1. Course Outline

Part 1: What is BI

1. Business Intelligence Overview
2. Evolution of Business Intelligence
3. Common Challenges
4. Benefits of Power BI

Part 2: Getting Started with Power BI

1. Overview & Pricing/Licensing
2. Components of Power BI
    1. Power BI Desktop
    2. Power BI Mobile
    3. Power BI Embedded
    4. Power BI Gateway
3. Building Blocks of Power BI
    1. Datasets
    2. Visualization
    3. Reports
    4. Tiles
    5. Dashboards
4. Power BI Workflows
5. Resources for Inspiration

Demo: Quick Tour of Power BI Service

Lab Exercise: Quick Tour of Power BI Service

Part 3: Getting Data

1. Navigating Power BI Desktop
2. Connect to Data Sources in Power BI Desktop
    1. File Data Sources
    2. Database Data Sources
    3. Azure Data Sources
    4. Online Service Data Sources
    5. Miscellaneous Data Sources
3. Clean and Transform your Data

4. Advanced Data Sources
    1. Advanced Editor
    2. Shaping Data
    3. Applied Steps
5. Transformations
6. Cleaning Irregularly Formatted Data
7. Data Types
8. Combining Data
9. AI Analytics
    1. Text Analytics
    2. Vision
    3. Azure Machine Learning
    4. Invoking the Shared Models
    5. Considerations and Limitations

Demo: Quick Tour of Power Query Editor

Lab Exercise: Import Data and Create Queries with Power BI Desktop

Lab Exercise: Transform Data

Lab Exercise: Combining Data

Lab Exercise: Create a Report using Power BI Desktop

Lab Exercise: Publish a PBIX File to the Power BI Service

Part 4: Power BI and Excel

1. Excel Integration
    1. Import an Excel Table into Power BI
    2. Use Excel as a Dataset
    3. Import Excel Files with Data Models
    4. Connect, Manage and View Excel in Power BI
2. Publishing and Sharing

Part 5: Modeling Data

1. Overview
2. How to Manage Your Data Relationships
3. Create Calculated Columns
4. Optimizing Data Models for Better Visuals
5. Create Measures and Work with Time-Based Functions
6. Create Calculated Tables
7. Explore Time-Based Data
8. Grouping
9. Binning
10. Hierarchies

Demo: Modeling Relationships Column by Example Conditional Columns, Groups, Hierarchies

Part 6: Visualizations

1. Overview
2. Create and Customize Simple Visualization
    1. Numerical Fields
    2. Text Fields
    3. Geographic Fields
3. Modify Colors Insert Static Objects, and Set Page Properties
4. Styling with Shapes, Text Boxes, and Images
5. Page Layout and Formatting
6. Z-Order of Report Elements
7. Customize Visuals with Summarizations
8. How to:
    1. Use Combination Charts
    2. Manage Slicers and Sync Slicer
    3. Use Map Visualizations
    4. Implement Tables and Matrixes
    5. Apply Conditional Formatting
    6. Interpret Scatter Charts
    7. Work with Water & Funnel Chart
    8. Use Gauges and Single Number Cards
9. Creating Complex Interactions Between Visuals
10. Advance Concepts and New Features
    1. Decomposition Tree
    2. Key Influencers
    3. Insights
    4. Visual Hierarchies and drill-down behavior
    5. Custom Visualizations
    6. Drillthrough
    7. Analytics Pane
    8. Forecasting
    9. Tooltips
    10. Chiclet Slicer
    11. Hierarchy Slicer
    12. Synoptic Panel
11. Other Powerful Custom Visualizes
    1. Pivot Slicer
    2. Smart Filter
    3. Hierarchy Filter
    4. Card Browser
    5. Visio Visual
    6. Infographic Designer
    7. D3JS Visualizer

Demo: Visualizations, Slicers, and Advanced Interactions

Part 7: Publishing and Sharing

1. Print and Export Power BI dashboards
2. Creating Content Packs
3. Publishing to Web
4. Embed in SharePoint
5. Export to PowerPoint
6. Power BI Mobile
7. Creating Workspaces in Power BI

Part 8: Exploring Data

1. Overview
2. Use Quick Insights
3. Create and Configure a Dashboard
4. Shared Dashboards with your Organization
5. Display Visuals and Tiles Full-Screen
6. Edit Tile Details
7. Get More Space on Your Dashboard
8. Ask Questions of your Data with Natural Language
   1. Custom Q&A suggestions
   2. Adding Q&A to a Report
   3. Adding a Q&A to a Report
   4. Q&A Tooling
   5. Review Questions
   6. Teach Q&A
   7. Manage Terms
   8. Data Sources for Q&A
   9. Bulk Synonyms
   10. Q&A Best Practices
9. Bookmarks
10. Themes

Demo: Quick sights

Demo: Q&A in Dashboards and Reports

Demo: Bookmarks

Part 9: Administration & Security

1. Securing Content in Power BI
   1. My workspace
   2. Sharing a Dashboard
   3. Sharing to Web
   4. Admin Access

2. Row-level Security
3. Permissions
4. Defining and Creating toles within Power BI Desktop
5. Row-Level Security
6. Managing Data Capacity
7. Subscriptions
8. Resources

Part 10: Introduction to DAX

1. DAX Calculation Types
    1. Calculated Columns
    2. Calculated Measures
2. DAX Functions
    1. Aggregation Functions
    2. Counting Functions
    3. Logical Functions
    4. Information Functions
    5. Text Functions
    6. Date Functions
3. Using Variables in DAX Expressions
4. Table Relationships in DAX
5. DAX Tables and Filtering
6. Quick Measures
7. What-if Parameters
8. Dynamic Labeling
9. Resources

Demo: Quick Measures

Demo: What-if

Demo: Dynamic Labeling

Hands-on Lab Exercises:

- Retail Sales Exercise
- Retail Analysis – Overview
- Retail Analysis – District Monthly Sales
- Retail Analysis – New Stores
- Customer Profitability Exercise
- Customer Profitability – Team Scorecard
- Customer Profitability – Industry Margin Analysis
- Customer Profitability – Executive Scorecard
- Opportunity Analysis: Exercise
- Opportunity Analysis – Opportunity Count
- Opportunity Analysis – Revenue Overview

- Opportunity Analysis – Upcoming Opportunities
- Opportunity Analysis – Region Stage Counts
- Opportunity Analysis Data Model

2.Audience/Prerequisites

Professionals who may benefit from this Microsoft Power BI training include:

- Analysts
- Database Administrators
- Project Managers
- Senior Business Intelligence Architects and Consultants
- Senior Business Analysts
- Digital Marketers
- IT Specialists
- IT Managers/IT Directors
- Anyone responsible for implementing BI

3.In this class you will learn how to

Utilize the entire Microsoft BI stack

- Connect on-premise data sources to the cloud
- Build an enterprise Data Catalog to share queries
- Implement scorecards, dashboards, and KPIs
- Analyze data with PowerPivot
- Integrate data from many different external data sources
- Implement effective, high-performing BI solutions
- Provide intuitive ad-hoc reporting for business users by implementing Power View.