



OpenMinds Technologies

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Power BI Complete Syllabus (Basic to Advanced)

Module 1: Introduction to Business Intelligence & Power BI

- What is Business Intelligence (BI)
- Importance of Data Analytics
- Types of Analytics
 - ✓ Descriptive
 - ✓ Diagnostic
 - ✓ Predictive
 - ✓ Prescriptive
- Introduction to Power BI
- Components of Power BI
 - ✓ Power BI Desktop
 - ✓ Power BI Service
 - ✓ Power BI Mobile

- ✓ Power BI Report Server
 - Power BI Architecture
 - Installing Power BI Desktop
 - Power BI Licensing Overview
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Module 2: Power BI Interface & Basics

- Understanding Power BI Desktop Interface
 - Home Tab
 - Transform Tab
 - Modeling Tab
 - View Tab
 - Report View
 - Data View
 - Model View
 - Creating First Dashboard
 - Loading Data into Power BI
 - Saving & Publishing Reports
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Module 3: Data Sources & Connections

Connecting to Different Data Sources

- Excel Files
- CSV / Text Files
- JSON & XML Files
- SQL Server
- Oracle Database
- MySQL

- PostgreSQL
- SharePoint
- Web APIs
- Folder Connections
- Azure Data Sources

Data Connection Types

- Import
 - Direct Query
 - Live Connection
 - Composite Models
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Module 4: Power Query Editor (ETL in Power BI)

Introduction to Power Query

- What is ETL?
- Query Editor Interface
- Applied Steps
- Query Dependencies

Data Cleaning Techniques

- Remove Duplicates
- Remove Null Values
- Replace Values
- Change Data Types
- Split Columns
- Merge Columns
- Fill Up / Fill Down
- Extract Text

- Add Conditional Columns
- Index Columns

Advanced Transformations

- Pivot Columns
- Unpivot Columns
- Group By
- Merge Queries
- Append Queries
- Transpose Data
- Custom Columns
- Parameters

Power Query Functions (M Language)

- Introduction to M Language
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Module 5: Data Modeling

Introduction to Data Modeling

- Importance of Data Modeling
- Fact Tables
- Dimension Tables
- Star Schema
- Snowflake Schema

Relationships

- One-to-One
- One-to-Many
- Many-to-Many
- Cross Filter Direction

Model Optimization

- Cardinality
 - Hierarchies
 - Role Playing Dimensions
 - Active vs Inactive Relationships
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Module 6: DAX (Data Analysis Expressions) – Basic to Advanced

Introduction to DAX

- Calculated Columns
- Measures
- Calculated Tables
- Difference Between Measure & Column

Basic DAX Functions

- SUM
- COUNT
- DISTINCTCOUNT
- MIN / MAX
- AVERAGE
- DIVIDE

Logical Functions

- IF
- SWITCH
- AND / OR

Date & Time Functions

- TODAY
- NOW

- YEAR
- MONTH
- QUARTER
- DATEDIFF

Text Functions

- LEFT
- RIGHT
- MID
- CONCATENATE

Filter Functions

- FILTER
- ALL
- ALLEXCEPT
- VALUES
- SELECTEDVALUE

Aggregation Functions

- SUMX
- AVERAGEX
- COUNTX

Time Intelligence Functions

- TOTALYTD
- TOTALMTD
- SAMEPERIODLASTYEAR
- DATEADD
- PARALLELPERIOD

Advanced DAX

- CALCULATE
 - RELATED
 - RELATEDTABLE
 - USERELATIONSHIP
 - RANKX
 - TOPN
 - Variables in DAX
 - Context Transition
 - Row Context
 - Filter Context
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Module 7: Data Visualization

Basic Visualizations

- Table
- Matrix
- Card
- Multi-row Card
- KPI

Charts

- Bar Chart
- Column Chart
- Pie Chart
- Donut Chart
- Line Chart
- Area Chart
- Combo Chart

- Waterfall Chart
- Funnel Chart
- Gauge Chart
- Scatter Plot

Maps

- Map Visual
- Filled Map
- ArcGIS Maps

Slicers & Filters

- Visual Level Filters
- Page Level Filters
- Report Level Filters
- Drillthrough Filters
- Sync Slicers

Interactive Features

- Drill Down
- Drill Through
- Tooltips
- Bookmarks
- Buttons
- Navigation

Module 8: Advanced Reporting Features

- Conditional Formatting
- Dynamic Titles
- Dynamic Measures

- Field Parameters
 - What-If Parameters
 - Custom Tooltips
 - Report Themes
 - Custom Visuals
 - Paginated Reports
 - Mobile Layout Design
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Module 9: Power BI Service

Introduction to Power BI Service

- Publishing Reports
- Creating Dashboards
- Workspaces
- Sharing Reports
- Apps in Power BI

Collaboration

- Row Level Security (RLS)
- User Roles
- Data Security
- Subscription Setup

Data Refresh

- Scheduled Refresh
 - Gateway Configuration
 - Incremental Refresh
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Module 10: Power BI Administration

- Workspace Management
 - Tenant Settings
 - Security Management
 - Audit Logs
 - Usage Metrics
 - Power BI Gateway
 - Capacity Management
 - Deployment Pipelines
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Module 11: SQL for Power BI

SQL Basics

- SELECT Statement
- WHERE Clause
- ORDER BY
- GROUP BY
- HAVING

Joins

- INNER JOIN
- LEFT JOIN
- RIGHT JOIN
- FULL JOIN

Advanced SQL

- Subqueries
- CTEs
- Window Functions

- Views
 - Stored Procedures
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Module 12: Power BI Interview Preparation

- Power BI Interview Questions
 - Scenario-Based Questions
 - DAX Interview Questions
 - SQL Interview Questions
 - Resume Preparation
 - Mock Interviews
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Module 13: Resume & Placement Assistance

- Resume Building
 - LinkedIn Profile Optimization
 - Job Portal Guidance
 - Real-Time Case Studies
 - Certification Guidance
 - Placement Support
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Power BI Advanced Topics

- Dataflows
- Fabric Introduction
- AI Dashboard Creation
- Power Automate with Power BI
- Power Apps Integration
- REST APIs

- Performance Tuning
 - DAX Query Optimization
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Tools Covered

- Power BI Desktop
 - Power BI Service
 - SQL Server (Basics)
 - Power Query
 - DAX Studio
 - Power Automate
 - Power Apps
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Outcome of the Course

After completing this course, students will be able to:

- ✓ Build Interactive Dashboards
- ✓ Create Data Models
- ✓ Write Advanced DAX Queries
- ✓ Perform ETL using Power Query
- ✓ Publish Reports to Power BI Service
- ✓ Implement Security & Scheduling
- ✓ Work on Real-Time Projects
- ✓ Attend Power BI Interviews Confidently

Suitable For

- Freshers
- Data Analysts
- BI Developers
- Excel Professionals
- IT Professionals

- Reporting Analysts
- Managers & Decision Makers