

## Data Engineering / Machine Learning

### DP-500T00: Designing and Implementing Enterprise-Scale Analytics Solutions Using Microsoft Azure and Microsoft Power BI

\$2,595.00

- 4 Days

## Upcoming Dates

## Course Description

This course covers methods and practices for performing advanced data analytics at scale. Students will build on existing analytics experience and will learn to implement and manage a data analytics environment, query and transform data, implement and manage data models, and explore and visualize data. In this course, students will use Microsoft Purview, Azure Synapse Analytics, and Power BI to build analytics solutions.

## Course Outline

### Module 1: Introduction to data analytics on Azure

Explore Azure data services, concepts of data analytics, and what you need to implement modern analytics at scale. This learning path helps you prepare for the Azure Enterprise Data Analyst Certification.

Lessons:

- Explore Azure data services for modern analytics
- Understand concepts of data analytics
- Explore data analytics at scale

### Module 2: Govern data across an enterprise

Use Microsoft Purview to register and scan data, catalog data artifacts, find data for reporting, and manage Power BI artifacts to improve data governance in your organization. This learning path helps you prepare for the Azure Enterprise Data Analyst Certification.

Lessons:

- 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

### Module 3: Model, query, and explore data in Azure Synapse

Query and explore data in Azure Synapse Analytics. You'll learn how to query and visualize data in a data lake and a data warehouse. This

learning path helps you prepare for the Azure Enterprise Data Analyst Certification.

Lessons:

- Introduction to Azure Synapse Analytics
- Use Azure Synapse serverless SQL pool to query files in a data lake Continuation after lab setup)
- Use Azure Synapse serverless SQL pool to query files in a data lake (Continuation after lab)
- Analyze data with Apache Spark in Azure Synapse Analytics
- Analyze data with Apache Spark in Azure Synapse Analytics (Continuation after lab)
- Analyze data in a relational data warehouse
- Analyze data in a relational data warehouse (Continuation after lab)

#### **Module 4: Prepare data for tabular models in Power BI**

Designing reports for enterprise scale requires more than just connecting to data. Understanding Power BI model frameworks and strategies for scalability and optimization are key to a successful enterprise implementation. This learning path helps you prepare for the Azure Enterprise Data Analyst Certification.

Lessons:

- Choose a Power BI model framework
- Understand scalability in Power BI
- Create and manage scalable Power BI dataflows
- Create and manage scalable Power BI dataflows (Continuation after lab)

#### **Module 5: Design and build tabular models**

This learning path introduces the foundational components of designing scalable tabular models using Power BI. This learning path helps you prepare for the Azure Enterprise Data Analyst Certification.

Lessons:

- Create Power BI model relationships
- Create Power BI model relationships (Continuation after lab)
- Understand DAX concepts
- Create calculation groups
- Create calculation groups (Continuation after lab)
- Enforce Power BI model security
- Enforce Power BI model security (Continuation after lab)
- Optimize Power BI performance
- Optimize Power BI performance (Continuation after lab)
- Optimize Power BI performance (Continuation after lab)
- Composite Modeling

#### **Module 6: Implement advanced data visualization techniques using Power BI**

This learning path takes analysts through visualizing data in Power BI. You'll learn about visuals in Power BI reports, using Power BI to visualize real-time data, and visualizing data in paginated reports. This learning path helps you prepare for the Azure Enterprise Data Analyst Certification.

Lessons:

- Create and Manage Aggregations
- Understand advanced data visualization concepts
- Monitor data in real-time with Power BI

- Create paginated reports
- Create paginated reports (Continuation after lab)

## **Module 7: Implement and manage an analytics environment**

This learning path introduces Power BI administration at an enterprise-level, including governance, adoption, collaborating, sharing, and automation methods. This learning path helps you prepare for the Azure Enterprise Data Analyst Certification.

Lessons:

- Design a Power BI application lifecycle management strategy
- Create and manage a Power BI deployment pipeline
- Create and manage Power BI assets
- Create and manage Power BI assets (Continuation after lab)

## **Module 8: Manage the analytics development lifecycle**

This learning path introduces the foundational components of implementing lifecycle management techniques for Power BI assets. This learning path helps you prepare for the Azure Enterprise Data Analyst Certification.

Lessons:

- Provide governance in a Power BI environment
- Facilitate collaboration and sharing in Power BI
- Monitor and audit usage
- Provision Premium capacity in Power BI
- Establish a data access infrastructure in Power BI
- Broaden the reach of Power BI
- Automate Power BI administration

## **Audience**

Candidates for this course should have subject matter expertise in designing, creating, and deploying enterprise-scale data analytics solutions. Specifically, candidates should have advanced Power BI skills, including managing data repositories and data processing in the cloud and on-premises, along with using Power Query and Data Analysis Expressions (DAX). They should also be proficient in consuming data from Azure Synapse Analytics and should have experience querying relational databases, analyzing data by using Transact-SQL (T-SQL), and visualizing data.

## **Prerequisites**

Before attending this course, it is recommended that students have:

- A foundational knowledge of core data concepts and how they're implemented using Azure data services. For more information see [Azure Data Fundamentals](#).
- Experience designing and building scalable data models, cleaning and transforming data, and enabling advanced analytic capabilities that provide meaningful business value using Microsoft Power BI. For more information see [Power BI Data Analyst](#).

## **What You Will Learn**