

Excel Dashboards & Power BI: Pivot Tables & DAX

Learn to build interactive Excel dashboards and Power BI reports using Pivot Tables, Power Query, data models and DAX.

3 Days

DURATION

8

MODULES

113

TOPICS

COURSE OVERVIEW

This course covers building reports and graphs in Excel, starting with Pivot Tables, Pivot Charts, Power Query and Power Pivot before introducing DAX for calculated columns and measures. It then covers creating interactive Excel dashboards using slicers, timelines, layouts and themes. The course moves into Power BI, covering connecting and shaping data, building data models with relationships and hierarchies, and writing DAX calculated fields and measures. It finishes with visualizing data through reports and charts, and applying drill-up, drill-down, bookmarks and navigation features.

WHO THIS COURSE IS FOR

Data Analysts

Business Analysts

Report Developers

Excel Users

BI Developers

LEARNING OBJECTIVES

- Create and format Pivot Tables and Pivot Charts
- Apply Power Query to import, clean and transform data
- Build calculated columns and measures with DAX in Power Pivot
- Design interactive Excel dashboards with slicers and timelines
- Build data models with relationships, hierarchies and schemas in Power BI
- Apply DAX functions such as CALCULATE, FILTER and SWITCH
- Build and format Power BI report visuals and charts
- Configure drillthrough filters, bookmarks and navigation buttons

8 Modules, 113 Topics

DAY 1

Advanced Excel Techniques for Dashboard

01

Working with Reports and Graphs

INTRODUCTION TO PIVOT TABLES

- **Understanding Pivot Tables:** What they are and why they are important
- **Basic Structure:** Rows, Columns, Values, and Filters
- Creating a simple Pivot Table from a data set

FORMATTING AND CUSTOMIZING PIVOT TABLES

- Formatting options for better readability (fonts, colors, etc.)
- Customizing Pivot Table designs
- Using Report Layouts to adjust the structure of Pivot Tables

ADVANCED OPTIONS OF PIVOT TABLES

- Sorting and Filtering within Pivot Tables
- **Grouping data:** Dates, Numbers, and Text
- Using Value Field Settings

USING GROUP FEATURES IN PIVOT TABLES

- Grouping data by time (years, months, quarters)
- Grouping numbers into ranges
- Custom groupings for better analysis

WORKING WITH PIVOT CHARTS

- Introduction to Pivot Charts and how they are linked to Pivot Tables
- Creating Pivot Charts
- Customizing Pivot Chart formatting

INSERTING NORMAL CHARTS

- Overview of different chart types (Column, Line, Pie, etc.)
- Creating a basic chart from a data set
- Customizing chart elements (titles, labels, axes)

INTRODUCTION TO POWER QUERY

- What is Power Query and why is it essential for data transformation
- **Basic features:** Importing data, transforming data, cleaning data
- **Practical example:** Using Power Query to clean and organize data

INTRODUCTION TO POWER PIVOT

- What is Power Pivot and its role in data modeling
- Setting up Power Pivot and connecting multiple data sources
- Using Power Pivot to create advanced calculations

WORKING WITH DAX

- What is DAX (Data Analysis Expressions)
- **Creating basic DAX measures:** SUM, AVERAGE, COUNT
- Introduction to calculated columns and measures in Power Pivot

Creating Interactive Dashboards

CREATING A DASHBOARD WITH PIVOT TABLES & CHARTS

- Overview of Dashboard Elements (Pivot Tables, Pivot Charts, Slicers)
- Combining Pivot Tables and Charts for dynamic reporting
- Designing a functional and visually appealing dashboard layout

CREATING A RELATIONSHIP BETWEEN SLICERS AND PIVOT TABLES / CHARTS

- What are Slicers and how do they help in filtering data across multiple Pivot Tables
- Setting up Slicer connections
- Using multiple Slicers to filter different Pivot Tables and Charts

CREATING TIMELINES

- Understanding the Timeline feature for date-based filtering
- Adding a Timeline to a dashboard
- Customizing the Timeline to filter Pivot Tables and Charts

USING SLICER/TIMELINE OPTIONS

- **Advanced features of Slicers:** Multiple Slicers, Formatting, and Customizing
- Using Timeline options to select specific periods or ranges
- Combining Slicer and Timeline functionality for comprehensive analysis

DESIGNING DASHBOARD LAYOUTS

- Organizing your dashboard layout for clarity and usability
- Sizing and aligning objects on the dashboard
- Using text boxes, images, and other elements for a professional dashboard look

USING A THEME TO MAKE AN INTERACTIVE DASHBOARD

- What is a Theme, and how does it affect the appearance of a dashboard
- Applying and customizing built-in themes in Excel
- Creating a cohesive color scheme for a dashboard to make it visually appealing

Working with Power BI

Day 2 & 3

Introduction to Power BI

Connecting & Shaping Data

Creating a Data Model

TOPICS

- Database Normalization
- Fact & Dimension Tables
- Primary & Foreign Key
- Creating Table Relationships
- Managing & Editing Relationships
- Star & Snowflake Schemas
- What's the meaning of Active & Inactive Relationships
- Connecting Multiple Fact Tables
- Filter Context & Filter Flow
- Bi-Directional Filters & Ambiguity
- Hiding Fields from Report View
- Data Formats & Categories
- Creating Hierarchies

Calculated Fields with DAX

TOPICS

- Data Analysis Expressions
- DAX vs. M Languages
- Intro to DAX Calculated Columns
- Intro to DAX Measures
- Implicit vs. Explicit Measures
- Quick Measures
- Calculated columns vs. Measures
- Dedicated Measure Tables
- Understanding Filter Context
- DAX Syntax & Operators
- Common DAX Function Categories
- Basic Math & Stats Functions
- Counting Functions
- Conditional & Logical Functions
- The SWITCH Function
- Common Text Functions
- Basic Date & Time Functions
- Joining Data with RELATED
- The CALCULATE Function
- DAX Measure Totals
- The ALL Function
- The FILTER Function
- Iterator (X) Functions
- Time Intelligence Patterns

Visualizing Data with Reports

TOPICS

- Introduction to reports in Power BI
- 3 Key Questions
- Dashboard Design Framework
- Sketching the Dashboard Layout
- Adding Report Pages & Objects
- Naming & Grouping Objects
- Cards & Multi-Row Cards
- Building & Formatting Charts
- Line Charts
- KPI Cards
- Bar & Donut Charts
- Basic Filtering Options
- Table & Matrix Visuals
- Conditional formatting
- Top N Filtering
- Top N Text Cards
- Map Visuals
- Report Slicers
- Gauge Charts
- Area Charts

Drill Up & Drill Down

TOPICS

- Drillthrough Filters
- Editing Report Interactions
- Adding Bookmarks
- Custom Navigation Buttons
- Numeric Range Parameters
- Fields Parameters
- Importing Custom Visuals
- Managing & Viewing Roles
- Mobile Layouts
- **PREVIEW:** Publishing to Power BI Service
- Data Visualization Best Practices

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

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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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