Advanced Techniques

- Getting Started
  - Setting up for this course.
  - DATA step review.
- Using Advanced Functions
  - Using a variety of advanced functions.
  - Performing pattern matching with Perl regular expressions.
- Defining and Processing Arrays
  - Defining and referencing one-dimensional arrays.
  - Doing more with one-dimensional arrays.
  - Defining and referencing two-dimensional arrays.
- Defining and Processing Hash Objects
  - Declaring hash objects.
  - Defining hash objects.
  - Finding key values in a hash object.
  - Writing a hash object to a table.
  - Using hash iterator objects.
- Using Utility Procedures
  - Creating picture formats with the FORMAT procedure.
  - Creating functions with the FCMP procedure.

Module 2: SAS Macro Language Essentials

- Introduction
  - Why SAS macro?
  - Setting up for this course.
- SAS Macro Facility
  - Program flow.
  - Creating and using macro variables.
- Storing and Processing Text
  - Macro functions.
  - Using SQL to create macro variables.
  - Using the DATA step to create macro variables.
  - Indirect references to macro variables.
- Working with Macro Programs
  - Defining and calling a macro.
  - Macro variable scope.
  - Conditional processing.
  - Iterative processing.
- Developing Macro Applications
  - Storing macros.
  - Generating data-dependent code.
  - Validating parameters and documenting macros.

Module 3: SAS SQL Essentials

- Essentials
  - Setting up for this course.
  - Overview of SAS Foundation.
  - Course logistics.
  - Course data files.
  - Introducing the Structured Query Language.
  - Overview of the SQL procedure.
  - Exploring tables.
  - Specifying columns.
- PROC SQL Fundamentals
  - Sub-setting data.
  - Presenting data.
  - Summarizing data.
  - Creating and managing tables.
  - Using DICTIONARY tables.
- SQL Joins
  - Introduction to SQL joins.
  - Inner joins.
  - Outer joins.
  - Complex SQL joins.
- Subqueries
  - Noncorrelated subqueries.
  - Correlated subqueries.
  - In-line views.
  - Creating views with the SQL procedure.
  - Subqueries in the SELECT clause.
  - Remerging summary statistics.
- Set Operators
  - Introduction to set operators.
  - The INTERSECT operator.
  - The EXCEPT operator.
  - The UNION operator.
  - The OUTER UNION operator.
- Using and Creating Macro Variables in SQL
  - Interfacing PROC SQL with the macro language.
  - Creating data-driven macro variables with a query.
  - Using macro variables in SQL.
- Accessing DBMS Data with SAS/ACCESS
  - Overview of SAS/ACCESS technology.
  - SQL pass-through facility.
  - SAS/ACCESS LIBNAME statement.
  - PROC Fed SQL.

Module 4: Placement Guide

- What is an Interview?
- Tips to clear an Interview
- Common Interview questions and answers
- SAS Advanced Interview Questions and Answers
- Resume Building Guide
- Career roadmap and certifications
- Attempt for related Global Certification Exam
- Start applying for Jobs