

# **COURSE OUTLINE**



Course Code: DP-080T00

## **Course Name:** Querying Data with Microsoft Transact-SQL



### **Course Overview**

This course will teach the basics of Microsoft's dialect of the standard SQL language: Transact-SQL. Topics include both querying and modifying data in relational databases that are hosted in Microsoft SQL Server-based database systems, including: Microsoft SQL Server, Azure SQL Database and Azure Synapse Analytics.

## **Target Audience**

This course can be valuable for anyone who needs to write basic SQL or Transact-SQL queries. This includes anyone working with data as a data analyst, a data engineer, a data scientist, a database administrator or a database developer. It can also be useful for others peripherally involved with data or wanting to learn more about working with data such as solution architects, students and technology managers.

## Job role:

Database Administrator

### **Exam Requirements**

DP-080

## Prerequisites

Before starting this module, it's helpful to have experience of working with tables with data; for example in a spreadsheet.

## Topics

#### Module 1: Introduction to Transact-SQL

This module provides an introduction to relational databases, the SQL language and Transact-SQL. You'll learn what kinds of statements make up the SQL language and look at the SELECT statement in detail.

- Understand what SQL is for
- Identify database objects in schemas.
- Identify SQL statement types.
- Use the SELECT statement.
- Work with data types
- Handle NULLs

#### Module 2: Sort and filter results in T-SQL

Learn how to sort and filter query results

- Sort your results
- Limit the sorted results
- Return paged results
- Remove duplicates
- Filter data with predicates

#### Module 3: Combine multiple tables with JOINs in T-SQL

Explore T-SQL queries accessing data from multiple tables with various kinds of JOIN operations.

- Describe join concepts and syntax
- Write queries that use inner and outer joins

- Write queries that use cross joins
- Write queries that use self joins

#### Module 4: Write Subqueries in T-SQL

Learn how to use subqueries to combine multiple SELECT statements and compose nested queries.

- Understand what subqueries are
- Use scalar or multi-valued subqueries
- Use self-contained or correlated subqueries

#### Module 5: Use built-in functions and GROUP BY in Transact-SQL

Learn how to use functions in Transact-SQL, and how to group aggregated results.

- Categorize built-in functions.
- Use scalar functions.
- Use ranking and rowset functions.
- Use aggregate functions.
- Summarize data with GROUP BY
- Filter groups with HAVING..

#### Module 6: Modify data with T-SQL

Learn how to use Transact-SQL to insert, update, and delete data in a database.

- Insert data into a table
- Generate automatic values
- Update data in a table
- Delete data from a table
- Merge data based on multiple tables

## **Exams and Certifications**

No associated Exams. A Certificate of completion is issued at the end of the Course.

## **Follow on Course**

Link to the next recommended course-link to course on website