



## DP – 203

# Data Engineering on Microsoft Azure

### Overview

As a candidate for this certification, you should have subject matter expertise in integrating, transforming, and consolidating data from various structured, unstructured, and streaming data systems into a suitable schema for building analytics solutions.

As an Azure data engineer, you help stakeholders understand the data through exploration, and build and maintain secure and compliant data processing pipelines by using different tools and techniques. You use various Azure data services and frameworks to store and produce cleansed and enhanced datasets for analysis. This data store can be designed with different architecture patterns based on business requirements, including:

- Modern data warehouse (MDW)
- Big data
- Lakehouse architecture

As an Azure data engineer, you also help to ensure that the operationalization of data pipelines and data stores are high-performing, efficient, organized, and reliable, given a set of business requirements and constraints. You help to identify and troubleshoot operational and data quality issues. You also design, implement, monitor, and optimize data platforms to meet the data pipelines.

As a candidate for this certification, you must have solid knowledge of data processing languages, including:

- SQL
- Python
- Scala

You need to understand parallel processing and data architecture patterns. You should be proficient in using the following to create data processing solutions:

- Azure Data Factory
- Azure Synapse Analytics
- Azure Stream Analytics
- Azure Event Hubs
- Azure Data Lake Storage
- Azure Databricks

## Prerequisites

There aren't specific prerequisites listed for the DP-203 exam, but Microsoft generally recommends that candidates have practical experience with Azure data services and a good understanding of data engineering concepts. The following two courses can be considered as recommendations before going for DP-203

- [AZ-900T00: Microsoft Azure Fundamentals](#)

**Or**

- [DP-900T00: Microsoft Azure Data Fundamentals](#)

## Audience Profile

The primary audience for this course is data professionals, data architects, and business intelligence professionals who want to learn about data engineering and building analytical solutions using data platform technologies that exist on Microsoft Azure. The secondary audience for this course includes data analysts and data scientists who work with analytical solutions built on Microsoft Azure.

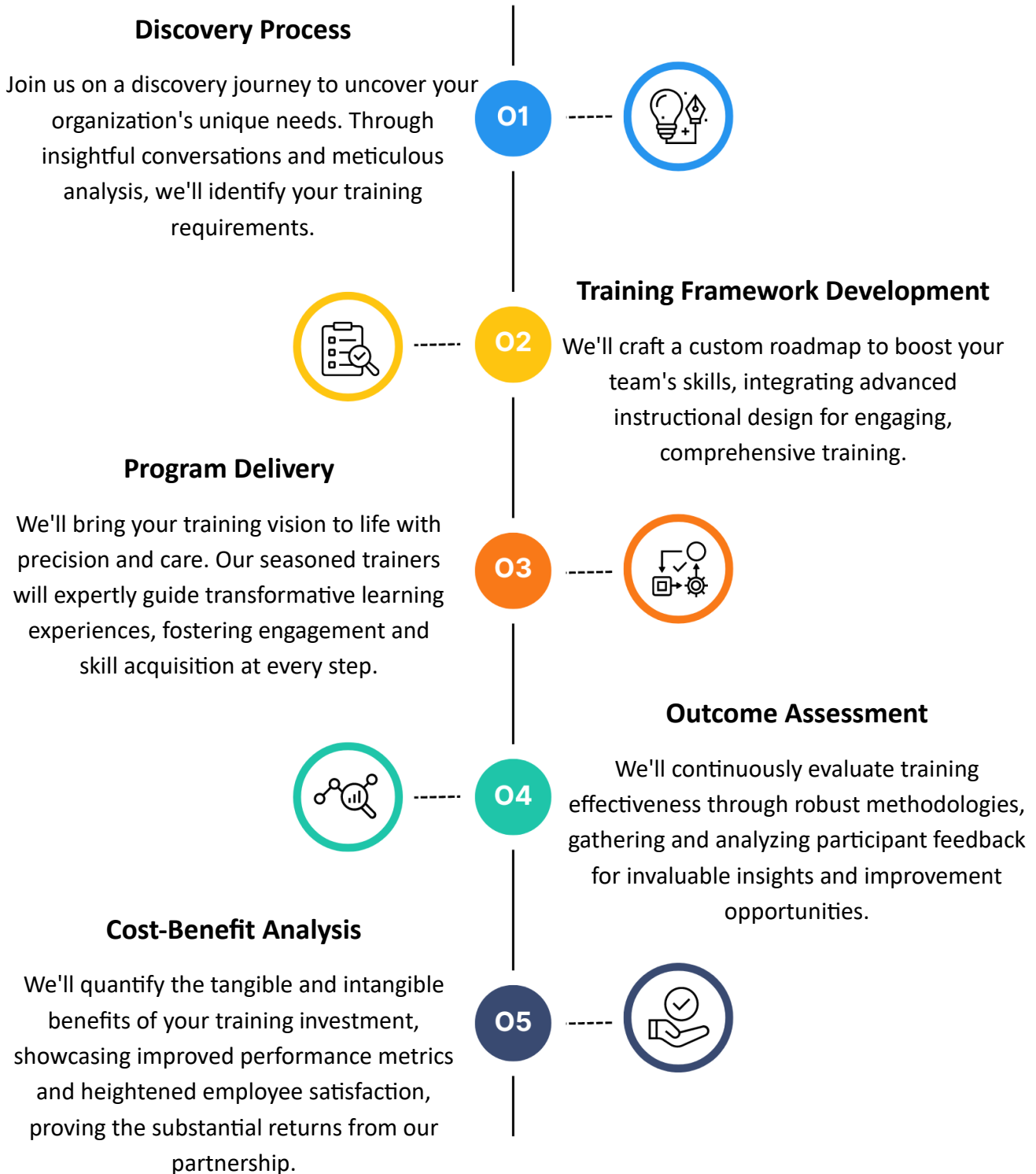
## Course Level

- Intermediate

## Course Duration

- 4 Day – 32 Hours

# Creating Tailor - Made Training Programs to Meet Your **Specific Goals**



# Course Outline

In this course, the student will learn how to implement and manage data engineering workloads on Microsoft Azure, using Azure services such as Azure Synapse Analytics, Azure Data Lake Storage Gen2, Azure Stream Analytics, Azure Databricks, and others. The course focuses on common data engineering tasks such as orchestrating data transfer and transformation pipelines, working with data files in a data lake, creating and loading relational data warehouses, capturing and aggregating streams of real-time data, and tracking data assets and lineage.

## **Module 1: Get started with data engineering on Azure**

- Lesson: Introduction to data engineering on Azure
- Lesson: Introduction to Azure Data Lake Storage Gen2
- Lesson: Introduction to Azure Synapse Analytics
- **Exercise:** Explore Azure Synapse Analytics

## **Module 2: Build data analytics solutions using Azure Synapse Analytics serverless SQL pools**

- Lesson: Use a serverless SQL pool to query files in a data lake
- Lesson: Use a serverless SQL pool to transform data
- Lesson: Create a lake database
- **Exercise:** Transform files using a serverless SQL pool

## **Module 3: Perform data engineering with Azure Synapse Apache Spark Pools**

- Lesson: Analyze data with Apache Spark in Azure Synapse Analytics
- Lesson: Transform data with Apache Spark in Azure Synapse Analytics
- Lesson: Use Delta Lake in Azure Synapse Analytics
- **Exercise:** Transform data using Spark in Synapse Analytics
- **Exercise:** Use Delta Lake in Azure Synapse Analytics

## **Module 4: Work with data warehouses using Azure Synapse Analytics**

- Lesson: Analyze data in a relational data warehouse
- Lesson: Load data into a relational data warehouse
- **Exercise:** Load data into a data warehouse

## **Module 5: Transfer and transform data with Azure Synapse Analytics Pipelines**

- Lesson: Build a data pipeline in Azure Synapse Analytics
- Lesson: Use Spark Notebooks in an Azure Synapse Pipeline
- **Exercise:** Build a data pipeline in Azure Synapse Analytics
- **Exercise:** Use an Apache Spark notebook in a pipeline

## **Module 6: Work with hybrid transactional and analytical processing (HTAP)**

### **Solutions using Azure Synapse Analytics**

- Lesson: Plan hybrid transactional and analytical processing
- Lesson: Implement Azure Synapse Link with Azure Cosmos DB
- Lesson: Implement Azure Synapse Link for SQL
- **Exercise:** Implement Azure Synapse Link for Cosmos DB

## **Module 7: Implement a data streaming solution with Azure Stream Analytics**

- Lesson: Get started with Azure Stream Analytics
- Lesson: Ingest streaming data using Azure Stream Analytics and Azure Synapse Analytics
- Lesson: Visualize real-time data with Azure Stream Analytics and Power BI
- **Exercise:** Ingest streaming data into Azure Synapse Analytics

## **Module 8: Govern data across an enterprise**

- Lesson: Introduction to Microsoft Purview
- Lesson: Integrate Microsoft Purview and Azure Synapse Analytics
- **Exercise:** Integrate Azure Synapse Analytics and Microsoft Purview

## **Module 9: Data engineering with Azure Databricks**

- Lesson: Explore Azure Databricks
- Lesson: Use Apache Spark in Azure Databricks
- Lesson: Run Azure Databricks notebooks in Azure Data Factory
- **Exercise:** Use Spark in Azure Databricks

# Indus Tech Services

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## Who We Are....

Indus Tech Services is an IT company that specializes in providing comprehensive training, consulting & implementation services for software solutions designed to address the diverse business challenges faced by organizations today. With a passion for technology and a deep understanding of business processes, Indus Tech is committed to empowering businesses to optimize their operations, boost productivity, and drive sustainable growth.

## Indus Tech Services and Microsoft Partnership

As a proud **Microsoft Partner**, **Indus Tech Services** is uniquely equipped to deliver top-tier training and certification programs designed to meet the evolving needs of today's workforce. Our partnership with Microsoft allows us to offer direct access to the latest tools, resources, and industry insights, ensuring that our courses are aligned with the most current technology trends. This collaboration enables us to provide unparalleled support to our students, helping them gain the skills and knowledge required to excel in their careers. By choosing Indus Tech Services, you're not just learning; you're gaining a competitive edge with Microsoft-backed expertise and certification.

## Why Choose Us...

From time to time, life serves up a profound nudge, urging us to step beyond our routines and make a difference in the world. Indus Tech Services emerged from one such compelling wake-up call. We are not just a company; we are a dedicated force with a belief in providing solutions to organizations, regardless of their size, and we infuse a human touch into everything we do.

## Our Expertise

With over 25 years of collective experience navigating the intricacies of daily business transactions, irrespective of geographical, cultural, time zone, or language barriers, our team has honed their expertise to meet any challenge head-on. This wealth of experience has armed our resources with an unparalleled understanding and skill set to tackle a broad spectrum of obstacles.

## Training

With two decades of unwavering commitment and a global footprint, our company is a true pioneer in the fields of linguistic, transactional, technical, and behavioural training for some of the world's largest corporate entities. Our unparalleled expertise has been refined through years of dedication and innovation, making us the go-to choice for businesses seeking transformative training solutions.

## Consulting

Our company has been at the forefront of providing world-class IT consulting services to organizations spanning the globe. With an extensive and proven track record, we have honed our expertise to meet the ever-evolving technological needs and challenges faced by businesses, regardless of their scale or industry.

## Implementation

Our experience covers a broad spectrum of IT implementation services, including system integration, software deployment, network architecture, cloud migration, and infrastructure setup. We understand that the successful execution of IT projects is pivotal to an organization's growth and efficiency. Therefore, we bring a depth of knowledge and a commitment to delivering results that set us apart.

To know more contact us at [info@industechservices.com](mailto:info@industechservices.com) or call us at +91 - 99961 61170.