

Training TOC: Data Analytics & BI

Duration: 5 Days

Day 1: Data Preparation in Excel with Power Query – Basics

Introduction to Power Query

- - What is Power Query & its Role in BI
- - Power Query Editor Interface
- - Understanding Applied Steps Panel

Extracting Data from Multiple Sources

- - From Excel Tables and Workbooks
- - From Web, Databases, and Folders
- - Navigating Query Options and Preview

Data Shaping Basics

- - Group By Function
- - Use First Row as Headers
- - Aggregation and Calculation Columns
- - Basic Text Functions

Hands-On Practice:

- - Practice extracting & cleaning Excel + Web data
- - Build queries using multiple sources

Day 2: Advanced Power Query Transformations

Cleaning & Restructuring Data

- - Text-to-Columns
- - Remove Unwanted Columns/Rows
- - Handle Formatting Issues and Errors
- - Unpivoting Data for Analysis

Merging & Appending Queries

- - Merge queries from one or multiple workbooks
- - Append tables (stacking datasets)

Automating with Power Query

- - Create Custom Functions

- - Automate Refresh and Data Pipelines

Creating Excel Dashboards

- - Load query results into pivot tables/charts
- - Overview of Excel Dashboards using Power Query data

Hands-On Lab:

- - Build an Excel dashboard from cleaned and transformed data

Day 3: Getting Started with Power BI & Data Modeling

Introduction to Power BI

- - Power BI Desktop Overview
- - Understanding the Power BI Workflow (Get → Model → Visualize → Share)

Connecting Data to Power BI

- - Load data from Excel and other sources
- - Understanding Storage Modes (Import, DirectQuery)

Modeling Concepts

- - Data Types, Tables, and Relationships
- - Star Schema and Best Practices
- - Hierarchies and Relationship Management

Basic DAX

- - Calculated Columns vs. Measures
- - Create Basic Measures with DAX

Lab:

- - Build a Power BI model from Excel data
- - Write basic DAX and design relationships

Day 4: Visual Analytics in Power BI

Working with Visuals

- - Choose Effective Visual Types
- - Add & Format Charts, Cards, Slicers

Report Design Best Practices

- - Layouts, Color Themes, Branding
- - Drill-Downs and Cross-filtering
- - Buttons, Bookmarks & Navigation

Advanced Visual Analytics

- - Use AI Visuals: Key Influencers, Decomposition Tree
- - Clustering, What-if Scenarios, KPIs

Hands-On Lab:

- - Create a business dashboard with interactivity
- - Use advanced visuals for insights

Day 5: Publishing, Sharing & Security in Power BI

Power BI Service Overview

- - Workspaces, Reports, Dashboards
- - Licensing Types & Content Publishing

Sharing & Collaboration

- - Publish to Web or Internal Users
- - Create and Use Apps

Dashboards & Row-Level Security

- - Create & Pin Dashboards
- - Apply and Test Row-Level Security

Monitoring & Maintenance

- - Set Refresh Schedules
- - Monitor Usage and Endorsement

Final Lab:

- - Build and publish an end-to-end report using Excel + Power BI
- - Apply RLS and deploy via workspace