

# POWER BI WITH DAX

Enhance your skills on DAX with Power BI

## Introduction

This workshop is a complete course about the DAX language. DAX is the native language of Power BI, Power Pivot for Excel, and SSAS Tabular models in Microsoft Server Analysis Services. The training is aimed at users of Power BI, Power Pivot for Excel, and at Anlaysis Services developers that want to learn and master the DAX language. This course covers the latest version of DAX 2019.

# **Training Duration**

#### 3 Full Days

#### Who Should Attend?

- Data Users
- Engineers

## Objectives

After completing this course, students will be able to:

- Understand all the features of the DAX language
- Write formulas for common and advanced scenarios

## Pre-requisites

Attendees need to have a basic knowledge of the data modelling in Power Pivot for Excel, or Power BI Desktop, or Analysis Services Tabular modelling.

## Methodology

This program will be conducted with interactive lectures, PowerPoint presentation, discussion and practical exercises.

#### **Audience**

A Dynamics 365 Customer Engagement Functional Consultant is responsible for performing discovery, capturing requirements, engaging subject matter experts and stakeholders, translating requirements, and configuring the solution and applications. The Functional Consultant implements a solution using out of the box capabilities, codeless extensibility, application and service integrations.

## **Course Outline**

#### **Module 1: Introduction to DAX**

- What is DAX?
- DAX data types
- · Calculated columns
- Measures
- Aggregation functions
- Counting values

- Conditional functions
- Handling errors
- Using variables
- Mathematical functions
- Relational functions

#### **Module 2: Table Functions**

- Introduction to table functions
- Filtering a table Ignoring filters
- · Mixing filters
- DISTINCT Function
- How many values for a column?

- ALLSELECTED function
- RELATEDTABLE function
- Tables and relationships
- Tables with one row and one column
- Table variables

#### **Module 3: Evaluation Contexts**

- Introduction to evaluation contexts
- Filter context
- · Row context
- Context errors
- Filtering a table

- Using RELATED in a row context
- Ranking by price
- Evaluation contexts and relationships
- Filters and relationships

#### **Module 4: CALCULATE Function**

- Introduction to CALCULATE function
- CALCULATE function examples
- CALCULATE function recap
- What is a filter context?
- KEEPFILTERS function

- CALCULATE operators
- Use one column only in a compact syntax
- Variables and evaluation contexts

## **Module 5: Iterators**

- · Working with iterators
- MINX and MAXX functions
- Useful iterators
- RANKX function
- ISINSCOPE function

## Module 6: Time Intelligence in DAX

- What is time intelligence?
- Time intelligence functions
- DATEADD function
- DATESINPERIOD function
- Running total
- Mixing Time Intelligence functions
- Semi-addictive measures
- · Calculation over weeks

#### **Module 7: Hierarchies in DAX**

- What are hierarchies?
- FILTER and CROSSFILTER function
- Percentages over hierarchies
- Parent-child hierarchies

#### **Module 8: ALLSELECTED & Shadow Filter Contexts**

- ALL SELECTED function revisited
- Shadow filter contexts

#### Module 9: Segmentation

- Static segmentation
- Circular dependency in calculated tables
- Dynamic segmentation

## Module 10: Many-to-many Relationships

- How to handle many-to-many relationships
- · Bidirectional filtering
- Expanded table filtering
- Comparison of the different techniques

# **About Elite Indigo**

Elite Indigo Consulting provides corporate training to the semiconductor and manufacturing industries. With a humble beginning of one founding member with passion and desire to share his 20 years of experiences in Smart Manufacturing for global manufacturing facilities, now, we have a strong and competent team of 20 members, all aligned with company mission, vision and core values.

#### Our Mission

"Transform Data into Insights - Leap Forward"

#### Our Vision

Be a Global Trusted Advisor in the Areas of Skills Development, Consultancy & Software Solutions specialising in Semiconductor & Manufacturing industries.

#### Our Core Values

