

# **Querying Data with Transact SQL**

**Modality: On Demand**

**Duration: 30 Hours**

## **About This Course:**

This course is part of the Microsoft Professional Program Certificate in Data Science and the Microsoft Professional Program Certificate in Big Data.

Transact-SQL is an essential skill for data professionals and developers working with SQL databases. With this combination of expert instruction, demonstrations, and practical labs, step from your first SELECT statement through to implementing transactional programmatic logic.

Work through multiple modules, each of which explore a key area of the Transact-SQL language, with a focus on querying and modifying data in Microsoft SQL Server or Azure SQL Database. The labs in this course use a sample database that can be deployed easily in Azure SQL Database, so you get hands-on experience with Transact-SQL without installing or configuring a database server.

## **Course Objective:**

- Create Transact-SQL SELECT queries
- Work with data types and NULL
- Query multiple tables with JOIN
- Explore set operators
- Use functions and aggregate data
- Work with subqueries and APPLY
- Use table expressions
- Group sets and pivot data
- Modify data
- Program with Transact-SQL
- Implement error handling and transactions

## **Audience:**

- Programmers
- Developers

## **Prerequisite:**

- Basic understanding of databases and IT systems.

## **Course Outline:**

### **Section 1: Modules 1-2**

- Module 1: Introduction to Transact-SQL
- Lab 1: Introduction to Transact-SQL
- Module 2: Querying Tables with SELECT
- Lab 2: Querying Tables with SELECT

## **Section 2: Modules 3-5**

- Module 3: Querying Multiple Tables with Joins
- Lab 3: Querying Multiple Tables with Joins
- Module 4: Using Set Operators
- Lab 4: Using Set Operators
- Module 5: Using Functions and Aggregating Data
- Lab 5: Using Functions and Aggregating Data

## **Section 3: Modules 6-8**

- Module 6: Using Subqueries and APPLY
- Lab 6: Using Subqueries and APPLY
- Module 7: Using Table Expressions
- Lab 7: Using Table Expressions
- Module 8: Grouping Sets and Pivoting Data
- Lab 8: Grouping Sets and Pivoting Data

## **Section 4: Modules 9-11**

- Module 9: Modifying Data
- Lab 9: Modifying Data
- Module 10: Programming with Transact-SQL
- Lab 10: Programming with Transact-SQL
- Module 11: Error Handling and Transactions
- Lab 11: Error Handling and Transactions

## **Final Assessment**

- Final Exam?