

# SQL: Advanced Querying (Fourth Edition)

Course length: 1 day

## Course Description

**Course Objective:** You will work with advanced queries to manipulate and index tables. You will also create transactions so that you can choose to save or cancel data entry process.

**Target Student:** Students should have basic computer skills, SQL skills, and be familiar with concepts related to database structure and terminology.

**Prerequisites:** To ensure your success, we recommend you first take the following courses, or have equivalent skills and knowledge:

- SQL: Fundamentals of Querying (Fourth Edition)
- Windows XP Professional: Level 1 and Windows XP Professional: Level 2 or Windows XP: Introduction

## Course Objectives

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

- Use subqueries to generate query output.
- Manipulate table data by inserting and updating records in a table and deleting records from a table.
- Manipulate the table structure.
- Create views, manipulate data through views, modify the view structure, and drop views.
- Create indices on table columns and drop inefficient indices.
- Mark the beginning of a transaction, create a savepoint within a transaction, rollback a transaction, and commit a transaction.

## Course Content

### Lesson 1: Using Subqueries to Perform Advanced Querying

Topic 1A: Search Based on Unknown Values  
Topic 1B: Compare a Value with Unknown Values  
Topic 1C: Search Based on the Existence of Records  
Topic 1D: Generate Output Using Correlated Subqueries  
Topic 1E: Filter Grouped Data Within Subqueries  
Topic 1F: Perform Multiple-Level Subqueries

### Lesson 2: Manipulating Table Data

Topic 2A: Insert Data  
Topic 2B: Modify and Delete Data

### Lesson 3: Manipulating the Table Structure

Topic 3A: Create a Table  
Topic 3B: Create a Table with Constraints  
Topic 3C: Add and Drop Table Columns  
Topic 3D: Add and Drop Constraints  
Topic 3E: Modify the Column Definition  
Topic 3F: Back Up Tables  
Topic 3G: Delete Tables



### **Lesson 4: Working with Views**

Topic 4A: Create a View

Topic 4B: Manipulate Data in Views

Topic 4C: Create Aliases

Topic 4D: Modify and Drop Views

### **Lesson 5: Indexing Data**

Topic 5A: Create Indices

Topic 5B: Drop Indices

### **Lesson 6: Managing Transactions**

Topic 6A: Create Transactions

Topic 6B: Commit Transactions

**Appendix A:** Structure of the Bookstore Database

