

# Course Outline

## Microsoft Power BI

### DAX Fundamentals



#### **Duration: 1 day**

This course is an introduction to the DAX language to create your own calculated columns and measures.

DAX, short for Data Analysis eXpressions is the language behind Power BI. It's a powerful language that's evaluated through the filter context of the Power BI Data Model. This "Filter context" can cause new users to experience problems with DAX until they learn how it works. Once mastered, creating effective DAX formulas will help you get the most out of your data. When you get the information you need, you can begin to solve real business problems that affect your bottom line. This is Business Intelligence, and DAX will help you get there.

#### **To get the most out of this course**

You should be a competent Microsoft Excel user. You don't need any experience of using DAX but we recommend that you attend one of our 2-day Microsoft Power BI courses prior to taking this course.

#### **What you will learn:**

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##### **Importing Your Data and Creating the Data Model**

*Overview of importing data into the Power BI Desktop and creating the Data Model.*

##### **Creating Calculated Columns**

*How to use DAX expressions in Calculated Columns.  
Using AND and OR operators (&& and ||).  
Using RELATED to look up values from related tables.  
Understanding de-normalisation.*

##### **Creating Measures**

*Why use Measures and opposed to Calculated Columns?  
Implicit and Explicit Measures.  
How to Create Measures using SUM & AVERAGE  
Using COUNTROWS and DISTINCTCOUNT.  
Using DAX aggregate functions; SUMX, AVERAGEX etc*

##### **Evaluation Context**

*What is Evaluation Context?  
The difference between evaluations using Row Context and evaluations using Filter Context.*

##### **Working with Filter Context**

*Using SELECTEDVALUE to retrieve filtered values  
Dynamic Titles using SELECTEDVALUES  
Scenario planning using Parameter Tables*

##### **Working with Table Functions**

*Overview of DAX Functions that output Tables.  
Using ALL, FILTER and VALUES functions.  
Creating Parameter Tables.*

##### **CALCULATE Function**

*Exploring the importance of the CALCULATE function.  
Using complex filters within CALCULATE using FILTER.  
Using ALL & ALLSELECTED Functions.*

##### **Generating Dynamic DateTables**

*What is a Date Table ?  
Generating Dynamic Date Tables in DAX*

##### **Time Intelligence Functions**

*Why Time Intelligence Functions?  
Using the Time Intelligence Functions  
Finding Month to Date, Year To Date, Previous Month and Same Period Last Year.  
Creating Moving Annual Totals and Moving Averages.*