

## Course 2780 — Instructor-led

### Course Length: 5 days

At the end of the course, students will be able to:

- Install and configure SQL Server 2005.
- Manage database files.
- Manage security.
- Perform administrative tasks.
- Back up databases.
- Restore databases.
- Monitor SQL Server.
- Troubleshoot SQL Server.
- Transfer data.
- Maintain high availability.

### Prerequisites:

- Basic knowledge of the Microsoft Windows operating system and its core functionality.
- Working knowledge of Transact-SQL.
- Working knowledge of relational databases.
- Some experience with database design.

In addition, it is recommended, but not required, that students have completed:

- Course 2778: Writing Queries Using Microsoft SQL Server 2005 Transact-SQL.
- Course 2779: Implementing a Microsoft SQL Server 2005 Database.

### Course Outline

#### Module 1: Installing and Configuring SQL Server 2005

This module explains how to plan for and install SQL Server 2005, how to manage a SQL Server 2005 installation, and how to use the SQL Server 2005 administrative tools.

##### Topics:

- Preparing to install SQL Server.
- Installing SQL Server.
- Managing a SQL Server 2005 Installation.
- Lab 1: Installing SQL Server 2005
- Performing an Installation.
- Managing SQL Server.

#### Module 2: Managing Databases and Files

This module explains how to manage databases and files.

##### Topics:

- Planning databases.
- Creating databases.
- Managing databases.
- Lab 2: Creating and Managing Databases
- Creating a Database.
- Managing Filegroups.
- Viewing Metadata.

#### Module 3: Disaster Recovery

This module explains how to plan and implement a backup and restore strategy.

##### Topics:

- Planning a Backup Strategy.
- Backing Up User Databases.
- Restoring User Databases.
- Recovering Data from Database Snapshots.
- System Database and Disaster Recovery.
- Lab 4: Implementing a Disaster Recovery Strategy
- Implementing a Backup Strategy.
- Restoring Databases.
- Rebuild The Master Database.

#### Module 4: Managing Security

This module explains how to manage principals, securables, and permissions, and how to implement cryptography in a SQL Server database.

##### Topics:

- Overview of SQL Server Security.
- Securing the Server Scope.
- Securing the Database Scope.
- Managing Keys and Certificates in SQL Server.
- Lab 3: Securing SQL Server
- Creating Logins.
- Creating and Managing Users.
- Using a Certificate to Encrypt Data.

## Implementing a Microsoft SQL Server 2005 Database

### Course 2780 — continued

#### Module 5: Monitoring SQL Server

This module explains how to monitor SQL Server performance and activity.

*Topics:*

- Viewing Current Activity.
- Using System Monitor.
- Using SQL Server Profiler.
- Using DDL Triggers.
- Using Event Notifications.
- Lab 5: Monitoring SQL Server
- Monitoring SQL Server Performance.
- Tracing SQL Server Activity.
- Implementing DDL Trigger.

#### Module 6: Transferring Data

This module explains how to transfer and transform data.

*Topics:*

- Overview of Data Transfer.
- Introduction to SQL Server Integration Services.
- Using SQL Server Integration Services.
- Lab 6: Transferring Data with SQL Server Integration Services (SSIS)
- Create an SSIS Package.
- Deploying an SSIS Package.

#### Module 7: Automating Administrative Tasks

This module explains how to use the SQL Server Agent to automate administrative tasks.

*Topics:*

- Automating Administrative Tasks in SQL Server 2005.
- Configuring the SQL Server Agent.

- Creating Jobs and Operators.
- Creating Alerts.
- Managing Multiple Servers.
- Managing SQL Server Agent Security.
- Lab 7: Automating Database Administration
- Configuring the SQL Server Agent.
- Creating Operators and Jobs.
- Creating Alerts.

#### Module 8: Maintaining High Availability

This module explains how to implement high availability technologies with SQL Server 2005.

*Topics:*

- Introduction to High Availability.
- Implementing Server Clustering.
- Implementing Database Mirroring.
- Implementing Log Shipping.
- Lab 8: Configuring Database Mirroring
- Setting the Recovery Model.
- Backing Up and Restoring the Database.
- Starting Database Mirroring.
- Performing an Automatic and Manual Failover.

#### Module 9: Introduction to Replication

This module explains considerations for implementing replication.

*Topics:*

- Overview of Replication.
- Replication Scenarios.
- Lab 9: Implementing Replication
- Creating a Publication.
- Creating a Subscription.