

# PL-300 Power BI Data Analyst

## Overview

This course covers the various methods and best practices that are in line with business and technical requirements for modeling, visualizing, and analyzing data with Power BI. The course will show how to access and process data from a range of data sources including both relational and non-relational sources. Finally, this course will also discuss how to manage and deploy reports and dashboards for sharing and content distribution.

## Audience Profile

The audience for this course are data professionals and business intelligence professionals who want to learn how to accurately perform data analysis using Power BI. This course is also targeted toward those individuals who develop reports that visualize data from the data platform technologies that exist on both in the cloud and on-premises.

**Duration: 24 hours (3 days)**

## Course Syllabus

### Learning Path 1: Get started with Microsoft data analytics

- Module 1: Discover data analysis
  - Different data roles
  - Data analyst tasks
- Module 2: Get started building with Power BI
  - Data analytics with Microsoft
  - Building blocks of Power BI
  - Compelling visuals and reports
  - Demo: Get started with Microsoft data analytics

### Learning Path 2: Prepare data in Power BI Desktop

- Module 1: Get data in Power BI
  - Retrieve data from various data sources
  - Select storage mode
  - Resolve import errors
  - Demo: Get data in Power BI Desktop
  - Lab: Prepare data in Power BI Desktop
- Module 2: Clean, transform, and load data in Power BI
  - Resolve inconsistencies and data quality issues
  - Profile data for better insights
  - Apply data shape transformations
  - Demo: Clean, transform, and load data in Power BI

- Lab: Load data in Power BI Desktop

### **Learning Path 3: Model data with Power BI Desktop**

- Module 1: Design a data model in Power BI
  - Data types
  - Star schema
  - Create relationships
  - Edit relationships
  - Create hierarchies
  - Demo: Design a data model in Power BI
  - Lab: Design a data model in Power BI Desktop
- Module 2: Introduction to DAX
  - What is DAX
  - Calculated measures, columns, and tables
  - Demo: Create measures using DAX in Power BI
  - Lab: Create DAX calculations in Power BI Desktop
- Module 4: Advanced DAX concepts
  - Filter context
  - Semi-additive measures
  - Time intelligence functions
  - Lab: Advanced DAX calculations in Power BI Desktop
- Module 5: Optimize DAX performance
  - Variables in DAX expressions
  - Performance analyzer
  - Demo: Optimize model performance in Power BI Desktop

### **Learning Path 4: Build Power BI visuals and reports**

- Module 1: Work with visuals
  - Add visuals to report
  - Choose effective visuals
  - Format and configure visuals
- Module 2: Report layout and interactions
  - Design appealing report layout
  - Cross-highlight and drill down
  - Demo: Create reports in Power BI Desktop
  - Lab: Design a report in Power BI Desktop
- Module 3: Navigation and filtering
  - Navigate and sort report
  - Filters and slicer visual

- Module 4: Report design elements
  - Add shapes, buttons, text, images
  - Bookmarks and drill through
  - Selection order (accessibility)
  - When to use paginated reports
  - Lab: Enhance a report in Power BI Desktop
  
- Module 5: Perform Advanced Analytics with Power BI Desktop
  - Explore insights with Advanced Analytics
    - Data comparison with Analyze feature.
    - Group and bin data.
    - Cluster data and find outliers with Scatter chart visual.
    - Key Performance Indicator visual.
    - What-if parameters for scenario planning.
  - Leverage AI visuals
    - AI insights during data preparation.
    - Use key influencers and decomposition tree visuals.
    - DEMO: Perform data analysis in Power BI Desktop
    - Lab: Perform data analysis in Power BI

### **Learning Path 5: Manage workspaces and datasets in Power BI**

- Module 1: Power BI workspaces
  - Create and manage workspaces
  - Interact with workspace items
  - Demo: Create and manage workspaces in Power BI service
- Module 2: Distribute and manage content
  - Create apps for distribution
  - Refresh, protect, and endorse datasets
  - Review Usage Metrics report
  - Power BI service licensing
  - Demo: Manage files and datasets in Power BI service
- Module 3: Dashboards in Power BI service
  - Create and use dashboards
  - Demo: Create a dashboard in Power BI service
  - Lab: Create a Power BI dashboard
- Module 4: Row-Level Security overview
  - Enforce row-level security
  - Demo: DEMO
  - Lab: Enforce row-level security in Power BI