

<u>20464CC</u>	<u>Developing Microsoft SQL Server Databases</u>	<u>5 DAYS</u>	<u>SATV : YES</u>
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Course Description

This five-day instructor-led course introduces SQL Server 2014 and describes logical table design, indexing and query plans. It also focusses on the creation of database objects including views, stored procedures, along with parameters, and functions.

Course Outline

Module 1: In-Memory Database Capabilities

- The Buffer Pool Extension
- Columnstore Indexes

Module 2: Designing and Implementing Views

- Introduction to Views
- Creating and Managing Views
- Performance Considerations for Views

Module 3: Designing and Implementing Stored Procedures

- Introduction to Stored Procedures
- Working With Stored Procedures
- Implementing Parameterized Stored Procedures
- Controlling Execution Context

Module 4: Introduction to Database Development

- Introduction to the SQL Server Platform
- Working with SQL Server Tools
- Configuring SQL Server Services

Module 5: Designing and Implementing Tables

- Designing Tables
- Working with Schemas
- Creating and Altering Tables

Module 6: Ensuring Data Integrity through Constraints

- Enforcing Data Integrity
- Implementing Domain Integrity
- Implementing Entity and Referential Integrity

Module 7: Introduction to Indexing

- Core Indexing Concepts
- Single Column and Composite Indexes
- SQL Server Table Structures
- Working with Clustered Indexes

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Module 8: Advanced Indexing

- Execution Plan Core Concepts
- Common Execution Plan Elements
- Working with Execution Plans
- Designing Effective Nonclustered Indexes
- Performance Monitoring

Module 9: Designing and Implementing User-Defined Functions

- Overview of Functions
- Designing and Implementing Scalar Functions
- Designing and Implementing Table-Valued Functions
- Implementation Considerations for Functions
- Alternatives to Functions

Module 10: Responding to Data Manipulation via Triggers

- Designing DML Triggers
- Implementing DML Triggers
- Advanced Trigger Concepts

Module 11: Using In-Memory Tables

- Memory-Optimized Tables
- Native Stored Procedures

Module 12: Implementing Managed Code in SQL Server

- Introduction to SQL CLR Integration
- Importing and Configuring Assemblies
- Implementing SQL CLR Integration

Module 13: Storing and Querying XML Data in SQL Server

- Introduction to XML and XML Schemas
- Storing XML Data and Schemas in SQL Server
- Implementing the XML Data Type
- Using the T-SQL FOR XML Statement
- Getting Started with XQuery
- Shredding XML

Module 14: Working with SQL Server Spatial Data

- Introduction to Spatial Data
- Working with SQL Server Spatial Data Types
- Using Spatial Data in Applications