

Course 2778 — Instructor-led

Course Length: 3 days

Upon successful completion of this course, students will be able to:

- Describe the uses of and ways to execute the Transact-SQL language.
- Use querying tool.
- Write SELECT queries to retrieve data.
- Group and summarize data by using Transact-SQL.
- Join data from multiple tables.
- Write queries that retrieve and modify data by using subqueries.

- Modify data in tables.
- Query text fields with full-text search.
- Describe how to create programming objects.
- Use various techniques when working with complex queries

Prerequisites:

To ensure success, we recommend:

- Knowledge of data integrity concepts.
- Core Windows Server skills.
- Relational database design skills.
- Programming skills.

Course Outline

Module 1: Getting Started with Databases and Transact-SQL in SQL Server 2008

Topics:

- Overview of SQL Server 2008
- Overview of SQL Server Databases
- Overview and Syntax Elements of T-SQL
- Working with T-SQL Scripts
- Using T-SQL Querying Tools

Lab : Using SQL Server Management Studio and SQLCMD

- Exploring the Components and Executing Queries in SQL Server Management Studio
- Starting and Using SQLCMD
- Generating a Report from a SQL Server Database Using Microsoft Office Excel

Module 2: Querying and Filtering Data

Topics:

- Using the SELECT Statement
- Filtering Data
- Working with NULL Values

- Formatting Result Sets
- Performance Considerations for Writing Queries

Lab : Querying and Filtering Data

- Retrieving Data by Using the SELECT Statement
- Filtering Data by Using Different Search Conditions
- Using Functions to Work with NULL Values
- Formatting Result Sets

Module 3: Grouping and Summarizing Data

Topics:

- Summarizing Data by Using Aggregate Functions
- Summarizing Grouped Data
- Ranking Grouped Data
- Creating Crosstab Queries

Lab : Grouping and Summarizing Data

- Summarizing Data by Using Aggregate Functions
- Summarizing Grouped Data
- Ranking Grouped Data
- Creating Crosstab Queries

Module 4: Joining Data from Multiple Tables

Writing Queries Using Microsoft SQL Server 2008 Transact-SQL

Course 2778—continued

Topics:

- Querying Multiple Tables by Using Joins
- Applying Joins for Typical Reporting Needs
- Combining and Limiting Result Set

Lab : *Joining Data from Multiple Tables*

- Querying Multiple Tables by Using Joins
- Applying Joins for Typical Reporting Needs
- Combining and Limiting Result Sets

Module 5: Working with Subqueries

Topics:

- Writing Basic Subqueries
- Writing Correlated Subqueries
- Comparing Subqueries with Joins and Temporary Tables
- Using Common Table Expressions

Lab : *Working with Subqueries*

- Writing Basic Subqueries
- Writing Correlated Subqueries
- Comparing Subqueries with Joins and Temporary Tables
- Using Common Table Expressions

Module 6: Modifying Data in Tables

Topics:

- Inserting Data into Tables
- Deleting Data from Tables
- Updating Data in Tables
- Overview of Transactions

Lab : *Modifying Data in Tables*

- Inserting Data into Tables
- Deleting Data from Tables
- Updating Data in Tables
- Working with Transactions

Module 7: Querying Metadata, XML, and Full-Text Indexes

Topics:

- Querying Metadata
- Overview of XML
- Querying XML Data
- Overview of Full-Text Indexes
- Querying Full-Text Indexes

Lab : *Querying Metadata, XML, and Full-Text Indexes*

- Querying Metadata
- Querying XML Data
- Creating and Querying Full-Text Indexes

Module 8: Using Programming Objects for Data Retrieval

Topics:

- Overview of Views
- Overview of User-Defined Functions
- Overview of Stored Procedures
- Overview of Triggers
- Writing Distributed Queries

Lab : *Using Programming Objects for Data Retrieval*

- Creating Views
- Creating User-Defined Functions
- Creating Stored Procedures
- Writing Distributed Queries

Module 9: Using Advanced Querying Techniques

Topics:

- Considerations for Querying Data
- Working with Data Types
- Cursors and Set-Based Queries
- Dynamic SQL
- Maintaining Query Files

Lab : *Using Advanced Querying Techniques*

- Using Execution Plans
- Converting Data Types
- Implementing a Hierarchy
- Using Cursors and Set-Based Queries