


Power BI Course Syllabus


The Power BI Course Curriculum is designed by Microsoft Power BI Certified Experts. Our Power BI Course Syllabus covers basic to advanced level concepts that consist of Report Designing, Visual Sync, Grouping, Hierarchies, Filters, Bookmarks, Azure, Modeling, DAX Functions - Level 1, DAX Functions - Level 2, Power BI Cloud, Excel & RLS, Report Server, RDL and more. Get Practical Exposure on Microsoft Power BI for Data Analytics and Visualization with Our Updated Power BI Training Course Content.

Power BI Course Syllabus

Module 1: SQL SERVER INTRODUCTION

- Data, Databases and RDBMS Software
 - Database Types: OLTP, DWH, OLAP
 - Microsoft SQL Server Advantages, Use
 - Versions and Editions of SQL Server
 - SQL: Purpose, Real-time Usage Options
 - SQL versus Microsoft T-SQL [MSSQL]
 - Microsoft SQL Server - Career Options
 - SQL Server Components and Usage
 - Database Engine Component and OLTP
 - BI Components, Data Science Components
 - ETL, MSBI and Power BI Components
 - Course Plan, Concepts, Resume, Project
 - 24 x 7 Online Labs for Remote DB Access
 - Software Installation Pre-Requisites
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Module 2: Introduction to Power BI (Free Demo Class)

- Power BI Job Roles in Real-time
 - Power BI Data Analyst Job Roles
 - Business Analyst - Job Roles
 - Power BI Developer - Job Roles
 - Power BI for Data Scientists
 - Comparing MSBI and Power BI
 - Comparing Tableau and Power BI
 - MCSA 70-778, MCSA 70-779 Exam
 - Types of Reports in Real-World
 - Interactive & Paginated Reports
 - Analytical & Mobile Reports
 - Data Sources Types in Power BI
 - Power BI Licensing Plans - Types
 - Power BI Training : Lab Plan
 - Power BI Dev & Prod Environments
 - Understanding the Power BI Tools
 - Installing Power BI & Connecting to Data
 - The "Locale" used in the curriculum
 - Working with the query Editor
 - Working with the data model and creating a visualization
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Module 3: Basic Report Design

- Power BI Desktop Installation
- Data Sources & Visual Types
- Canvas, Visualizations and Fields
- Get Data and Memory Tables
- In-Memory xvelocity Database
- Table and Tree Map Visuals
- Format Button and Data Labels
- Legend, Category and Grid
- PBIX and PBIT File Formats
- Visual Interaction, Data Points
- Disabling Visual Interactions
- Edit Interactions - Format Options
- SPOTLIGHT & FOCUSMODE
- CSV and PDF Exports. Tooltips
- Power BI EcoSystem, Architecture

Module 4: Visual Sync, Grouping

- Slicer Visual : Real-time Usage
 - Orientation, Selection Properties
 - Single & Multi Select, CTRL Options
 - Slicer : Number, Text and Date Data
 - Slicer List and Slicer Dropdowns
 - Visual Sync Limitations with Slicer
 - Disabling Slicers, Clear Selections
 - Grouping : Real-time Use, Examples
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- List Grouping and Binning Options
 - Grouping Static / Fixed Data Values
 - Grouping Dynamic / Changing Data
 - Bin Size and Bin Limits (Max, Min)
 - Bin Count and Grouping Options
 - Grouping Binned Data, Classification

Module 5: Hierarchies, Filters

- Creating Hierarchies in Power BI
 - Independent Drill-Down Options
 - Dependant Drill-Down Options
 - Conditional Drilldowns, Data Points
 - Drill Up Buttons and Operations
 - Expand & Show Next Level Options
 - Dynamic Data Drills Limitations
 - Show Data and See Records
 - Filters : Types and Usage in Real-time
 - Visual Filter, Page Filter, Report Filter
 - Basic, Advanced and TOP N Filters
 - Category and Summary Level Filters
 - DrillThru Filters, Drill Thru Reports
 - Keep All Filters" Options in DrillThru
 - CrossReport Filters, Include, Exclude
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Module 6: Bookmarks, Azure, Modeling

- Drill-thru Filters, Page Navigations
- Bookmarks: Real-time Usage
- Bookmarks for Visual Filters
- Bookmarks for Page Navigations
- Selection Pane with Bookmarks
- Buttons, Images with Actions
- Buttons, Actions and Text URLs
- Bookmarks View & Selection Pane
- OLTP Databases, Big Data Sources
- Azure Database Access, Reports
- Import & Direct Query with Power BI
- SQL Queries and Enter Data
- Data Modeling : Currency, Relations
- Summary, Format, Synonyms
- Web View & Mobile View in PBI

Module 7: Visualization Properties

- Stacked Charts and Clustered Charts
 - Line Charts, Area Charts, Bar Charts
 - 100% Stacked Bar & Column Charts
 - Map Visuals: Tree, Filled, Bubble
 - Cards, Funnel, Table, Matrix
 - Scatter Chart : Play Axis, Labels
 - Series Clusters & Selections
 - Waterfall Chart and ArcGIS Maps
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- Info graphics, Icons and Labels
 - Color Saturation, Sentiment Colors
 - Column Series, Column Axis in Lines
 - Join Types : Round, Bevel, Miter
 - Shapes, Markers, Axis, Plot Area
 - Display Units, Data Colors, Shapes
 - Series, Custom Series and Legends

Module 8: Power Query Level 1

- Power Query M Language Purpose
 - Power Query Architecture and ETL
 - Data Types, Literals and Values
 - Power Query Transformation Types
 - Table & Column Transformations
 - Text & Number Transformations
 - Date, Time and Structured Data
 - List, Record and Table Structures
 - let, source, in statements @ M Lang
 - Power Query Functions, Parameters
 - Invoke Functions, Execution Results
 - Get Data, Table Creations and Edit
 - Merge and Append Transformations
 - Join Kinds, Advanced Editor, Apply
 - ETL Operations with Power Query
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Module 9: Power Query Level 2

- Query Duplicate, Query Reference
- Group By and Advanced Options
- Aggregations with Power Query
- Transpose, Header Row Promotion
- Reverse Rows and Row Count
- Data Type Changes & Detection
- Replace Columns: Text, NonText
- Replace Nulls: Fill Up, Fill Down
- PIVOT, UNPIVOT Transformations
- Move Column and Split Column
- Extract, Format and Numbers
- Date & Time Transformations
- Deriving Year, Quarter, Month, Day
- Add Column : Query Expressions
- Query Step Inserts and Step Edits

Module 10: Power Query Level 3

- Creating Parameters in Power Query
 - Parameter Data Types, Default Lists
 - Static/Dynamic Lists For Parameters
 - Removing Columns and Duplicates
 - Convert Tables to List Queries
 - Linking Parameters to Queries
 - Testing Parameters and PBI Canvas
 - Multi-Valued Parameter Lists
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- Creating Lists in Power Query
 - Converting Lists to Table Data
 - Advanced Edits and Parameters
 - Data Type Conversions, Expressions
 - Columns From Examples, Indexes
 - Conditional Columns, Expressions

Module 11: DAX Functions - Level 1

- DAX : Importance in Real-time
 - Real-world usage of Excel, DAX
 - DAX Architecture, Entity Sets
 - DAX Data Types, Syntax Rules
 - DAX Measures and Calculations
 - ROW Context and Filter Context
 - DAX Operators, Special Characters
 - DAX Functions, Types in Real-time
 - Vertipaq Engine, DAX Cheat Sheet
 - Creating, Using Measures with DAX
 - Creating, Using Columns with DAX
 - Quick Measures and Summaries
 - Validation Errors, Runtime Errors
 - SUM, AVERAGEX, KEEPFILTERS
 - Dynamic Expressions, IF in DAX
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Module 12: DAX Functions - Level 2

- Data Modeling Options in DAX
- Detecting Relations for DAX
- Using Calculated Columns in DAX
- Using Aggregated Measures in DAX
- Working with Facts & Measures
- Modeling : Missing Relations
- Modeling : Relation Management
- CALCULATE Function Conditions
- CALCULATE & ALL Member Scope
- RELATED & COUNTROWS in DAX
- Entity Sets and Slicing in DAX
- Dynamic Expressions, RETURN
- Date, Time and Text Functions
- Logical, Mathematical Functions
- Running Total & EARLIER Function

Module 13: DAX Functions Level 3

- Connection with CSV, MS Access
 - AVERAGEX and AVERAGE in DAX
 - KEEPFILTERS and CALCUALTE
 - COUNTROWS, RELATED, DIVIDE
 - PARALLELPERIOD, DATEDADD
 - CALCULATE & PREVIOUSMONTH
 - USERRELATIONSHIP, DAX Variables
 - TOTALYTD , TOTALQTD
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- DIVIDE, CALCULATE, Conditions
 - IF..ELSE..THEN Statement
 - SELECTEDVALUE, FORMAT
 - SUM, DATEDIFF Examples in DAX
 - TODAY, DATE, DAY with DAX
 - Time Intelligence Functions - DAX

Module 14: Power BI Cloud - 1

- Power BI Service Architecture
 - Power BI Cloud Components, Use
 - App Workspaces, Report Publish
 - Reports & Related Datasets Cloud
 - Creating New Reports in Cloud
 - Report Publish and Report Uploads
 - Dashboards Creation and Usage
 - Adding Tiles to Dashboards
 - Pining Visuals and Report Pages
 - Visual Pin Actions in Dashboards
 - LIVE Page Interaction in Dashboard
 - Adding Media: Images, Custom Links
 - Adding Chs and Embed Links
 - API Data Sources, Streaming Data
 - Streaming Dataset Tiles (REST API)
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Module 15: Power BI Cloud - 2

- Dashboards Actions, Report Actions
- DataSet Actions: Create Report
- Share, Metrics and Exports
- Mobile View & Dashboard Themes
- Q & A [Cortana] and Pin Visuals
- Export, Subscribe, Subscribe
- Favorite, Insights, Embed Code
- Featured Dashboards and Refresh
- Gateways Configuration, PBI Service
- Gateway Types, Cloud Connections
- Gateway Clusters, Add Data Sources
- Data Refresh : Manual, Automatic
- PBIEngw Service, ODG Logs, Audits
- DataFlows, Power Query Expressions
- Adding Entities and JSON Files

Module 16: Excel & RLS

- Import and Upload Options in Excel
 - Excel Workbooks and Dashboards
 - Datasets in Excel and Dashboards
 - Using Excel Analyzer in Power BI
 - Using Excel Publisher in PBI Cloud
 - Excel Workbooks, PINS in Power BI
 - Excel ODC Connections, Power Pivot
 - Row Level Security (RLS) with DAX
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- Need for RLS in Power BI Cloud
 - Data Modeling in Power BI Desktop
 - DAX Roles Creation and Testing
 - Adding Power BI Users to Roles
 - Custom Visualizations in Cloud
 - Histogram, Gantt Chart, Infographics

Module 17: Report Server, RDL

- Need for Report Server in PROD
 - Install, Configure Report Server
 - Report Server DB, Temp Database
 - Web service URL, Webportal URL
 - Creating Hybrid Cloud with Power BI
 - Using Power BI DesktopRS
 - Uploading Interactive Reports
 - Report Builder For Report Server
 - Report Builder For Power BI Cloud
 - Designing Paginated Reports (RDL)
 - Deploy to Power BI Report Server
 - Data Source Connections, Report
 - Power BI Report Server to Cloud
 - Tenant IDs Generation and Use
 - Mobile Report Publisher, Usage
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Module 18: PowerApp

- Overview
- Basic Power App Concept
- Canvas Apps | Navigation | Customization
- Contents (Galleries, Data Cards, Forms, Triggers, Functions & Formulas, Edit Forms, Text Boxes)

Module 19: Power BI Service & Power BI Mobile

- Why Power Bi Service?
 - Comparison Power BI Free & Premium
 - Logging into Power Bi Service
 - Interface overview
 - Importing data from Desktop to Service
 - Dataset menu
 - Working on reports
 - Dashboard overview
 - Workspace & Gateways
 - Installing Gateways - Personal & On-premise
 - Working alone or collaborating with colleagues
 - Collaborating in App Workspace
 - Sharing the results
 - Publishing the app
 - Content packs from online services
 - Power Bi Mobile Overview
 - Excluding dataset from sharing
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Module 20: Power BI and Excel Together

- Options for Publishing from Excel
- Pin Excel Elements to Power BI
- Analyze in Excel (Power BI Pro or Premium)
- Excel Publish: Upload and Export to Power BI
- Sharing Published Excel Dashboards (Power BI Pro or Premium)

Module 21: Real-Time Project

- Project Requirement Analysis
- Implementing SDLC Phases
- Requirement Gathering, FSA

Phase 1:

- PBIX Report Design
- Visualizations, Properties
- Analytics and Formatting

Phase 2:

- Data Modeling, Power Query
- Dynamic Connections, Azure DB
- Parameters and M Lang Scripts

Phase 3:

- DAX Requirements, Analysis
 - Cloud and Report Server
 - Project FAQs and Solutions
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