SAS PROGRAMMING FAST TRACK - ADVANCED

Audience

This five-day course combines the courses SAS Programming III and SAS Macro Language. You learn the most effective ways to manage, manipulate, store & cleanse your data, indexing, multiple ways to combine and format your data, automate processes, dynamic and self-modifying code and creating data-independent code.

Duration: 5.0 days

Course Description [Click to register ONLINE]

This four-day intensive course builds on the concepts presented in the Fundamentals Fast Track - Fundamentals or SAS Programming II: Manipulating Data with the DATA Step. This course focuses on the following key areas:

- manipulating different forms of data
- combining data
- performing table lookups
- using permanent user-defined formats
- the SAS macro facility and how to design, write, and debug macro systems
- how programs with and without macro code are processed
- establishing and using a benchmark environment
- improving the speed of data access
- reducing program development time
- conserving data storage space
- reducing memory requirements.

Prerequisites

Before attending this course you should have attended either the Fundamentals Fast Track - Fundamentals or the SAS Programming II course.

Course Contents

Accessing Observations

- creating sample data sets
- creating and maintaining indexes

Combining Data Vertically

- appending raw data files
- appending SAS data sets

Combining Data Horizontally

- joining data without a common variable
- combining summary and detail data
- using an index to combine data

Using Lookup Tables to Match Data

- working with multidimensional arrays
- transposing data using the TRANSPOSE procedure

- working with DATA step hash tables (self-study)

Formatting Data

- creating permanent formats
- creating formats from SAS data sets
- maintaining permanent formats
- creating informats

SAS DATA Step Views

- creating a DATA step view

Updating SAS Data Sets (self-study)

- modifying SAS data sets in place
- creating generation data sets
- creating integrity constraints
- creating and using audit trails
- validating and modifying data using Perl regular expressions

Introduction to the Macro Facility

- purpose of the macro facility
- program flow
- course data

Macro Variables

- introduction to macro variables
- automatic macro variables
- macro variable references
- user-defined macro variables
- delimiting macro variable names
- macro functions

Macro Definitions

- defining and calling macros
- macro parameters

DATA Step and SQL Interfaces

- creating macro variables in the DATA step
- indirect references to macro variables
- retrieving macro variables in the DATA step
- creating macro variables in SQL

Macro Programs

- conditional processing
- iterative processing
- global and local symbol tables