Course Details

Course Code: DP-900T00

Duration: 1 day

Notes:

- This course syllabus should be used to determine whether the course is appropriate for the students, based on their current skills and technical training needs.
- Course content, prices, and availability are subject to change without notice.
- Terms and Conditions apply

Elements of this syllabus are subject to change.

About this course

In this course, students will gain foundational knowledge of core data concepts and related Microsoft Azure data services. Students will learn about core data concepts such as relational, non-relational, big data, and analytics, and build their foundational knowledge of cloud data services within Microsoft Azure. Students will explore fundamental relational data concepts and relational database services in Azure. They will explore Azure storage for non-relational data and the fundamentals of Azure Cosmos DB. Students will learn about large-scale data warehousing, real-time analytics, and data visualization.

Audience Profile

The audience for this course is individuals who want to learn the fundamentals of database concepts in a cloud environment, get basic skilling in cloud data services, and build their foundational knowledge of cloud data services within Microsoft Azure.

Prerequisites

Prerequisite certification is not required before taking this course. Successful Azure Data Fundamentals students start with some basic awareness of computing and Internet concepts, and an interest in extracting insights from data.

Specifically:

- Experience using a web browser, such as Microsoft Edge.
- Familiarity with basic data-related concepts, such as working with tables of data in a spreadsheet and visualizing data using charts.
- A willingness to learn through hands-on exploration.

Explore core data concepts

Data powers the digital transformation that is sweeping across organizations and society in general. But what is "data", and how is it represented and used?

Learning objectives

In this module you will learn how to:

- Identify common data formats
- Describe options for storing data in files
- Describe options for storing data in databases
- Describe characteristics of transactional data processing solutions
- Describe characteristics of analytical data processing solutions

Explore data roles and services

Data professionals perform distinct roles in building and managing software solutions, and work with multiple technologies and services to do so.

Learning objectives

In this module you will learn how to:

- Identify common data professional roles
- Identify common cloud services used by data professionals

Explore fundamental relational data concepts

Relational database systems are a common way to store and manage transactional and analytical data in organizations of any size around the world.

Learning objectives

In this module you'll learn how to:

- Identify characteristics of relational data
- Define normalization
- Identify types of SQL statement
- Identify common relational database objects

Explore relational database services in Azure

Microsoft Azure provides multiple services for relational databases. You can choose the relational database management system that's best for your needs, and host relational data in the cloud.

Learning objectives

In this module, you'll learn how to:

- Identify options for Azure SQL services
- Identify options for open-source databases in Azure
- Provision a database service on Azure

Explore Azure Storage for non-relational data

Azure Storage is a core service in Microsoft Azure that is commonly used to store non-relational data.

Learning objectives

In this module, you'll learn how to:

- Describe features and capabilities of Azure blob storage
- Describe features and capabilities of Azure Data Lake Gen2
- Describe features and capabilities of Azure file storage
- Describe features and capabilities of Azure table storage
- Provision and use an Azure Storage account

Explore fundamentals of Azure Cosmos DB

Azure Cosmos DB provides a highly scalable store for non-relational data.

Learning objectives

In this module, you'll learn how to:

- Describe key features and capabilities of Azure Cosmos DB
- Identify the APIs supported in Azure Cosmos DB
- Provision and use an Azure Cosmos DB instance

Explore fundamentals of large-scale analytics

Organizations use analytics platforms to build large scale data analytics solutions that generate insights and drive success. Microsoft provides multiple technologies that you can combine to build a large scale data analytics solution.

Learning objectives

In this module, you will learn how to:

- Identify common elements of a data analytics solution
- Describe key features for data ingestion pipelines

- Identify common types of analytical data store and related Azure services
- Describe platform-as-a-service (PaaS) data analytics solutions in Azure
- Provision Azure Synapse Analytics and use it to ingest, process, and query data
- Describe features of Microsoft Fabric - a software-as-a-service (SaaS) solution for data analytics
- Use Microsoft Fabric to ingest and analyze data

Explore fundamentals of real-time analytics

Learn about the basics of stream processing, and the services in Microsoft Azure that you can use to implement real-time analytics solutions.

Learning objectives

- Compare batch and stream processing
- Describe common elements of streaming data solutions
- Describe features and capabilities of Azure Stream Analytics
- Describe features and capabilities of Spark Structured Streaming on Azure
- Describe features and capabilities of realtime analytics in Microsoft Fabric

Explore fundamentals of data visualization

Learn the fundamental principles of analytical data modeling and data visualization, using Microsoft Power BI as a platform to explore these principles in action.

Learning objectives

After completing this module, you will be able to:

- Describe a high-level process for creating reporting solutions with Microsoft Power BI
- Describe core principles of analytical data modeling
- Identify common types of data visualization and their uses
- Create an interactive report with Power BI Desktop