

KOENIG SOLUTIONS · COURSE OUTLINE

Microsoft Power BI Super User (55400AC)

Learn to gather requirements, transform data, build data models and design reports and dashboards using Power BI.

6

MODULES

80

TOPICS

27

HANDS-ON ACTIVITIES

COURSE OVERVIEW

This course covers the Power BI toolset, from the web service and Desktop application to Report Server, and how requirements gathering and grain statements shape a business intelligence project. It then addresses extracting, transforming and loading data with Power Query, before covering data modelling with relationships, DAX measures, hierarchies and row level security. Report design is explored through visuals, filters, slicers, drill throughs and custom visuals, and the course closes with workspaces, dashboards, licensing, publishing and data refresh scheduling.

WHO THIS COURSE IS FOR

Data Analysts

Report Developers

Business Intelligence Analysts

Power BI Users

Dashboard Designers

LEARNING OBJECTIVES

- Describe the Power BI toolset and available support resources
- Plan a business intelligence project using grain statements
- Apply Power Query steps to extract, transform and load data
- Build a data model with relationships and calculated measures
- Implement row level security and dimensional hierarchies
- Design reports using visuals, slicers, filters and drill throughs
- Configure workspaces, licensing and dashboard publishing
- Assess data refresh scheduling and gateway configuration

6 Modules, 80 Topics

01

4 Activities

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

- What is business intelligence?
- Introducing Power BI
- Power BI tools and services
- Power BI Report Server
- Power BI (Online)
- Power BI Desktop
- Case studies
- Support and information
- Data stories

02

4 Activities

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

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

Extract, Transform and Load Data

The 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

- Creating a project with Power BI desktop
- Pinning an active project
- What is in a PBIX file?
- Connecting to data sources
- Managing data connections
- Refine data with Power Query
- Applied steps
- M code language
- Designing your query
- Choose columns
- Rename columns
- Moving columns
- Formatting columns
- Replacing values
- Expanding related columns
- Star schemas
- Merge columns
- Split columns
- Custom and conditional columns

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

- 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

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

- Adding pages and navigation buttons
- Using shapes, text and images
- Creating a theme
- Adding visualisations
- Using filters and slicers
- Controlling filters
- Adding drill throughs
- Adding custom visualisations
- Configure phone layouts
- Report tips

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

- Power BI licensing
- My workspaces
- App workspaces
- Premium capacity workspaces
- Creating a new workspace
- Publishing a project
- Parallels with Microsoft Excel
- Publishers and viewers
- Reconnecting with data sources
- Introducing the on-premises data gateway
- Scheduling the data refresh frequency
- 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

Practise What You Learn

#	MODULE	ACTIVITY
01	An Introduction to Power BI	LAB 1: GETTING READY
		■ Sign in to Office 365
		■ Download course files
		■ Place data sources into OneDrive
02	Requirements Gathering	■ Create further user accounts
		LAB 1: BUILD A REPORT IN POWER BI WEB
		■ Connect to an Excel spreadsheet
		■ Build visualisations
03	Extract, Transform and Load Data	■ Create a dashboard for desktop and mobile users
		■ Share your report and dashboard
		LAB 1: STARTING A PROJECT IN POWER BI DESKTOP
		■ Creating a new PBIX project file
04	Creating a Data Model	■ Connecting to data sources
		■ Use the query editor to refine data
		■ Review the table relationships
		■ Optional - Connect to an Azure SQL database
05	Designing Reports	LAB 1: DESIGNING A DATA MODEL
		■ Hide and format table columns
		■ Create calculated columns
		■ Create measures
06	Using Workspaces and Dashboards	■ Using geographical data and lookup tables
		■ Create a dimensional hierarchy
		LAB 1: CREATING A REPORT
		■ Creating new pages and adding basic content
06	Using Workspaces and Dashboards	■ Adding and configuring visualisations
		■ Design slicers
		■ Create bookmarks and navigational buttons
		LAB 1: PUBLISH AND SHARE REPORTS AND DASHBOARDS
06	Using Workspaces and Dashboards	■ Publish your project to Power BI
		■ Create a dashboard
		■ Use quick insights and pin visuals
		■ Use Q&A to query your data source
06	Using Workspaces and Dashboards	■ Share your dashboard with marketing

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

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