

# SQL: Fundamentals of Querying (4th Edition)

Course length: 1 day

## Course Description

**Course Objective:** You will compose SQL queries to retrieve desired information from a database.

**Target Student:** Individuals with basic computer skills, familiar with concepts related to database structure and terminology, and who want to use SQL to query databases.

**Prerequisites:** Basic end-user computer skills and some familiarity with database terminology and structure are required.

The following courses or equivalent knowledge and skills are highly recommended:

- Windows XP Professional: Level 1
- Windows XP Professional: Level 2
- Microsoft Windows Vista: Level 1
- Microsoft Windows Vista: Level 2
- Relational Databases Design (Second Edition)
- Access 2003: Designing a Database

## Course Objectives

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

- Connect to the SQL Server database and execute a simple query.
- Include a search condition in a simple query.
- Use various functions to perform calculations on data.
- Organize data obtained from a query before it is displayed on-screen.
- Retrieve data from tables.
- Format an output, save a result, and generate a report.

## Course Content

### Lesson 1: Executing a Simple Query

Topic 1A: Connect to the SQL Database

Topic 1B: Query a Database

Topic 1C: Save a Query

Topic 1D: Modify a Query

Topic 1E: Execute a Saved Query

### Lesson 2: Performing a Conditional Search

Topic 2A: Search Using a Simple Condition

Topic 2B: Compare Column Values

Topic 2C: Search Using Multiple Conditions

Topic 2D: Search for a Range of Values and Null Values

Topic 2E: Retrieve Data Based on Patterns

### Lesson 3: Working with Functions

Topic 3A: Perform Date Calculations

Topic 3B: Calculate Data Using Aggregate Functions

Topic 3C: Manipulate String Values



### **Lesson 4: Organizing Data**

Topic 4A: Sort Data

Topic 4B: Rank Data

Topic 4C: Group Data

Topic 4D: Filter Grouped Data

Topic 4E: Summarize Grouped Data

Topic 4F: Use PIVOT and UNPIVOT Operators

### **Lesson 5: Retrieving Data from Tables**

Topic 5A: Combine Results of Two Queries

Topic 5B: Compare the Results of Two Queries

Topic 5C: Retrieve Data by Joining Tables

Topic 5D: Check for Unmatched Records

Topic 5E: Retrieve Information from a Single Table Using Joins

### **Lesson 6: Presenting Query Results**

Topic 6A: Save the Query Result

Topic 6B: Generate an XML Report

### **Appendix A: The OGCBooks Database**

