

**It's all about
Analytics!**



Data Analytics using PowerBI

**IBF Funded Course
SkillsFuture Claimable**

Microsoft PowerBI is a leader in Business Intelligence and Analytics! It is a very widely used BI tool in organizations, and being able to do accurate and efficient analysis is an asset. In this course learn through hands-on workshops and demonstrations, how you can embark on the PowerBI journey today!

**Course Fee (Before Funding): \$750 (excl. GST)
Course Fee (After Funding): \$80 - \$200 (incl. GST)**

Start your data journey with us.

Course Duration
16 hours



What You'll Learn

This course provides participants with the knowledge and skills to work with and analyze data with business cases using Microsoft PowerBI. Participants will learn to use PowerBI Desktop to connect to various data sources, shape the data, use data models and create interactive reports.

Through this PowerBI course, participants can learn that Power BI Desktop centralizes, simplifies, and streamlines what can otherwise be a scattered, disconnected, and arduous process of designing and creating business intelligence repositories and reports.

Pre-requisites

Workplace Literacy (Advanced Literacy) Level 4-5

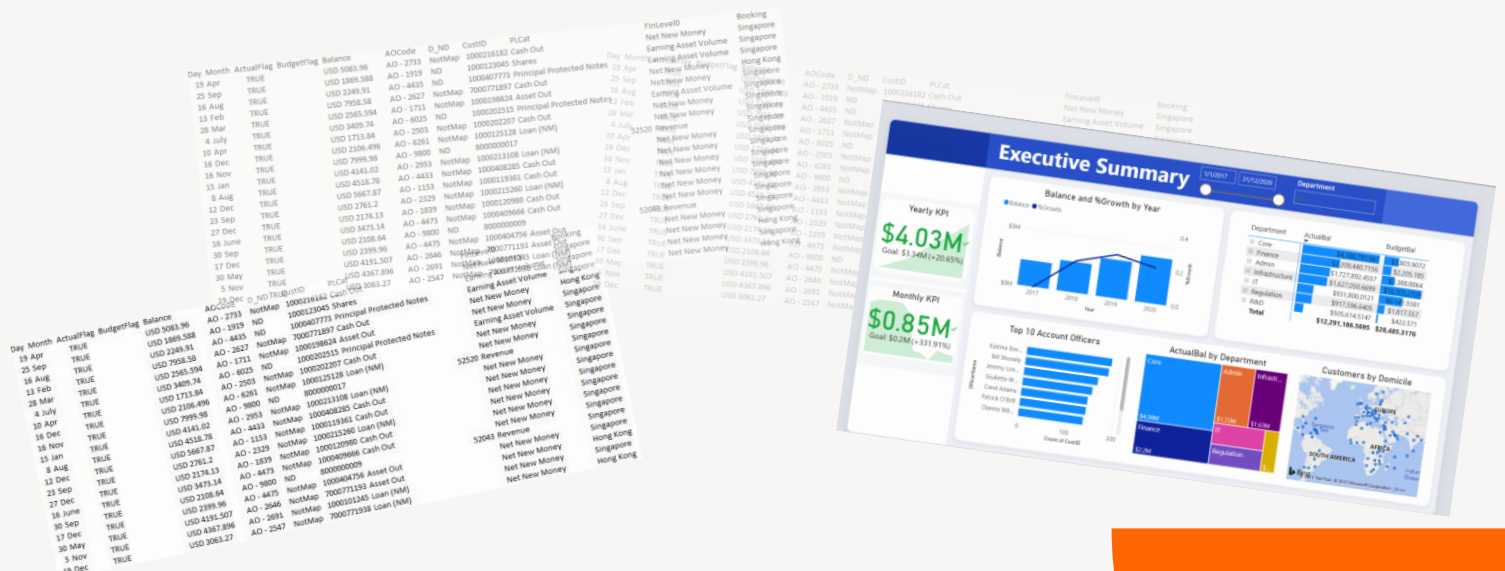
Basic English Literacy

Intermediate knowledge of Excel would be beneficial

Key-Takeaways!

After going through the course, participants will:

- Be able to Identify Business Organisation KPIs
- Be able to wrestle in data from a variety of sources
- Be able to control the transformation of data
- Be able to design beautiful and interactive visuals
- Be able to have a grasp over business intelligence
- Be able to build informative and powerful dashboards
- Experience varying business cases from different perspectives



Course Outline

Introduction to PowerBI

This module takes through the journey of how it all began and what constitutes analytics and business intelligence along with the strength of how PowerBI bridges the gap between users and business insights.

- Exploring Window and playing with cells
- A quick history of Business Intelligence and Analytics
- The development of Self-Service Business Intelligence
- Introducing the Power BI suite
- Power BI Service, Power BI desktop & Power BI Mobile
- Introduction to Data Sources
- What Data Sources can be used with PowerBI

Data Normalization and Tables

Non optimized data tends to slow down visualizations and makes the process messy. This module will recap a few concepts of data normalization and the basic normal forms of data along with the main types of tables that should exist in a dataset.

- What is Data Normalization?
- Normalizing a dataset
- Understanding Fact and Dimension Tables

Working with Data and Defining a Business Case

Before using any tool for data visualization and analytics, it is important to be data literate, understand the nature of the data, what the data consists of and also define the format of the data to make it suitable for analytics.

- Understanding data and defining business problem
- Creating tables of data to use in PowerBI

PowerBI Desktop – The Tool, Data Models and Relationships

This module introduces PowerBI Desktop and how it can be used to make data ready for further visualization and analytics. Preparing the data is a pivotal part of any data analytics lifecycle.

- Introducing PowerBI Desktop
- Connecting to a data source
- Building a data model
- Setting the properties of data
- Loading Table Relationships
- Creating and Deleting Relationships
- Using Query Editor

Column, Data and Date Transformations

Transformations are an integral part of the data pre-processing stage. PowerBI allows for various kinds of transformations to be done within the tool itself. This module focuses on the transformations which are important from the perspective of data and the business case.

- Adding custom columns
- Duplicating, renaming, splitting columns
- Creating conditional columns
- Changing Data Types
- Filling and replacing values
- Extract various components of date/time
- Filtering dates

Data Analysis Expressions (DAX)

DAX are expressions or formulas that are used for data analysis and calculations. These expressions are a collection and combination of functions, operators, and constants that are evaluated as one formula to yield results (value or values). DAX formulas are very useful in BI tools as they help data analysts to use the data sets they have to the fullest potential. In this module we will learn some of the important DAX functions.

- Introduction to DAX
- Creating simple SUM measures
- Creating columns using the IF functions
- Simple DAX functions
- Using the X functions

Creating Visualizations and Formatting

In this module, we will first understand what are the different types of possible visualizations and the business insights that could potentially be obtained from each type of chart/graph. It is important to understand what each visualization signifies in order to make the right choice while building a report. Visualizations are as good as they are made to look. It is important to know how to format your visualizations to have them convey the right information to the stakeholders. In this module, we will cover the various formatting options available for different visualizations.

- Overview of Visualizations
- Creating and working with Visualizations
- Creating a Bar Charts, Column Charts, Line Charts and other visualizations
- Understanding Focus Mode
- Axes, Data Labels, Titles & Data Colours
- Backgrounds and Borders
- Aligning visualizations
- What is the right size for a visualization?

Working with Filters

While working with data and visualizations, it is very important to be able to narrow down what you see to make information easier to decipher. Filtering is an operation which helps you do that. This section deals with all possible and right ways to apply filters to data.

- Creating a Slicer
- Understanding and using the visualization pane for filtering
- Creating Visual Field filters
- Creating Top N Filters
- Adding page level filters

Advanced Visualizations

There could be cases where users would require plotting multiple dimensions in a visualization. For such cases we would need to look towards more advanced visualizations. This module covers some of those visualizations and how one can choose the right visualization when it needs to be plotted.

- Create Map Based Visualizations
- Create a Gauge and Tree Map Visualizations
- Importing Custom Visualizations
- How do you choose the right visualization?

Understanding Visual Interactions

For business users, different visualizations need to have a controlled behavior when certain actions are done on the report or other visualizations. This module walks through the different types of visual interactions available and used.

- Why are Visual Interactions used in PowerBI? Why are they useful?
- Types of Visual Interactions
- Using Visual Interactions across visualizations

Reports in PowerBI

In order to present our findings, we need to put everything together to form meaningful visualizations which can give us valid and important business insights. This section deals with how we can put various visualizations together to form a report, along with using additional features.

- Creating a report
- Adding Multiple Pages to your Reports
- Building a narrative in your report
- Adding Shapes, Images & Text Boxes to reports
- Using Natural Language Queries to make Visualizations
- Create a Visual using Q&A
- Understanding and using Quick Insights

Funding Information

For Self-Sponsored Individuals (Upto 30th June 2022)

	For Singaporeans below 40 & Singapore PR of all age groups (80% Funding Support)	For Singaporeans 40 and above (90% Funding Support)
Original Course Fee	\$750	\$750
7% GST	\$52.50	\$52.50
Enhanced Funding Support	\$642.00	\$722.25
Total fee payable	\$160.50	\$80.25

For Company-Sponsored Individuals (Upto 30th June 2022)

	For Singaporeans below 40 & Singapore PR of all age groups (80% Funding Support)	For Singaporeans 40 and above (90% Funding Support)
Original Course Fee	\$750	\$750
7% GST	\$52.50	\$52.50
Enhanced Funding Support	\$600.00	\$675.00
Total fee payable	\$202.50	\$127.50

Training Allowance Grant (TAG) at \$10/training hour for eligible company-sponsored individuals is paid out after course completion	On successfully completing the course \$160
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**Participants need to clear the assessment and acquire the minimum attendance to be eligible for the funding*



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