

# Data Engineering on Microsoft Azure

**Course Duration: 32 Hrs.**

**Course Code: DP-203T00**

## Course Overview

Data Engineering on Microsoft Azure course provides a wide-ranging and detailed approach to the creation and adaptation of data engineering solutions using Microsoft Azure services, Azure Stream analytics Service and Studio.

## Course Content

### Module-01 Get started with data engineering on Azure

- Introduction to data engineering on Azure
- Introduction to Azure Data Lake Storage Gen2
- Introduction to Azure Synapse Analytics

### Module-02 Build data analytics solutions using Azure Synapse serverless SQL pools

- Use Azure Synapse serverless SQL pool to query files in a data lake
- Use Azure Synapse serverless SQL pools to transform data in a data lake
- Create a lake database in Azure Synapse Analytics
- Secure data and manage users in Azure Synapse serverless SQL pools

### Module-03 Perform data engineering with Azure Synapse Apache Spark Pools

- Analyze data with Apache Spark in Azure Synapse Analytics
- Transform data with Spark in Azure Synapse Analytics
- Use Delta Lake in Azure Synapse Analytics

### Module-04 Transfer and transform data with Azure Synapse Analytics pipelines

- Build a data pipeline in Azure Synapse Analytics
- Use Spark Notebooks in an Azure Synapse Pipeline

### Module-05 Implement a Data Analytics Solution with Azure Synapse Analytics

- Introduction to Azure Synapse Analytics
- Use Azure Synapse serverless SQL pool to query files in a data lake
- Analyze data with Apache Spark in Azure Synapse Analytics
- Use Delta Lake in Azure Synapse Analytics
- Analyze data in a relational data warehouse
- Build a data pipeline in Azure Synapse Analytics

### Module-06 Work with Data Warehouses using Azure Synapse Analytics

- Analyze data in a relational data warehouse
- Load data into a relational data warehouse
- Manage and monitor data warehouse activities in Azure Synapse Analytics
- Secure a data warehouse in Azure Synapse Analytics

## Module-07 Work with Hybrid Transactional and Analytical Processing Solutions

- Plan hybrid transactional and analytical processing using Azure Synapse Analytics
- Implement Azure Synapse Link with Azure Cosmos DB
- Implement Azure Synapse Link for SQL

## Module-08 Implement a Data Streaming Solution with Azure Stream Analytics

- Get started with Azure Stream Analytics
- Ingest streaming data using Azure Stream Analytics and Azure Synapse Analytics
- Visualize real-time data with Azure Stream Analytics and Power BI

## Module-09 Implement a data lakehouse analytics solution with Azure Databricks

- Explore Azure Databricks
- Perform data analysis with Azure Databricks
- Use Apache Spark in Azure Databricks
- Manage data with Delta Lake
- Build data pipelines with Delta Live Tables
- Deploy workloads with Azure Databricks Workflows
- Use SQL Warehouses in Azure Databricks
- Run Azure Databricks Notebooks with Azure Data Factory

## Module 10 Govern data across an enterprise

- Introduction to Microsoft Purview
- Discover trusted data using Microsoft Purview
- Catalog data artifacts by using Microsoft Purview
- Manage Power BI assets by using Microsoft Purview
- Integrate Microsoft Purview and Azure Synapse Analytics

### Pre-Requisites

Familiarity with Azure AI Services and the Azure portal.

