

Microsoft® Power BI®: Data Analysis Professional

General:

As technology progresses and becomes more interwoven with our businesses and lives, more data is collected about business and personal activities. This era of "big data" has exploded due to the rise of cloud computing, which provides an abundance of computational power and storage, allowing organizations of all sorts to capture and store data. Leveraging that data effectively can provide timely insights and competitive advantage.

The creation of data-backed visualizations is a key way data scientists, or any professional, can explore, analyze, and report insights and trends from data. Microsoft® Power BI® software is designed for this purpose. Power BI was built to connect to a wide range of data sources and allows users to quickly create visualizations of connected data to gain insights, show trends, and create reports. Power BI's data connection capabilities and visualization features go far beyond those that can be found in spreadsheets, allowing users to create compelling and interactive worksheets, dashboards, and stories that bring data to life and turn data into thoughtful action.

Objectives:

In this course, you will explore and visualize data with Power BI.

You will:

- Analyze data with self-service BI.
- Connect to data sources.
- Perform advanced data modeling and shaping.
- Visualize data with Power BI.
- Enhance data analysis.
- Model data with calculations.
- Create interactive visualizations.
- Perform advanced analysis.
- Publish and share reports and dashboards.
- Extend access to Power BI.

Audience:

This course is designed for professionals in a variety of job roles who are currently using desktop or web-based data-management tools such as Microsoft Excel or SQL Server reporting services to perform numerical or general data analysis. They are responsible for connecting to cloud-based data sources, then shaping and combining data for the purpose of analysis and are looking for alternative ways to analyze business data, visualize insights, and share those insights with peers across the enterprise. This includes capturing and reporting on data to peers, executives, and clients.

This course is also designed for professionals looking to take the Exam 70-778: Analyzing and Visualizing Data with Microsoft Power BI certification exam.

Prerequisites:

To ensure your success, you should have experience managing data with a spreadsheet program such as Microsoft Excel or Google Sheets. To meet this prerequisite, you can take any one or more of the following Logical Operations courses:

- *Microsoft® Office Excel® 2016: Part 1 (Desktop/Office 365™)*
- *Microsoft® Office Excel® 2016: Part 2*
- *Using Google G Suite™*

Optionally, having experience with other data analytics tools, such as Google Analytics™ or Customer Relationship Management (CRM), as well as an understanding of database design concepts and basic programming constructs such as looping and branching, will help you get even more out of this course. The following courses are helpful but not required:

- *Google Analytics™: Foundation (Second Edition)*
- *Database Design: A Modern Approach*
- *Microsoft® Office Excel® 2016: Data Analysis with Power Pivot*

Duration:

Five (3) days including classroom lecture and lab sessions.

Course Content

Lesson 1: Analyzing Data with Self-Service BI

Topic A: Data Analysis and Visualization for Business Intelligence

Topic B: Self-Service BI with Microsoft Power BI

Lesson 2: Connecting to Data

Topic A: Create Data Connections

Topic B: Model Data with Relationships

Topic C: Save Power BI Files

Lesson 3: Performing Advanced Data Modeling and Shaping

Topic A: Clean and Transform Data with the Query Editor

Topic B: Shape Data with the Query Editor

Topic C: Combine and Manage Data Rows

Lesson 4: Visualizing Data with Power BI

Topic A: Create Visualizations in Power BI

Topic B: Chart Data in Power BI

Lesson 5: Enhancing Data Analysis

Topic A: Enhance Analysis with Customized Visuals and Pages

Topic B: Enhance Analysis with Tooltips

Lesson 6: Modeling Data with Calculations

Topic A: Create Calculations with Data Analysis Expressions (DAX)

Topic B: Create Calculated Measures and Conditional Columns

Lesson 7: Creating Interactive Visualizations

Topic A: Create and Manage Data Hierarchies

Topic B: Filter and Slice Reports

Topic C: Create Dashboards in Power BI

Lesson 8: Performing Advanced Analysis

Topic A: Create Calculated Tables, Variables, and Parameters

Topic B: Enhance Visuals with Statistical Analysis

Topic C: Review Analysis Services Connection Options

Lesson 9: Publishing and Sharing Reports and Dashboards

Topic A: Publish Reports

Topic B: Share Reports and Dashboards

Lesson 10: Extending Access to Power BI

Topic A: Access Reports Using Power BI Mobile

Topic B: Extend Access with the Power BI API

Appendix A: Mapping Course Content to the Analyzing and Visualizing Data with Microsoft® Power BI® Certification Objectives