# Querying Data with Microsoft Transact-SQL

## Description

This course, **Querying Data with Microsoft Transact-SQL (DP-080)**, teaches you the fundamentals of **Microsoft's dialect of the standard SQL language**: Transact-SQL. Topics covered include querying and modifying data in relational databases hosted in database systems based on Microsoft SQL Server, including: Microsoft SQL Server, Azure SQL Database, and Azure Synapse Analytics.

From using SELECT commands to managing JOINS and subqueries, and modifying data, this course provides you with all the necessary skills to excel in the field of database management. Join us through the course Querying Data with Microsoft Transact-SQL to transform your understanding of SQL and become an expert in Transact-SQL.

**Course Content**
**Module 1: Introduction to Transact-SQL**

- Understanding the utility of SQL
- Identifying database objects in schemas
- Identifying types of SQL statements
- Using the SELECT statement
- Working with data types
- Handling NULLs

**Module 2: Sorting and Filtering Results in T-SQL**

- Sorting your results
- Limiting sorted results
- Returning paginated results
- Removing duplicates
- Filtering data with predicates

**Module 3: Combining Multiple Tables with JOINS in T-SQL**

- Describing the concepts and syntax of joins
- Writing queries using inner and outer joins
- Writing queries using cross joins
- Writing queries using self joins

## Module 4: Writing Subqueries in T-SQL

- Understanding what subqueries are
- Using scalar or multi-valued subqueries
- Using standalone or correlated subqueries

## Module 5: Using Built-in Functions and GROUP BY in Transact-SQL

- Categorizing built-in functions
- Using scalar functions
- Using ranking and window functions
- Using aggregate functions
- Summarizing data with GROUP BY
- Filtering groups with HAVING

## Module 6: Modifying Data with T-SQL

- Inserting data into a table
- Generating automatic values
- Updating data in a table
- Deleting data from a table
- Merging data based on multiple tables

## Lab / Exercises
## Official Microsoft Labs

- Get started with SQL Server query tools and writing queries in T-SQL
- Sort and filter data returned by SELECT queries
- Write queries with JOIN operations
- Write SELECT statements using subqueries
- Built-in functions
- Modify data

## Documentation

- Access to Microsoft Learn (online learning content)

## Participant profiles

- Database Administrators
- Database Developers
- Business Intelligence professionals
- SQL power users who aren't necessarily database-focused such as report writers, business analysts and client application developers

## Prerequisites

- No prerequisites

## Objectives

- Use SQL Server query tools
- Write SELECT statements to retrieve columns from one or more tables
- Sort and filter selected data
- Use built-in functions to returned data values
- Create groups of data and aggregate the results
- Modify data with Transact-SQL using INSERT, UPDATE, DELETE and MERGE

**Niveau**
Fondamental
**Classroom Registration Price (CHF)**
1800
**Virtual Classroom Registration Price (CHF)**
1700
**Duration (in Days)**
2
**Reference**
DP-080T00