PL-300: Power BI Data Analyst Associate

Content

Module 1: Get Started with Microsoft Data Analytics

- **Lessons**
    - Data Analytics and Microsoft
    - Getting Started with Power BI
- **Lab**: Getting Started in Power BI Desktop
    - Getting Started
- **After completing this module, students will be able to:**
    - Explore the different roles in data
    - Identify the tasks performed by a data analyst
    - Describe the Power BI landscape of products and services
    - Use the Power BI service

Module 2: Prepare Data in Power BI

- **Lessons**
    - Get data from various data sources
- **Lab**: Preparing Data in Power BI Desktop
    - Prepare Data
- **After completing this module, students will be able to:**
    - Identify and retrieve data from different data sources
    - Understand connection methods and their performance implications
    - Use Microsoft Dataverse
    - Connect to a data flow

Module 3: Clean, Transform, and Load Data in Power BI

- **Lessons**
    - Data shaping
    - Enhance the data structure
    - Data Profiling
- **Lab**: Transforming and Loading Data in Power BI Desktop
    - Loading Data
- **After completing this module, students will be able to:**
    - Apply data shape transformations
    - Enhance the structure of the data
    - Profile and examine the data

Module 4: Design a Data Model in Power BI

- **Lessons**
    - Introduction to data modeling

- o Working with tables
- o Dimensions and Hierarchies
- **Lab**: Data Modeling in Power BI Desktop
  - o Create Model Relationships
  - o Configure Tables
  - o Review the model interface
  - o Create Quick Measures
- **Lab**: Advanced Data Modeling in Power BI Desktop
  - o Configure many-to-many relationships
  - o Enforce row-level security
- **After completing this module, students will be able to:**
  - o Understand the basics of data modeling
  - o Define relationships and their cardinality
  - o Implement Dimensions and Hierarchies
  - o Create histograms and rankings

Module 5: Create Model Calculations using DAX in Power BI

- **Lessons**
  - o Introduction to DAX
  - o DAX context
  - o Advanced DAX
- **Lab**: Advanced DAX in Power BI Desktop
  - o Use the CALCULATE() function to manipulate filter context
  - o Use Time Intelligence functions
- **Lab**: Introduction to DAX in Power BI Desktop
  - o Create calculated tables
  - o Create calculated columns
  - o Create measures
- **After completing this module, students will be able to:**
  - o Understand DAX
  - o Use DAX for simple formulas and expressions
  - o Create calculated tables and measures
  - o Build simple measures
  - o Work with Time Intelligence and Key Performance Indicators

Module 6: Optimize Model Performance in Power BI

- **Lessons**
  - o Optimize the model for performance
  - o Optimize DirectQuery Models
  - o Create and manage Aggregations
- **After completing this module, students will be able to:**
  - o Understand the importance of variables
  - o Enhance the data model
  - o Optimize the storage model
  - o Implement aggregations

Module 7: Create Reports in Power BI

- **Lessons**
  - o Design a report
  - o Enhance the report
- **Lab**: Designing a report in Power BI Desktop
  - o Create a live connection in Power BI Desktop
  - o Design a report
  - o Configure visual fields and format properties
- **Lab**: Enhancing reports with interaction and formatting in Power BI Desktop
  - o Create and configure Sync Slicers
  - o Create a drillthrough page
  - o Apply conditional formatting
  - o Create and use Bookmarks
- **After completing this module, students will be able to:**
  - o Design a report page layout
  - o Select and add effective visualizations
  - o Add basic report functionality
  - o Add report navigation and interactions
  - o Improve report performance
  - o Design for accessibility

Module 8: Create Dashboards in Power BI

- **Lessons**
  - o Create a Dashboard
  - o Real-time Dashboards
  - o Enhance a Dashboard
- **Lab**: Creating a Dashboard in Power BI Service
  - o Create a Dashboard
  - o Pin visuals to a Dashboard
  - o Configure a Dashboard tile alert
  - o Use Q&A to create a dashboard tile
- **After completing this module, students will be able to:**
  - o Create a Dashboard
  - o Understand real-time Dashboards
  - o Enhance Dashboard usability

Module 9: Enhance Reports for Usability and Storytelling in Power BI

- **Lessons**
  - o Paginated report overview
  - o Create Paginated reports
- **Lab**: Creating a Paginated report in Power BI Desktop
  - o Use Power BI Report Builder
  - o Design a multi-page report layout
  - o Define a data source
  - o Define a dataset
  - o Create a report parameter
  - o Export a report to PDF
- **After completing this module, students will be able to:**
  - o Explain paginated reports

- o Create a paginated report
- o Create and configure a data source and dataset
- o Work with charts and tables
- o Publish a report

Module 10: Perform Advanced Analytics in Power BI

- **Lessons**
  - o Advanced Analytics
  - o Data Insights through AI visuals
- **Lab**: Data Analysis in Power BI Desktop
  - o Create animated scatter charts
  - o Use the visual to forecast values
  - o Work with Decomposition Tree visual
  - o Work with the Key Influencers visual
- **After completing this module, students will be able to:**
  - o Explore statistical summary
  - o Use the Analyze feature
  - o Identify outliers in data
  - o Conduct time-series analysis
  - o Use AI visuals
  - o Use the Advanced Analytics custom visual

Module 11: Manage Datasets in Power BI

- **Lessons**
  - o Parameters
  - o Datasets
  - o Security in Power BI
- **After completing this module, students will be able to:**
  - o Create and work with parameters
  - o Manage datasets
  - o Configure dataset refresh
  - o Troubleshoot gateway connectivity
  - o Understand aspects of Power BI security
  - o Configure row-level security roles and group memberships

Module 12: Create and Manage Workspaces in Power BI

- **Lessons**
  - o Creating Workspaces
  - o Sharing and Managing Assets
- **Lab**: Publishing and Sharing Power BI Content
  - o Map security principals to dataset roles
  - o Share a dashboard
  - o Publish an App