

Power BI Course Syllabus

Section 1: Power BI Fundamentals

- Overview of Power BI
- Power BI Components
- Understanding the Power BI Workflow
- Installing Power BI Desktop
- What is Power BI Interface

Section 2: Data Loading

- Connecting to Data Sources
- Importing Data from Excel, CSV, PDF, SQL Server, Azure, JSON, Folders & Web
- Understanding Data Connectivity Modes - Import
- Understanding Data Connectivity Modes - Direct Query

Section 3: Data Transformation

- Data Transformation
- Power Query Editor
- Creating Custom Columns
- Manage column & Split column
- Reduce rows
- Applied Steps and Removing Errors
- Transforming Unstructured Data
- Transforming Menu
- How to power query pivot

- Unpivot column
- Convert text to number
- Transform - Text, Numbers, Date and Time
- Power query using parameters and Functions
- Storage modes in Power bi
- Configuration setting - Data load
- Auto Page refresh in Power BI

Section 4: Data Modeling

- Creating a Data Model
- Get multiple datasets and link them together
- Understanding Data Relationships
- Understanding Relationship Types One-to-One
- Understanding Relationship Types One-to-Many
- Creating Relationships in Power BI
- Best Practices for Managing Relationships

Section 5: DAX - Data Analysis Expressions

- Introduction to DAX
- Syntax and Functions in DAX
- Calculated Columns and Measures
- Basic Calculations using Data Analysis Expressions - DAX
- Measures vs. Calculated Columns
- Aggregation Functions: SUM, COUNT, AVERAGE
- Logical Functions - IF, SWITCH

- Time Intelligence: Year-over-Year, Running Totals, Date Calculations
- Advanced DAX Functions
- CALCULATE, FILTER, ALL Functions
- Context Transition and Row Context in DAX

Section 6: Visualizations and Insights

- Overview of Data Visualization
- Types of Visuals: Bar, Line, Pie, Column, and Scatter Plots
- How Power BI handles Data Visuals
- Formatting Visuals - On-object Interaction, font and font size, colors, Stylistic options
- Scatter charts and Bubble Charts
- Customizing Visuals
- Advanced Filtering
- Hierarchies, Drill-Downs, and Conditional Formatting
- Matrices and bar charts
- Group and bin data
- Understanding the Analyze Feature in Power BI
- Tree maps and Funnel Charts
- Maps and Geo-Data Visualizations
- Using Maps to Visualize Geographic Data
- Understanding Heat Maps and Filled Maps
- Key Performance Indicator Dashboard
- Drill through and Drill-down Visualizations
- Time based Visualization

Section 7: Interactive Dashboards

- Designing Dashboards
- Creating Interactive Dashboards
- Enhancing User Experience
- To design for Mobile Devices
- Incorporating Visual Interactions - Sync Slicers, Selection Controls

Section 8: Power BI Service - Publishing and Sharing Reports

- To publish Power BI Service
- Steps to Publish Reports
- Understanding Workspaces and Apps
- Overview of Sharing and Collaborating
- Sharing Reports and Dashboards
- Collaboration Features in Power BI Service
- Exporting Reports
- Embedding Reports
- Exporting Reports to PDF
- Exporting Reports to Excel
- Embedding Power BI Reports in Applications

Section 9: Row-Level Security - RLS

- Introduction to Data Security
- To Implement Row-Level Security in Reports
- What is Role-Based Access Control - RBAC

Section 10: Power BI with Excel Integration

- Power BI and Excel: A Combined Approach
- Importing Data from Excel to Power BI
- Using Power Pivot, Power Query in Excel with Power BI
- Creating Visuals in Power BI with Excel Data
- Excel Integration for Analysis and Reporting

Section 11: Real-World Applications

- Industry Use Case
- To Create Dashboards for Business Insights
- Power BI for Financial Reporting
- Capstone Project

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