PL-300: Microsoft Power BI Data Analyst

Overview

Course Duration: 24 Hours.

About This Course

PL-300 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.
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: 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.

At Course Completion

After completing this course:

Students will be able to work closely with business stakeholders to identify business requirements.
Students will be able to collaborate with enterprise data analysts and data engineers to identify and acquire data.

Students will use Power BI to:
- Transform the data.
- Create data models.
- Visualize data.
- Share assets.

Course Outline

Module 1: Get started with Microsoft data analytics

learn about the life and journey of a data analyst, the skills, tasks, and processes they go through in order to tell a story with data so trusted business decisions can be made.

You will learn how the suite of Power BI tools and services are used by a data analyst to tell a compelling story through reports and dashboards, and the need for true BI in the enterprise.

After completing this module, student will be able to:

- Get familiar with the overview of data analysis.
- Get familiar with roles in data.

Module 2: Prepare data for analysis with Power BI

Learn how to use Power Query to extract data from different data sources, choose a storage mode, and connectivity type. You'll also learn to profile, clean, and load data into Power BI before you model your data.

After completing this module, student will be able to:

- Get data from files.
- Get data from relational data sources.
- Create dynamic reports with parameters.
- Get data from a NoSQL database.
- Get data from online services.
- Select a storage mode.
- Get data from Azure Analysis Services.
- Fix performance issues
- Resolve data import errors.
- Prepare data in Power BI Desktop.
- Shape the initial data.
- Simplify the data structure.
- Evaluate and change column data types.
- Combine multiple tables into a single table.
- Profile data in Power BI.
- Use Advanced Editor to modify M code.
- Load data in Power BI Desktop

Module 3: Model data with Power BI

Learn what a Power BI semantic model is, which data loading approach to use, and how to build out your semantic model to get the insights you need.

After completing this module, student will be able to:

- Star schema design.
- Analytic queries.

- Configure report visuals.
- Describe Power BI model fundamentals.
- Determine when to develop an import model.
- Determine when to develop a Direct Query model.
- Determine when to develop a composite model.
- Choose a model framework.
- Work with tables.
- Create a date table.
- Work with dimensions.
- Define data granularity.
- Work with relationships and cardinality.
- Resolve modeling challenges.
- Model data in Power BI Desktop.
- Write DAX formulas.
- DAX data types.
- Work with DAX functions.
- Use DAX operators.
- Use DAX variables.
- Create simple measures.
- Create compound measures.
- Create quick measures.
- Compare calculated columns with measures.
- Check your knowledge.
- Create DAX Calculations in Power BI Desktop.
- Create calculated columns.
- Learn about row context.
- Choose a technique to add a column.
- Use DAX time intelligence functions.
- Additional time intelligence calculations.
- Create Advanced DAX Calculations in Power BI Desktop.
- Review performance of measures, relationships, and visuals.
- Use variables to improve performance and troubleshooting.
- Reduce cardinality.
- Optimize Direct Query models with table level storage.
- Create and manage aggregations.
- Restrict access to Power BI model data.
- Restrict access to Power BI model objects.
- Apply good modeling practices.
- Enforce model security.

Module 4: Build Power BI visuals and reports.

Turn data into interactive, actionable insights with Power BI Desktop visuals and reports.

After completing this module, student will be able to:

- Identify the audience.
- Determine report types.
- Define user interface requirements.
- Define user experience requirements.
- Explore report designs.
- Design the analytical report layout.
- Design visually appealing reports.
- Report objects.
- Select report visuals.
- Select report visuals to suit the report layout.
- Format and configure visualizations.
- Work with key performance indicators.
- Design a report in Power BI desktop.
- Introduction to designing reports for filtering.
- Apply filters to the report structure.
- Apply filters with slicers.
- Design reports with advanced filtering techniques.
- Consumption-time filtering.
- Select report filter techniques.
- Configure report filters based on feedback.
- Design reports to show details.
- Design reports to highlight values.
- Design reports that behave like apps.
- Work with bookmarks.
- Design reports for navigation.
- Work with visual headers.
- Design reports with built-in assistance.
- Tune report performance.
- Optimize reports for mobile use.
- Enhance Power BI reports.
- Introduction to analytics.
- Explore statistical summary.
- Identify outliers with Power BI visuals.
- Group and bin data for analysis.
- Apply clustering techniques.

- Conduct time series analysis.
- Use the Analyze feature.
- Create what-if parameters.
- Use specialized visuals.
- Perform Advanced Analytics with AI Visuals.
- Introduction to paginated reports.
- Get data.
- Create a paginated report.
- Work with charts on the report.
- Publish the report.

Module 5: Manage workspaces and datasets in Power BI

learn how to publish Power BI reports to the Power BI service. You'll also learn how to create workspaces, manage related items, and data refreshments for up-to-date reports. Additionally, implement row-level security to restrict user access to relevant data without the need for multiple reports.

After completing this module, student will be able to:

- Distribute a report or dashboard.
- Monitor usage and performance.
- Recommend a development life cycle strategy.
- Troubleshoot data by viewing its lineage.
- Configure data protection.
- Use a Power BI gateway to connect to on-premises data sources.
- Configure a semantic model scheduled refresh.
- Configure incremental refresh settings.
- Manage and promote semantic models.
- Troubleshoot service connectivity.
- Configure data alerts.
- Explore data by asking questions.
- Review Quick insights.
- Add a dashboard theme.
- Pin a live report page to a dashboard.
- Configure a real-time dashboard.
- Configure data classification.
- Set mobile view.
- Create a Power BI dashboard.
- Configure row-level security with the static method.
- Configure row-level security with the dynamic method.
- Enforce row-level security in Power BI.