Implementing an Azure Data Solution

Course Agenda

At the end of this course, the student will learn:

Module 1: Azure for the Data Engineer

At the end of this module, the students will be able to:

●● Explain the evolving world of data

●● Survey the services in the Azure Data Platform

●● Identify the tasks that are performed by a Data Engineer

●● Describe the use cases for the cloud in a Case Study

Module 2: Working with Data Storage

At the end of this module, the students will be able to:

●● Choose a data storage approach in Azure

●● Create an Azure Storage Account

●● Explain Azure Data Lake Storage

●● Upload data into Azure Data Lake

Module 3: Enabling Team Based Data Science with Azure Databricks

At the end of this module, the students will be able to:

●● Explain Azure Databricks

●● Work with Azure Databricks

●● Read data with Azure Databricks

●● Perform transformations with Azure Databricks

Module 4: Building Globally Distributed Databases with Cosmos DB

At the end of this module, the students will be able to:

●● Create an Azure Cosmos DB database built to scale

●● Insert and query data in your Azure Cosmos DB database

●● Build a .NET Core app for Azure Cosmos DB in Visual Studio Code

●● Distribute your data globally with Azure Cosmos DB

Module 5: Working with Relational Data Stores in the Cloud

At the end of this module, the students will be able to:

Use Azure SQL Database
Describe Azure Data Warehouse
Creating and Querying an Azure SQL Data Warehouse

Module 6: Performing Real-Time Analytics with Stream Analytics

At the end of this module, the students will be able to:

●● Explain data streams and event processing

●● Data Ingestion with Event Hubs

●● Processing Data with Stream Analytics Jobs

Module 7: Orchestrating Data Movement with Azure Data Factory

At the end of this module, the students will be able to:

- Explain how Azure Data Factory works
- Azure Data Factory Components
- Azure Data Factory and Databricks

Module 8: Securing Azure Data Platforms

- At the end of this module, the students will be able to:
- An introduction to security
- Key security components
- Securing Storage Accounts and Data Lake Storage

Module 9: Monitoring and Troubleshooting Data Storage and Processing

At the end of this module, the students will be able to:

●● Explain the monitoring capabilities that are available

●● Troubleshoot common data storage issues

●● Troubleshoot common data processing issues

●● Manage disaster recovery