



Education and Support for SharePoint, Office 365 and Azure
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COURSE OUTLINE

MICROSOFT POWER BI FOR END USERS

Course Duration: 2 Day

Overview

This course delivers an instructor-led breakdown of Microsoft Power BI. Students will be taught how to design reports that will work with a variety of data sources. Power BI lends something to everyone from beginners who wish to leverage existing data sources to build engaging dashboards right up to knowledgeable users who may query data sources and construct data models to fuel business reports. We will take users through a selection of well-crafted lessons to help them build new reporting capabilities for their business.

Audience

This course is for students that are looking to learn how to use the range of Microsoft Power BI tools to refine and model their data into a visual and interactive format. Students considering adopting this course are not required to have any prerequisite knowledge of Power BI or experience working on data modelling related tasks.

Prerequisites

Delegates should have some exposure to a Windows operating system and Microsoft Office.

Module List

Module 1	An Introduction to Power BI
Module 2	Requirements gathering
Module 3	Extract, transform and load data
Module 4	Creating a data model
Module 5	Designing reports
Module 6	Using workspaces and dashboards
Module 7	Labs

Module 1: An introduction to Power BI

In this module we will give a brief overview of what Business Intelligence is and what Power BI is. Power BI consists of multiple tools, which we will explore the purpose of and their core features. We will also make you aware of some essential resources for user learning about Power BI.

Topics Covered

- What is business intelligence?
- Introducing Power BI
- Power BI tools and services
- Case studies
- Data stories
- Support and information

Module 2: Requirements gathering

Typically, a business intelligence project focuses on a variety of themes and understanding them will help you take your first steps towards successfully completing a BI project. To start a project, this module will help you understand grain statements, a way of understanding what objectives your project is expected to achieve. This will evolve to understanding the full path of a project including discovering, refining and modelling your data to producing reports and dashboards. This may require you to use just the Power BI web service or the Power BI desktop application based on the needs of your project. You will also learn about workspaces and see how to use your personal workspace to take your first steps using the Power BI web service to create a report. Throughout this course, we will be basing our discussions around a fictitious company called House Rules Board Games to bring the training to life.

Topics Covered

- Welcome to House Rules Board Games
- Beginning a Power BI project
- Grain statements
- Data discovery
- Refining information
- Modelling data
- Building reports
- Creating dashboards
- Choosing workspaces
- Create and share a report in Power BI

Module 3: Extract, transform and load data

Power BI web service is a quick tool for creating reports, but it lacks the depth to truly configure your data. In this module we will introduce Power BI desktop, an application that data analysts can use to work on Power BI projects. We will use the application to perform more enhanced data discovery and with that we can refine and format the data. As you will learn in this module, it is not always likely that our data will be a palatable format, therefore learning how to extract, transform and load data as part of a query is essential.

Topics Covered

- Creating a project with Power BI desktop

What is a PBIX file?

Connecting to data sources

Managing data connections

Refine data with the query editor

Applied steps

M code language

Designing your query

- Choose columns

- Rename columns

- Moving columns

- Formatting columns

- Replacing values

- Expand related columns

- Star schemas

- Mere columns

- Custom and conditional columns

Module 4: Creating a data model

A data model is the data found in one or more tables, from one or more sources. These tables can be, and often are, related. Understanding and maintaining these relationships between the tables is essential for optimising your data model so that it performs well for your report views. In addition, it is often the case that although you have connected to all the relevant data sources, it may not provide you with all of the information you require for your report. In this module we will show how to generate more data using Data Analysis eXpression language which is like formulas in Microsoft Excel. You can use this language to create new columns and measures which can provide you with even more data to report on. We will also look at how to structure related data into hierarchies, work with geographical data and introduce row level security which can later be combined with roles.

Topics Covered

- Understanding relationships

 - Cardinality

 - Cross filter direction

 - Hiding tables and columns

- Formatting columns

- Introducing DAX

- Designing calculated columns

- Creating measures

Adding lookup tables

Structuring data with dimensional hierarchies

Roles and row level security

Module 5: Designing reports

Often the part of the project that is seen by most is the report. The report uses information refined and calculated in your data model to create a visual experience that is interactive and tells a clear narrative. To do this, the report utilises a wide selection of visuals which we will focus on in this module. Visuals range from bar charts to maps. This extensive range can be enhanced by accessing the store, which is rich with custom visuals. You can use slicers and filters to help users drill down through your data and navigational buttons to help users move between your report pages.

Topics Covered

Adding pages and navigation buttons

Using shapes, text and images

Creating a theme

Adding visualisations

Using filters and slicers

Adding drill throughs

Adding custom visualisations

Configure phone layouts

Report tips

Module 6: Using workspaces and dashboards

Once you have finalised your report, it is ready to be published. In this module we will cover the last stages of producing a report which covers publishing and configuring a published project. Your ability to publish a project, and to what type of workspace depends on your license, so this module will outline the types of license and workspaces you may encounter. We will also cover dashboards, which are ways that you can share your content and as well as ways you can restrict your content.

Topics Covered

Power BI licensing

My workspaces

App workspaces

Premium capacity workspaces

Publishing a project

Parallels with Microsoft Excel

Publishers and viewers

Reconnecting with data sources

Scheduling the data refresh frequency

Introducing the on-premises data gateway

Assigning security roles

Creating and populating dashboards

Customising dashboard tiles

Creating tiles using Q&A and quick insights

Creating a mobile dashboard

Sharing reports and dashboards

Publishing apps in a workspace

Publishing content to websites