# Querying SQL Databases using T-SQL Training

Duration: **2 Day**

BILGINÇ IT Academy
info@bilginc.com
bilginc.com

## Overview

This **practical, instructor-led training** provides a comprehensive introduction to the **Transact-SQL (T-SQL)** language — the foundation of querying Microsoft SQL Server databases.
Throughout the course, you'll learn how to **retrieve, filter, sort, and analyze data** from multiple tables and gain hands-on experience using **SQL Server Management Studio (SSMS)** to write efficient queries.

By the end of this course, you'll have the core T-SQL skills required to extract valuable insights from your data and prepare for more advanced SQL training.

*No prior SQL experience is required.*

## Prerequisites

## Who Should Attend

This course is designed for:

- IT professionals working with Microsoft SQL Server 2005–2016.
- Non-technical "power users" seeking to understand how to query and analyze data.
- Anyone who needs to extract, report, or interpret information using SQL Server.

*Note: For virtual participants, a second monitor (19" minimum, 1280x1024 resolution) is required for lab work.*

# Querying SQL Databases using T-SQL Training

Duration: **2 Day**

BILGINC IT Academy
info@bilginc.com
bilginc.com

## What You Will Learn

By the end of this training, you will have gained knowledge and skills in the following areas:

- Access and navigate SQL Server Management Studio (SSMS).
- Write simple to complex **SELECT** queries.
- Retrieve data from multiple tables using **JOIN** clauses.
- Apply **filters** using the **WHERE** clause and logical operators.
- Sort and organize data using **ORDER BY** and **TOP**.
- Summarize data with **GROUP BY**, **HAVING**, and aggregate functions.
- Create and use **Views** and **Stored Procedures**.
- Utilize text, date, and conversion **functions** for data manipulation.

## Outline

**Module 1: Introduction to T-SQL**

- Overview of Relational Database Management Systems (RDBMS)
- Introduction to Microsoft SQL Server
- Getting started with SQL Server Management Studio (SSMS)
- Query Editor basics

*Lab:* Familiarizing yourself with SSMS and writing your first query

**Module 2: Retrieving Data**

- Writing basic **SELECT** statements
- Using expressions in query results

*Lab:* Selecting data and using expressions

**Module 3: Filtering Rows**

- Using the **WHERE** clause to filter data
- Applying equality, logical, string, and NULL comparisons

*Lab:* Practicing different types of filters

# Querying SQL Databases using T-SQL Training

Duration: **2 Day**

BILGINÇ IT Academy
info@bilginc.com
bilginc.com

**Module 4: Sorting Returned Rows**

- Managing output order with **ORDER BY**
- Sorting with expressions
- Using **DISTINCT** and **TOP** for unique and limited results

*Lab:* Sorting and limiting query results

**Module 5: Grouping and Aggregating Data**

- Using **aggregate functions** (SUM, AVG, COUNT, etc.)
- Grouping results with **GROUP BY**
- Filtering groups with **HAVING**

*Lab:* Aggregating and grouping data

**Module 6: Using Multiple Tables**

- Joining tables using **INNER**, **OUTER**, and **CROSS JOIN**
- Combining result sets with **UNION, INTERSECT, EXCEPT**

*Lab:* Joining and merging data from multiple tables

**Module 7: Using Views and Stored Procedures**

- Understanding pre-written queries and database objects
- Creating and executing **views** and **stored procedures**

*Lab:* Working with stored queries

**Module 8: Common Functions**

- Using **text**, **date**, and **NULL** functions
- Formatting and converting data types

*Lab:* Applying SQL functions in queries

**Appendix (Optional): Modifying Data**

- Introduction to **INSERT**, **UPDATE**, and **DELETE** statements (time permitting)