

DTI-STU-103

# Microsoft Power BI

# Program Information



**Nature of the Course**  
Theory + Practical



**Total Hours per Day**  
2 hours



**Course Duration**  
14 Days

## Course Summary

Power Bi is a quick and intensive data analysis tool. It is an affordable alternative to many Bi tools existing in the market for the past years. It offers many features and does most of the job for its user by providing the best of data analysis tools. It does not require any knowledge of coding (maybe a little knowledge of SQL if used as a source to get data)

## Completion Criteria

After fulfilling all of the following criteria, the student will be deemed to have finished the Module:

- Has attended 90% of all classes held.
- Has received an average grade of 80% on all assignments
- Has received an average of 60% in assessments.
- The tutor believes the student has grasped all of the concepts and is ready to go on to the next module.

## Required Textbooks

- Brett Powell, "Mastering Microsoft Power BI", Packt.
- Roger F. Silva, "Power BI: Create and Learn", Business Intelligence Clinic.

## Prerequisites

- Fundamental understanding of basic Mathematical concepts.
- If you are only interested in theory and have no interest/patience in spending at least 10 hours every week throughout the duration of the course, then this course might not be for you
- Basic understanding of Database and Microsoft Excel will prove helpful.
- A strong will to learn.

# Course Details

## Day : 1

- Setting up Power BI Desktop
  - Getting Started with Power BI Desktop
  - Overview of Power BI
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## Day : 2

- Data Sources in Power BI Desktop
  - Importing Excel Workbooks
  - Data Types in Power BI Desktop
  - Appending Multiple Files
  - Transforming Data (Combining Files)
  - Joins (Left, Right, Inner, Outer)
  - Transforming Data (Merging Queries)
  - Refreshing Data
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## Day : 3

- Data Connect from Multiple Sources
  - Delimited Text Files
  - JSON Files
  - XML Files
  - Connecting to Web Data
  - Data Transformation
  - Transforming Data (Appending Queries)
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## Day : 4

- Connecting to APIs
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## Day : 5

- Pivot Feature in Power BI
  - Unpivot Feature in Power BI
  - Advance Data Transformation
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## Day : 6

- Introduction to Modeling Data
  - Data Mapping (Relationship between Tables)
    - One-to-One
    - One-to-Many
    - Many-to-Many
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## Day : 7

- Introduction to Database Connection from Power BI Desktop
  - Connecting Access Database
  - Connecting Oracle Database (If Available)
  - Connecting MySQL Database (If Available)
  - Connecting SQL Server Database (If Available)
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## Day : 8

- |                                     |                                                              |
|-------------------------------------|--------------------------------------------------------------|
| • Basics of DAX                     | • Calculated Tables                                          |
| • Creating Calculated Columns       | • Creating Calculated Measures (Measure Basics)              |
| • Navigation Functions              | • Creating Calculated Measures (Time Intelligence Functions) |
| • Conditional and Logical Functions |                                                              |
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## Day : 9

- Advanced DAX
  - Working with Variables
  - Working with Filter Context (What is Filter Context?)
  - Working with Filter Context (CALCULATE)
  - Working with Filter Context (Overriding Filter Context)
  - Working with Filter Context (FILTER)
  - Working with Filter Context (FILTER and ALL)
  - Working with Filter Context (ALLEXCEPT)
  - Working with Filter Context (Totals)
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## Day : 10

- Advanced DAX Function (CONTAINS)
  - Advanced DAX Function (FIND)
  - Advanced DAX Function (SEARCH and SUBSTITUTE)
  - Advanced DAX Function (ALLSELECTED)
- 

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- 

## Day : 11

- Introduction to Visualization in Power BI Desktop
  - Branding (Size, Header, Spacing, Footer)
  - Inserting Images, Shapes, Text Box
  - Creating Basic Reports with the Power BI Desktop
  - Starting Data Visualization
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## Day : 12

- Bar Chart
  - Column Chart
  - Line Chart
  - Area Chart
  - Ribbon Chart
  - Pie Chart
  - Combo Chart
  - Bubble Chart
  - Scatter Chart
  - Donut Chart
  - Gauge Chart
  - Funnel Chart
  - Waterfall Chart
  - Single Number Chart
  - Multi-Row Chart
  - KPI Chart
  - Table Chart
  - Matrix Chart
  - Tree Map
  - Slicer
  - Map
  - Filled Map
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## Day : 13

- Using the Power BI Service (Deploying to the Power BI Service)
  - Using the Power BI Service (Creating and Sharing Dashboards)
  - Using the Power BI Service (Setting Up App Workspaces)
  - Using the Power BI Service (Concept of Report, Dashboard, Power Bi App)
  - Using the Power BI Service (Concept on Development Environment and Production Environment)
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## Day : 14

- Refreshing Data (Refreshing Data Overview)
  - Refreshing Data (Installing Data Gateway)
  - Refreshing Data (Scheduling Data Refresh)
  - Understanding End-to-End Process for a Power BI Dashboard
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# Labs

Lab assignments will focus on the practice and mastery of contents covered in the lectures, and introduce critical and fundamental problem solving techniques to the students.

## Learning Outcomes

- Gain valuable experience using Microsoft Power BI Desktop.
- Learn to load any type of data and combine with data from other sources.
- Learn how to create data derived visualizations, reports, and dashboards.
- Learn how to clean and transform data.

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