

SAS Macro Language 1: Essentials

Duration: 2.0 days

This course focuses on the components of the SAS macro facility and how to design, write, and debug macro systems. Emphasis is placed on understanding how programs with macro code are processed.

Learn how to

- perform text substitution in SAS code
- automate and customize the production of SAS code
- conditionally or iteratively construct SAS code
- use macro variables and macro functions.

Who should attend

Experienced SAS programmers who have a sound understanding of DATA step processing and who want to write SAS programs that are reusable and dynamic

Prerequisites

Before attending this course, you should have completed the *SAS Programming 2: Data Manipulation Techniques* course or have equivalent knowledge. Specifically, you should be able to

- use a DATA step to read from or write to a SAS data set or external file
- use DATA step programming statements such as IF-THEN/ELSE, DO WHILE, DO UNTIL, and iterative DO
- use SAS data set options such as DROP=, KEEP=, and OBS=
- use character functions such as SUBSTR, SCAN, INDEX, and UPCASE
- form subsets of data using the WHERE clause
- create and use SAS date values and constants
- use SAS procedures such as SORT, PRINT, CONTENTS, MEANS, FREQ, TABULATE, and CHART.

Course Contents

Introduction to the Macro Facility

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

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
- the autocall facility
- 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

Learning More

- SAS resources
- other recommended courses

Classroom Course Materials

Students attend classroom courses in one of our public training centers. You receive a hardcopy of the course notes.