Power BI for Data Analysis and Reporting with Advance Excel

Duration: 5 Days (4 Hours per Day)

Day 1: Advanced Excel for Data Analysis

Objective: Equip participants with advanced Excel skills necessary for data preparation and analysis.

Module 1: Advanced Excel Techniques

- Lookup Functions: XLOOKUP, INDEX-MATCH, INDIRECT
- Dynamic Array Functions: FILTER, SORT, UNIQUE, SEQUENCE
- Advanced Conditional Formatting Techniques
- Excel Tables & Structured References
- PivotTables and PivotCharts: Advanced Use
- Data Cleaning Using Power Query in Excel
- Named Ranges, Data Validation, Form Controls
- Introduction to Power Pivot & Data Modeling
- Labs

Day 2: Power BI Desktop Essentials

Objective: Understand the Power BI interface, data connectivity, and transformation process.

Module 2: Introduction to Power BI

- Power BI Overview and Architecture
- Power BI Desktop vs Power BI Service
- Connecting to Various Data Sources
- Exploring the Power BI Interface

Module 3: Data Transformation with Power Query

- Basic & Advanced Transformations
- Cleaning Data and Shaping Tables
- Merging and Appending Queries
- Managing Errors and Missing Data
- Labs

Day 3: Data Modeling and DAX Fundamentals

Objective: Learn how to build data models and use DAX for custom calculations.

Module 4: Data Modeling in Power BI

- Star vs Snowflake Schema
- Creating and Managing Relationships
- Cardinality and Cross-filter Direction
- Best Practices for Data Modeling
- Labs

Module 5: Introduction to DAX (Data Analysis Expressions)

- Calculated Columns vs Measures
- Core DAX Functions: SUM, COUNTROWS, CALCULATE
- Time Intelligence Functions: YTD, MTD, SAMEPERIODLASTYEAR
- Understanding Row Context vs Filter Context
- Labs

Day 4: Data Visualization and Report Design

Objective: Learn how to build visually appealing and interactive reports.

Module 6: Report Building and Visualization

- Using Visualizations: Cards, Tables, Charts, Maps, etc.
- Exploring Custom Visuals
- Interactive Elements: Drill-through, Tooltips, Bookmarks, Buttons
- Filter Types: Page, Visual, and Report-level Filters
- Report Formatting, Themes, and Design Best Practices
- Labs

Day 5: Power BI Advanced Features & Sharing (4 Hours)

Objective: Master Power BI service, collaboration, and advanced reporting features.

Module 7: Power BI Service & Report Sharing

- Publishing to Power BI Service
- Workspaces, Dashboards, and Apps
- Implementing Row-Level Security (RLS)
- Scheduling Data Refresh and Managing Gateways
- Exporting and Sharing Reports
- Labs

Module 8: Power BI Tips & Wrap-up

- Power BI Q&A with Natural Language Queries

- Introduction to Power BI Mobile
- Performance Optimization Tips
- Final Q&A and Course Recap