

## DAX with Power BI Course Outline

This course is intended for business users who have been using Power BI to build analytic solutions and are ready to take advantage of the power and flexibility that DAX provides. Learning DAX is a very common next step for experienced Power BI users.

### Prerequisites

Although experience with Power BI Desktop is not strictly required for this class, students with at least some familiarity will be better equipped to get the most out of the lab work.

### DAX functions that are covered in this class include:

- **Date and time functions:** CALENDAR(), DATE(), DATEDIFF(), NOW(), WEEKDAY(), WEEKNUM(), YEAR(), MONTH(), DAY()
- **Filter functions:** ALL(), ALLCROSSFILTERED(), ALLEXCEPT(), ALLSELECTED(), CALCULATE(), CALCULATETABLE(), FILTER(), KEEPFILTERS(), LOOKUPVALUE(), REMOVEFILTERS()
- **Information functions:** CONTAINS(), HASONEFILTER(), HASONEVALUE(), ISBLANK(), ISEMPTY(), ISERROR(), USERNAME()
- **Logical functions:** AND(), COALESCE(), IF(), IF.EAGER(), IFERROR(), NOT(), OR(), SWITCH(), TRUE(), FALSE()
- **Math and Statistical Functions:** DIVIDE(), SUM(), SUMX(), AVERAGE(), AVERAGEX(), COUNT(), COUNTBLANK(), COUNTROWS(), COUNTX(), DISTINCTCOUNT(), MAX(), MAXX(), MEDIAN(), MEDIANX(), MIN(), MINX(), RANKX()
- **Table manipulation functions:** CROSSJOIN(), DATATABLE(), NATURALINNERJOIN(), VALUES()
- **Text functions:** CONCATENATEX(), FIND(), LEFT(), LEN(), MID(), REPLACE(), SEARCH(), TRIM(), VALUE()
- **Time intelligence functions:** DATEADD(), DATESBETWEEN(), DATESMTD(), DATESQTD(), DATESYTD(), PARALLELPERIOD(), SAMEPERIODLASTYEAR(), TOTALMTD(), TOTALQTD(), TOTALYTD

## **Getting started with DAX**

- What is DAX?
- Basics of DAX syntax
- Creating a calculated column
- Creating a calculated measure
- Creating a calculated table
- Differences in evaluation context
- Rules of evaluation
- Working with variables
- Commenting your code
- Testing your code

## **Performing basic calculations**

- Implicit measures
- Adding quick measures
- Doing basic math
- Using logic in your calculations
- Aggregating and summarizing data
- Working with DAX data types

## **Working with context in the data model**

- Context defined
- Data modeling basics
- Introduction to dimensional modeling
- Relationships and their effect on the evaluation context
- Getting data from other tables using RELATED and RELATEDTABLE
- Modifying the context using CALCULATE
- Looking up data without using relationships

## **Performing more advanced calculations**

- Handling errors gracefully
- Using DAX iterator functions
- Using table manipulation functions
- Troubleshooting your calculations using the Performance Analyzer and DAX Studio

## **Working with time**

- Performing date calculations
- Working with date tables
- Generating a date table with the CALENDAR() function
- Defining custom operating periods
- YTD, QTD, and MTD calculations
- Custom to-date calculations
- Finding year-over-year change
- Finding moving averages

## **Enhancing the user experience**

- Controlling visibility of your measures
- Using What-if parameters
- Adding banding
- Using DAX to provide row-level security

**Above is our standard course outline, please suggest if you would like to include also few topics during the training to make sure it covers all your requirements and make this course a customized course.**



[www.cybermodo.com](http://www.cybermodo.com)

Suite 507, Rania Business Center,  
Al Barsha, Dubai, UAE (Next to MOE)  
P.O. Box 38395, Dubai, UAE  
Tel: +971- 4-4579128 Fax: +971-4-4579129  
Mobile: +971- 55- 1136109

**Approved by KHDA Educational Services, Dubai, Permit No: 60359, DED License No. 649459**