



# Power BI

Syllabus

## Week 1: Introduction & Interface

- What is Power BI? Components, Architecture, Use Cases
- Power BI Desktop Installation, Interface Tour
- Connect to Excel/CSV/ Database Sources
- Basic Data Transformation (Remove Rows, Rename Columns, Filters)
- Load vs Transform, Power Query Editor Overview

## Week 2: Data Transformation

- M Language Basics, Applied Steps, Column Splitting
- Data Types, Replace Values, Fill, Pivot & Unpivot
- Group By, Merge Queries, Append Queries
- Parameters and Functions in Power Query
- Practical Exercises (Data Cleaning Challenge)

## Week 3: Data Modeling Basics

- Star vs Snowflake Schema, Relationships
- Create/Manage Relationships, Cardinality, Cross Filter
- Data Normalization/Denormalization
- Hierarchies, Date Table, Sorting by Column
- Project: Build a Data Model (Sales Example)

## Week 4: DAX Basics

- DAX Syntax, Measures vs Calculated Columns
- Basic DAX Functions: SUM, COUNT, DISTINCTCOUNT
- IF, SWITCH, AND, OR Logic
- CALCULATE, FILTER, ALL
- Time Intelligence: YTD, MTD, Previous Month

## Week 5: Visual Design Basics

- Bar, Column, Line, Pie, Combo Charts
- Cards, KPIs, Multi-row Cards, Tables, Matrix
- Slicers, Filters, Drill Down/Through
- Bookmarks, Tooltips, Selection Pane
- Project: Build Interactive Dashboard (Sales Report)

## Week 6: Advanced Visualizations

- Maps, Filled Maps, Tree Maps
- Custom Visuals from Marketplace
- Sync Slicers, Responsive Visuals
- Mobile Layout Design
- Dashboard UX/UI Best Practices

## Week 7: Advanced DAX

- Context: Row, Filter, Evaluation Context
- Variables in DAX, Nested Measures
- RANKX, TOPN, LOOKUPVALUE, RELATED
- Virtual Tables with SUMMARIZE, ADDCOLUMNS
- Case Study: Customer Segmentation Logic

## Week 8: Time Series & Performance

- Custom Date Tables, OFFSETS in Time DAX
- Moving Averages, Forecasting
- Performance Analyzer, Optimize DAX
- DAX Studio Basics
- Complex DAX Exercises

## Week 9: Power BI Service

- Power BI Service Overview, Workspace Setup
- Publish to Service, Dataset vs Report
- Dashboards vs Reports, Tiles, Alerts
- Schedule Refresh, Gateways
- Row-Level Security (RLS)

## Week 10: Sharing & Collaboration

- App Workspaces, Apps, Permissions
- Share Report with Users, Export Options
- Dataflow Basics
- Metrics, Goals (formerly Scorecards)
- Report Usage Metrics and Audit Logs

## Week 11: Real-world Scenarios

- Project 1: Sales Dashboard End-to-End
- Project 2: HR Analytics Dashboard
- Project 3: Financial Dashboard
- Using Excel as Data Source with Refresh
- Project Review and Optimization

## Week 12: Integration & Wrap-up

- Integrate with Power Automate
  - Use Power Apps in Power BI
  - Custom Visuals with R and Python
  - Prepare for DA-100/PL-300 Certification
  - Final Quiz, Wrap-Up, Resume Portfolio Guidance
- 



✉ alok@webmyne.com

☎ +91 94276 02525

📍 702, Ivory Terrace , Opp. Circuit House  
R.C. Dutt Road, Vadodara-07  
Gujarat - India.

