SAS® Programming 2: Data Manipulation Techniques

■ Duration

3 days

■ Delivery

Classroom

■ Course code

PRG2

■ Online registration

www.sas.com/uk/education/
courses/prg2.html

UK CONTACT INFORMATION

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THE POWER TO KNOW®

This course is for those who need to learn data manipulation techniques using SAS® DATA and procedure steps to access, transform, and summarise 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
- summarise, 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 at least six months of experience writing SAS programs or 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
- direct output to external files
- produce summary reports using the FREQ and MEANS procedures.

Course contents:

Introduction

- course logistics
- course overview
- SAS syntax review
- navigating the SAS windowing environment (self-study).

Controlling Input and Output

- outputting multiple observations
- writing to multiple SAS data sets
- selecting variables and observations.

Summarising 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
- additional techniques for list input (self-study).

Data Transformations

- manipulating character values
- manipulating numeric values
- converting variable type.

Debugging Techniques

- using the PUTLOG statement
- using the DEBUG option.

Processing Data Iteratively

- DO-loop processing
- SAS array processing
- using SAS arrays.

Restructuring a Data Set

- rotating with the DATA step
- using the TRANSPOSE procedure
- Combining SAS Data Sets
- using data manipulation techniques with match-merging.

Other SAS® Languages

- an overview of other languages
- using the SQL procedure
- the SAS macro language
- Learning More
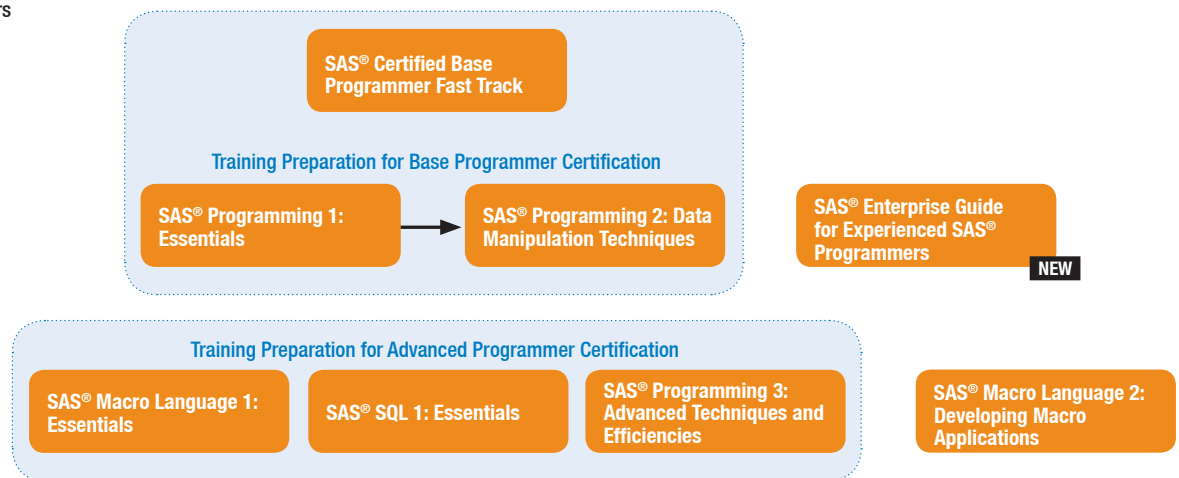- SAS resources
- beyond this course.

Software addressed

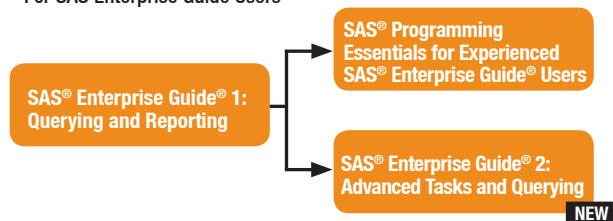This course addresses the following software products:

- Base SAS®.

This course is appropriate for learners who are using SAS® 8 or SAS®9 software.

Training Path for Programmers/Analysts

For SAS Programmers

SAS® Certified Base Programmer Fast Track

Training Preparation for Base Programmer Certification

SAS® Programming 1: Essentials → SAS® Programming 2: Data Manipulation Techniques

SAS® Enterprise Guide for Experienced SAS® Programmers **NEW**

Training Preparation for Advanced Programmer Certification

SAS® Macro Language 1: Essentials

SAS® SQL 1: Essentials

SAS® Programming 3: Advanced Techniques and Efficiencies

SAS® Macro Language 2: Developing Macro Applications

For SAS Enterprise Guide Users

SAS® Enterprise Guide® 1: Querying and Reporting →

SAS® Programming Essentials for Experienced SAS® Enterprise Guide® Users

SAS® Enterprise Guide® 2: Advanced Tasks and Querying **NEW**

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