

Course 20778A:

Analyzing Data with Power BI

Course Outline

Module 1: Introduction to Self-Service BI Solutions

Introduces business intelligence (BI) and how to self-serve with BI.

Lessons

- Introduction to business intelligence
- Introduction to data analysis
- Introduction to data visualization
- Overview of self-service BI
- Considerations for self-service BI
- Microsoft tools for self-service BI

After completing this module, students will be able to:

- Describe the trends in BI
- Describe the process of data analysis in Power BI.
- Use the key visualizations in Power BI.
- Describe the rationale for self-service BI.
- Describe considerations for self-service BI.
- Understand how you can use Microsoft products to implement a BI solution.

Module 2: Introducing Power BI

This module introduces Power BI desktop, and explores the features that enable the rapid creation and publication of sophisticated data visualizations.

Lessons

- Power BI

- The Power BI service

After completing this module, students will be able to:

- Develop reports using the Power BI Desktop app.
- Use report items to create dashboards on the Power BI portal.
- Understand the components of the Power BI service including licensing and tenant management.

Module 3: Power BI

At the end of this module students will be able to explain the rationale and advantages of using Power BI.

Lessons

- Using Excel as a data source for Power BI
- The Power BI data model
- Using databases as a data source for Power BI
- The Power BI service

After completing this module, students will be able to:

- Describe the data model and know how to optimize data within the model.
- Connect to Excel files and import data
- Use on-premises and cloud Microsoft SQL Server databases as a data source, along with the R script
- data connector
- Take advantage of the features of the Power BI service by using Q&A to ask questions in natural query language, and create content packs and groups.

Module 4: Shaping and Combining Data

With Power BI desktop you can shape and combine data with powerful, built-in tools. This module introduces the tools that are available for preparing your data, and transforming it into a form ready for reporting.

Lessons

- Power BI desktop queries
- Shaping data
- Combining data

After completing this module, students will be able to:

- Perform a range of query editing skills in Power BI
- Shape data, using formatting and transformations.
- Combine data together from tables in your dataset.

Module 5: Modelling data

This module describes how to shape and enhance data.

Lessons

- Relationships
- DAX queries
- Calculations and measures

After completing this module, students will be able to:

- Describe relationships between data tables.
- Understand the DAX syntax, and use DAX functions to enhance your dataset.
- Create calculated columns, calculated tables and measures.

Module 6: Interactive Data Visualizations

This module describes how to create and manage interactive data visualizations.

Lessons

- Creating Power BI reports
- Managing a Power BI solution

After completing this module, students will be able to:

- Use Power BI desktop to create interactive data visualizations.
- Manage a power BI solution.

Module 7: Direct Connectivity

This module describes various connectivity options using Power BI.

Lessons

- Cloud data
- Connecting to analysis services

After completing this module, students will be able to:

- Use Power BI direct connectivity to access data in Azure SQL data warehouse, in addition to big data sources such as Hadoop
- Use Power BI with SQL Server Analysis Services data, including Analysis services modes running in multidimensional mode.

Module 8: Developer API

This module describes the developer API within Power BI.

Lessons

- The developer API
- Custom visuals

After completing this module, students will be able to:

- Describe the developer API.
- Use the developer API to create custom visuals.

Module 9: Power BI mobile app

This module describes the Power BI mobile app.

Lessons

- The Power BI mobile app
- Using the Power BI mobile app
- Power BI embedded

After completing this module, students will be able to:

- Describe the Power BI mobile app.
- Download and use the Power BI mobile app.

- Describe Power BI embedded and when you would want to use it.