

# SAS® SQL 1: Essentials

## Course Description

This course teaches you how to process SAS data using Structured Query Language (SQL).

### Learn how to

- Query and subset data.
- Summarize and present data.
- Combine tables using joins and set operators.
- Create and modify tables and views.
- Create data-driven macro variables using a query.
- Access DBMS data with SAS/ACCESS technology.

## Course Prerequisites

Before attending this class, you should be able to do the following:

- Submit SAS programs on your operating system.
- Create and access SAS data sets.
- Use arithmetic, comparison, and logical operators.
- Invoke SAS procedures. You can gain this experience from the SAS Programming 1: Essentials course. No knowledge of SQL is necessary.

## Who Should Attend?

SAS programmers and business analysts

## Course Outline

### Essentials

- Setting up for this course.
- Overview of SAS Foundation.
- Course logistics.
- Course data files.
- Introducing the Structured Query Language.
- Overview of the SQL procedure.
- Exploring tables.
- Specifying columns.

## PROC SQL Fundamentals

- Subsetting data.
- Presenting data.
- Summarizing data.
- Creating and managing tables.
- Using DICTIONARY tables.

## SQL Joins

- Introduction to SQL joins.
- Inner joins.
- Outer joins.
- Complex SQL joins.

## Subqueries

- Noncorrelated subqueries.
- Correlated subqueries.
- In-line views.
- Creating views with the SQL procedure.
- Subqueries in the SELECT clause.
- Remerging summary statistics.

## Set Operators

- Introduction to set operators.
- The INTERSECT operator.
- The EXCEPT operator.
- The UNION operator.
- The OUTER UNION operator.

## Using and Creating Macro Variables in SQL

- Interfacing PROC SQL with the macro language.
- Creating data-driven macro variables with a query.
- Using macro variables in SQL.

## Accessing DBMS Data with SAS/ACCESS

- Overview of SAS/ACCESS technology.
- SQL pass-through facility.
- SAS/ACCESS LIBNAME statement.
- PROC FedSQL.

## Course Duration

2 days

## SAS Products Covered

Base SAS

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