



## Microsoft SQL Server 2008 for Developers

In this course, you will learn how to...

- Install or upgrade from an earlier version of SQL Server.
- Configure SQL 2008 Server to meet your needs.
- Apply relational database design principles.
- Create a SQL Server database and tables.
- Understand T-SQL, the SELECT statement and the WHERE Clause.
- Use SQL Server Management Studio (SSMS).
- Implement security with authentication, authorization and encryption.
- Understand the differences between views, stored procedures, triggers, and user-defined functions.
- Explore the various types of user-defined functions and how they support reusable database code.
- Learn why using .NET code, using either C# or Visual Basic, in the database overcomes many Transact-SQL limitations, and how SQL Server protects itself from misbehaving code.
- Understand the complex data types in SQL Server, such as for spatial and hierarchical data, and how they support complex data operations.
- How to partition data to store data in ways that improves the efficiency of queries.
- Understand Business Intelligence to add reporting and analysis capabilities to your databases and applications.

**Prerequisites:** To get the most out of the Microsoft SQL Server 2008 course, you should have a solid understanding of relational databases and the concepts of SQL Server. No particular programming experience is required, but the course is taught from a developer's perspective.

### A Tour of SQL Server 2008

- SQL Server 2008 Editions, Components, and Tools
- Using SQL Server Management Studio (SSMS)
- Working with Tables, Queries, and Views
- Business Intelligence Services

### Installing SQL Server 2008

- Preparing for Installation
- Upgrading an Earlier Version
- Installation Steps
- Configuring the Server

### Designing and Creating a Database

- Relational Database Design Principles
- Implementing the Design
- Create a SQL Server Database



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- Create SQL Server Tables
- Creating Relationships Using a Database Diagram

## Data Selection

- Understanding Transact-SQL
- The SELECT Statement
- The WHERE Clause
- Using ORDER BY to Sort Data
- The GROUP BY Clause
- Joining Tables

## Modifying Data

- Modifying Data with Transact-SQL
- Inserting Data
- Updating Data
- Understanding Transaction Isolation

## Working with SQL Server Management Studio

- Getting Started with Management Studio
- Exploring the Object Explorer
- Working with the Query Editor
- Using SQL Server Books Online

## Transact-SQL Programming

- Overview of Transact-SQL
- Using Built-In Functions
- Using Control of Flow Constructs

## Understanding and Implementing Security

- Security Overview
- Authentication
- Authorization
- Data Encryption
- Security Epilog

## Creating Views

- What Is a View?
- Creating Views
- Updating Data Using a View
- Using Computed Columns
- Indexed Views



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- Partitioned Views

## Creating Stored Procedures and Triggers

- Creating Stored Procedures
- Creating Triggers

## Creating User-Defined Functions

- User-Defined Function Overview
- Scalar Functions
- Inline Table-Valued Functions
- Multi-Statement Table-Valued Functions
- Using Functions, Views, and Stored Procedures

## Transactions and Error Handling

- Transaction Concepts
- Applications and Transactions
- Creating Explicit Transactions
- Using TRY/CATCH Error Handling

## Using .NET Code in SQL Server

- Introduction
- Writing SQLCLR Code
- SQLCLR Code Modules
- SQLCLR Security
- T-SQL vs. .NET Code

## Advanced SQLCLR Code Techniques

- Advanced SQLCLR Code Modules
- Managing Code Modules

## Advanced Query Techniques

- Full-Text Search
- Advanced T-SQL Techniques
- Executing Dynamic SQL

## Advanced Data Types

- Introduction
- The HierarchyID Data Type
- Sparse Columns and Column Sets
- FILESTREAM Storage



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- Spatial Data

## Implementing Partitions

- SQL Server Partitions
- Creating Partitioned Tables
- Querying Partitions
- Managing Partitions

## Complex Querying

- Complex Queries
- Ranking
- Correlated SubQueries
- Common Table Expressions

## Advanced Techniques

- Complex Data and Structures
- Efficient Queries
- Working with Complex Queries
- Maintaining Query Files

## Design and Deployment with Visual Studio

- Team System for Database Professionals
- Creating Databases and Managing Projects
- Database and Project Management

## Working with XML

- XML Data Type
- XML Schema Collections
- Querying XML
- Best Practices

## Business Intelligence Services

- Introduction to Business Intelligence Services
- Using Integration Services
- Using Analysis Services
- Using Reporting Services