# <u>Updating Your Skills to Microsoft SQL Server 2016 (MS-10986) (Flex)</u>

Modality: Virtual Classroom

Duration: 12 Days (2 hrs/day)

### **About course:**

Our concise but very useful Training program of Microsoft SQL is intended to help learners in finding out about MS SQL Server stages. The principal reason for this course is to offer training and knowledge on the previous version of the server while facilitating them make an easy change onto the new release of 2016.

We have appointed proficient teachers who will assist understudies with learning hands-on tricks and tips to work on new features easily and effectively. The course makes sure that you will have the capability to play out an assortment of assignments on Microsoft SQL 2016 Server easily.

By getting significant hints from the teacher, learners can without much of a stretch work on various assignments in the Microsoft SQL Server Training sessions including monitoring, security, scalability, performance, deployment, SQL server Cloud functionality, data access, Power BI, reporting, SQL server OLAP, and much more.

## **Course Objectives:**

After finalizing this course, learners will be able to:

- 1. Describe key components and capabilities of SQL 2016 Server
- 2. Describe enhanced and new SQL Server OLAP features
- 3. Describes enhanced and new features in the security of SQL Server
- 4. Describe enhanced and new features of data access
- 5. Describe enhanced and new features in PowerBI and reporting in SQL 2016 Server
- 6. Describe enhanced and new features in the performance of SQL Server
- 7. Describe new Scalability and Availability in SQL Server
- 8. Describe new functionality of SQL Server cloud

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#### @ Moore

## **Targeted Audience:**

This course is ideal for you if you have experience or wish to work as a proficient in a database on SQL 2014 Server. This course is for the individuals who need to figure out how to function proficiently on the version of Microsoft SQL Server 2016 features. You can further sign up for this program if you need to take the certification exam of SQL Server 2016.

# **Prerequisites:**

In addition to the experience of their expert, understudies who go to this preparation should already have the accompanying specialized information:

- Experience in managing and building database, business intelligence (BI), and data warehouse solutions with SQL Server 2014.
- Awareness with Microsoft SharePoint Server 2013 and Microsoft Excel.
- Recognition with the Windows Server 2012 R2 networking and operating system.

## Recommended prerequisites courses:

- Inquiring Data with MS Transact-SQL (MS-20761)
- Managing the Databases of Microsoft SQL Server (MS-20462)

### **Course Outline:**

#### Module 1: Introduction to SQL Server 2016

Describe key capabilities and components of SQL Server 2016

#### Lessons

- Overview of SQL Server 2016
- SQL Server 2016 Editions and Components
- Installing SQL Server 2016

SQL Server Management Studio Enhancements

## Lab: Exploring SQL Server 2016

After completing this module, you will be able to:

- Describe the key elements of SQL Server 2016
- Describe the components and editions of SQL Server 2016
- Install SQL Server 2016
- Describe the enhancement to SQL Server Management Studio

#### Module 2: What?s New in SQL Server Performance

This module describes new and enhanced features in SQL Server performance.

#### Lessons

- Operational Analytics
- In-memory OLTP Enhancements
- Query Store
- Live Query Statistics
- Native JSON
- Temporal Tables

## Lab: Implementing SQL Server 2016 Performance Improvements

After completing this module, you will be able to:

- Describe the use of Columnstore indexes for operational analytics
- Describe the enhancements to in-memory OLTP
- Use the query data store
- Use Native JSON
- Describe and use temporal tables

## Module 3: What?s New in SQL Server Security?

This module describes new and enhanced features in SQL Server security.

#### Lessons

- Using Always Encrypted
- Row-level Security
- Dynamic Data Masking

### Lab: Implementing SQL Server 2016 Security Improvements

After completing this module, you will be able to:

- Implement a logical design for a data warehouse
- Implement a physical design for a data warehouse

## Module 4: What?s New in SQL Server Availability and Scalability?

This module introduces what?s new in SQL Server Availability and Scalability.

#### Lessons

- Enhanced AlwaysOn Availability Groups
- What?s New with tempdb?
- Use Windows Server 2016 with SQL Server 2016
- PowerShell 5.0

### Lab: Monitoring tempdb

After completing this module, you will be able to:

- Describe the enhancements to AlwaysOn availability groups
- Describe what?s new in database caching
- Use Windows Server 2016 with SQL Server 2016

## Module 5: What?s New in SQL Server Reporting and BI

This module introduces reporting and BI enhancements and new features in SQL Server 2016.

#### Lessons

- Reporting Services Enhancements
- PowerBI Enhancements
- Mobile Report Publisher

### Lab: Implementing PowerBI

After completing this module, you will be able to:

- Describe the enhancements to reporting services
- Describe the enhancements to PowerBI

## Module 6: What?s New in SQL Server Data Access?

At the end of this module you will be able to describe data access enhancements in SQL Server 2016.

#### Lessons

- PolyBase
- What?s new in Integration Services

Working with SSIS and Azure

## Lab: Exploring the new features of SQL Server Integrated services (SSIS)

After completing this module, you will be able to:

- Describe and install PolyBase
- Describe enhancements to SSIS

#### Module 7: New and Enhanced Features in SQL Server OLAP

This module describes enhancements in SQL Server OLAP.

#### Lessons

- New and Enhanced Features in SQL Server OLAP
- What?s New in SQL Server Analysis Services

#### Lab: OLAP with SQL Server

After completing this module, you will be able to:

- Describe new and enhanced features in SQL Server OLAP
- Describe new and enhanced features in SQL Server analysis services

### Module 8: What?s New for SQL Server in the Cloud?

This module describes new SQL Server cloud functionality.

#### Lessons

- Stretch Database
- Enhanced Backups to Azure
- Introduction to SQL Server 2016 Hybrid Cloud
- What?s New in SQL Server Azure Database

## **Lab: Using Stretch Database**

After completing this module, you will be able to:

- Describe stretch databases and why you would use them
- Understand the enhanced backup options
- · Be aware of SQL Server hybrid cloud
- Describe what?s new in SQL Server Azure database