

# SAS® Macro Language 1: Essentials

Course code: MC1V2

This 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.

Affiliate	Duration	Course price	ITB
Bratislava	2	1 000 €	0

The prices are without VAT.

## Course terms

Date	Duration	Course price	Type	Course language	Location
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The prices are without VAT.

## Who is the course for

Experienced SAS programmers who are familiar with simple SQL queries and well-versed in DATA step processing and who want to write reusable, dynamic programs and automate repetitive processing in SAS

## What we teach you

- Perform text substitution in SAS code
- 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

## Required skills

Before attending this course, you should have knowledge equivalent to having completed the SAS Programming 1:

Essentials and SAS Programming 2: Data Manipulation Techniques courses. Specifically, you should be able to do the following:

- Write simple SQL queries using the SELECT statement.
- Read from and write to SAS tables using a DATA step.
- Use DATA step programming statements, including IF-THEN/ELSE, DO WHILE, DO UNTIL, and iterative DO.
- Use SAS data set options, including DROP=, KEEP=, and OBS=.
- Use character functions, including SUBSTR, SCAN, and UPCASE.
- Read subsets from tables using the WHERE statement.
- Create and use SAS date values and constants.
- Use Base SAS procedures such as SORT, PRINT, CONTENTS, MEANS, and FREQ.

## Course outline

### 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

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# SAS® Macro Language 1: Essentials

- 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

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