



## Microsoft SQL Server 2019 Administration

**Duration:** 35 hours

**Prerequisites:** Familiarity with database concepts

**Course Description:** This course provides students who administer and maintain SQL Server 2019 databases with the knowledge and skills to administer a SQL Server database infrastructure.

The primary audience for this course is individuals who administer and maintain SQL Server databases. These individuals perform database administration and maintenance as their primary area of responsibility, or work in environments where databases play a key role in their primary job.

### Students Will Learn

- ➔ Installing and configuring SQL Server 2019
- ➔ Authenticating and authorizing users
- ➔ Assigning server and database roles
- ➔ Authorizing users to access resources
- ➔ Protecting data with encryption and auditing
- ➔ Recovery models and backup strategies
- ➔ Backing up SQL Server databases
- ➔ Restoring SQL Server databases
- ➔ Automating database management
- ➔ Configuring security for the SQL Server agent
- ➔ Managing alerts and notifications
- ➔ Tracing access to SQL Server
- ➔ Monitoring a SQL Server infrastructure
- ➔ Troubleshooting a SQL Server infrastructure
- ➔ Importing and exporting data
- ➔ Creating a high availability solution

### Overview

#### Installation and Configuration

- Installing Multiple Instances of SQL Server 2019
- Applying a Service Pack
- Creating Aliases
- Setting up a Central Management Server

#### Assigning Server and Database Roles

- Working with Server Roles
- Working with Fixed Database Roles
- Creating User-Defined Database Roles

#### Protecting Data with Encryption and Auditing

- Options for Auditing Data Access in SQL Server
- Implementing SQL Server Audit

#### Authenticating and Authorizing Users

- Authenticating Connections to SQL Server
- Authorizing Logins to Access Databases
- Authorization Across Servers
- Contained Databases

#### Authorizing Users to Access Resources

- Authorizing User Access to Objects
- Authorizing Users to Execute Code
- Configuring Permissions at the Schema Level

#### SQL Server Recovery Models

- Backup Strategies
- Understanding SQL Server Transaction Logging

- Managing SQL Server Audit
- Protecting Data with Encryption

## Planning a SQL Server Backup Strategy

### Backup of SQL Server Databases

- Backing up Databases and Transaction Logs
- Managing Database Backups
- Working with Backup Options

### Tracing Access to SQL Server

- Capturing Activity Using SQL Server profiler
- Improving Performance with the Database Engine Tuning Advisor
- Working with Tracing Options

### Troubleshooting SQL Server

- Resolving Service Related Issues
- Resolving Login and Connectivity Issues
- Troubleshooting Common Issues

### Maintaining High Availability of Data

- Windows Clustering
- AlwaysOn Availability Groups
- Implementing AlwaysOn
- Implementing Log Shipping

### Restoring SQL Server Databases

- Understanding the Restore Process
- Restoring Databases
- Working with Point-in-time Recovery
- Restoring System Databases and Individual Files

### Monitoring SQL Server

- Monitoring Activity
- Capturing and Managing Performance Data
- Analyzing Collected Performance Data

### Importing and Exporting Data

- Transferring Data to/from SQL Server
- Importing and Exporting Table Data
- Using BCP and BULK INSERT to Import Data

## Related Bootcamps

Track	Duration	Price
Master SQL Server Developer	5-course track	\$6,000
	6-course track	\$7,200
SQL Server Administrator	2-course track	\$2,400
	3-course track	\$3,600

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