



## Power BI Course Detailed Syllabus

Total Duration: 70 Hours

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### Module 1: Introduction to Business Intelligence & Power BI

Duration: 4 Hours

#### Topics

- Introduction to Microsoft Power BI
  - What is Business Intelligence (BI)
  - Role of Data in Business Decisions
  - Components of Power BI
    - Power BI Desktop
    - Power BI Service
    - Power BI Mobile
  - Installing Power BI Desktop
  - Overview of Power BI Interface
  - Power BI Workflow
  - Types of Analytics
    - Descriptive
    - Diagnostic
    - Predictive
    - Prescriptive
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## Module 2: Data Sources & Data Import

Duration: 6 Hours

### Topics

- Connecting Power BI to different data sources
  - Importing data from:
    - Excel
    - CSV
    - Text files
    - Web
    - SQL Database
  - Data Refresh options
  - Direct Query vs Import Mode
  - Data Source Settings
  - Handling multiple data sources
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## Module 3: Data Transformation with Power Query

Duration: 10 Hours

### Topics

- Introduction to Power Query Editor
  - Data Cleaning Techniques
  - Removing duplicates
  - Handling missing values
  - Data formatting
  - Split / Merge columns
  - Pivot & Unpivot columns
  - Replace values
  - Append Queries
  - Merge Queries
  - Creating calculated columns in Power Query
  - Applied Steps
  - Query Folding concept
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## Module 4: Data Modeling

Duration: 8 Hours

### Topics

- What is Data Modeling
  - Table relationships
  - One-to-One
  - One-to-Many
  - Many-to-Many relationships
  - Star Schema vs Snowflake Schema
  - Creating relationships
  - Managing relationships
  - Data normalization basics
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## Module 5: DAX (Data Analysis Expressions)

Duration: 14 Hours

### Topics

- Introduction to DAX
  - Calculated Columns vs Measures
  - Basic DAX Functions
  - Aggregation Functions
    - SUM
    - AVERAGE
    - COUNT
  - Logical Functions
    - IF
    - SWITCH
  - Filter Functions
  - Time Intelligence Functions
    - TOTALYTD
    - SAMEPERIODLASTYEAR
  - Date table creation
  - Advanced DAX formulas
  - KPI calculations
  - Performance optimization
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## Module 6: Data Visualization

Duration: 12 Hours

### Topics

- Types of Visualizations
  - Creating charts and graphs
    - Bar Chart
    - Column Chart
    - Pie Chart
    - Line Chart
    - Area Chart
  - Tables & Matrix
  - Cards & KPIs
  - Maps and Geographic visuals
  - Slicers and Filters
  - Drill Down & Drill Through
  - Custom Visuals
  - Formatting visuals
  - Conditional formatting
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## Module 7: Interactive Dashboards & Reports

Duration: 6 Hours

### Topics

- Creating professional dashboards
  - Report layout design
  - Page navigation
  - Buttons & bookmarks
  - Tooltips
  - Cross filtering & cross highlighting
  - Report themes
  - Mobile view optimization
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## Module 8: Power BI Service (Cloud)

Duration: 4 Hours

### Topics

- Introduction to Power BI Service
  - Publishing reports to cloud
  - Workspaces
  - Sharing dashboards
  - Data refresh scheduling
  - Collaboration features
  - Power BI Mobile App overview
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## Module 9: Data Security & Governance

Duration: 3 Hours

### Topics

- Row Level Security (RLS)
  - Managing user roles
  - Data privacy settings
  - Security best practices
  - Dataset management
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## Module 10: Real World Projects

Duration: 8 Hours

### Project Topics

Students will build industry dashboards

- 1 Sales Dashboard
- 2 Financial Analysis Dashboard
- 3 HR Analytics Dashboard
- 4 Marketing Campaign Dashboard

### Skills learned

- Data modeling
  - KPI creation
  - Interactive dashboard design
  - Business storytelling
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## Final Module: Career Preparation

Duration: 2 Hours

### Topics

- Portfolio building
- Interview questions
- Resume preparation
- Power BI certification guidance

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## Tools Covered

- Microsoft Power BI
- Microsoft Excel
- Microsoft SQL Server (basic connection)

