

# SAS® Certification Review: SAS® 9.4 Base Programming Performance-Based Exam

Course code: CRBM6

This course provides a review of the majority of topics in the SAS 9.4 Base Programming Performance-Based Exam. It addresses the four exam content areas: Accessing and Creating Data Structures, Managing Data, Generating Reports and Output, and Handling Errors.

## Who is the course for

SAS users who are interested in a review course before taking the SAS 9.4 Base Programming Performance-Based Exam, part of the SAS Global Certification Program

## What we teach you

- Read, create, and combine SAS data sets
- Sort observations with the SORT procedure.
- Read delimited data and Microsoft Excel files with the IMPORT procedure and the LIBNAME engine
- Create variables using assignment, conditional, and sum statements
- Manipulate data using SAS functions
- Process data with DO loops
- Restructure data with the TRANSPOSE procedure
- Create reports using the PRINT procedure, the FREQ procedure, the MEANS procedure, and the UNIVARIATE procedure
- Create formats with the FORMAT procedure
- Create external files with ODS, the EXPORT procedure, and the LIBNAME engine
- Identify and resolve programming logic errors

## Required skills

Before attending this course, you should:

- Be an experienced programmer with knowledge of the four exam content areas.
- Have taken SAS Programming 1: Essentials and SAS Programming 2: Data Manipulation Techniques or have equivalent experience.

## Course outline

### SAS 9.4 Base Programming Performance-Based Exam Review

- Specifics about the SAS 9.4 Base Programming Performance-Based Exam
- Specifics about this review course
- Review SAS fundamental concepts
- Using macro variables to simplify code maintenance

### Access and Create Data Structure

- Investigating SAS data libraries
- Accessing SAS data sets and data sources not in SAS (Microsoft Excel and text files)
- Creating SAS data sets and reviewing DATA step processes
- Controlling rows and columns to process and output
- Modifying column attributes

### Manage Data

- Using assignment statements
- Conditional processing with IF-THEN/ELSE
- Sorting and combining tables
- Accumulating subtotals and totals
- Manipulating data with functions

#### GOPAS Praha

Kodaňská 1441/46  
101 00 Praha 10  
Tel.: +420 234 064 900-3  
[info@gopas.cz](mailto:info@gopas.cz)

#### GOPAS Brno

Nové sady 996/25  
602 00 Brno  
Tel.: +420 542 422 111  
[info@gopas.cz](mailto:info@gopas.cz)

#### GOPAS Bratislava

Dr. Vladimíra Clementisa 10  
Bratislava, 821 02  
Tel.: +421 248 282 701-2  
[info@gopas.sk](mailto:info@gopas.sk)



Copyright © 2020 GOPAS, a.s.,  
All rights reserved

# SAS® Certification Review: SAS® 9.4 Base Programming Performance-Based Exam

- Iterative processing with DO loops
- Restructuring data with PROC TRANSPOSE

## Error Handling

- Identifying and resolving programming logic errors
- Examining and resolving data errors

## Generating Reports and Output

- Generating list reports using the PRINT procedure
- Generating summary reports and frequency tables using Base SAS procedures
- Enhancing reports with labels, SAS formats, user-defined formats, titles, footnotes, and SAS reporting options
- Generating reports using ODS statements
- Exporting data to text and Microsoft Excel files

## Additional Information

- More specifics about the SAS 9.4 Base Programming Performance-Based Exam
- Additional preparation resources
- Test-taking strategies

### GOPAS Praha

Kodaňská 1441/46  
101 00 Praha 10  
Tel.: +420 234 064 900-3  
[info@gopas.cz](mailto:info@gopas.cz)

### GOPAS Brno

Nové sady 996/25  
602 00 Brno  
Tel.: +420 542 422 111  
[info@gopas.cz](mailto:info@gopas.cz)

### GOPAS Bratislava

Dr. Vladimíra Clementisa 10  
Bratislava, 821 02  
Tel.: +421 248 282 701-2  
[info@gopas.sk](mailto:info@gopas.sk)



Copyright © 2020 GOPAS, a.s.,  
All rights reserved