

COURSE OUTLINE		
	Program Name: Power BI - DAX in a Day (customised L3)	
	Software App: MS Power BI Desktop	
	Duration: 8.0 hrs. (10 AM - 6 PM)	
	Level: Intermediate to Advanced	
	Target Learners: Learners who have completed L1-L2 level (Basic to Intermediate) of Power BI training	
	Program Objective:	
	By the end of this session, you will be able to understand and apply the:	
	1. Top 10 essential concepts, theories and fundamentals of how DAX works	
	2. The top 10 commonly used DAX measures	
	3. Basics of Data Modeling & Relationship cardinality	
	Coverage:	
	Writing DAX formulas.	
	Defining calculated tables and columns.	
	Defining measures.	
	Using DAX iterator functions.	
	Modifying filter context.	
	Using DAX time intelligence functions.	
	Important Note:	
	This is a hands-on practice based workshop. Learners are expected to complete the program pre-requisites before the start of the program.	
	Program Pre-requisite:	
	1. Download and Install Power BI Desktop (free) from this Microsoft link - https://www.microsoft.com/en-us/download/details.aspx?id=58494 (PBIDesktopSetup_x64.exe)	
	2. Download the detailed case studies and PDF material from the link shared in the email.	
	3. 25-mins 'Pre-Training Prep' video course - courses.yodalearning.com/p/introduction-to-power-query-and-power-bi-desktop/	
1	Fast recap of earlier session	30 Mins
1	Visualisation, Power Query	
2	Basics of Data Modeling & Relationship cardinality	25 Mins
1	What is a Data Model?	
2	Relationship Cardinality - Uniqueness of Values in Columns	
3	What are Table relationships? What are active relationships?	
4	Most popular Table relationship - One to Many	
5	Data Tables (FACT or Transactions Tables) vs. Lookup Tables (DIM or Master Table)	
6	'Manage relationship' feature	
7	Recommended reading -	
	Database Normalization: Concepts & Rules (1NF, 2NF, 3NF)	
	What is Denormalization?	
	Key Types: Primary, Foreign, Composite	
	Star Schema	

3 Using DAX - Data Analysis Expression		280 Mins
1	"DAX is simple, but it is not easy."	
2	What is DAX? Why is it needed?	
3	How DAX works in the background?	
4	Calculated Columns & Measures	
5	Implicit Measures vs Explicit Measures	
6	New Measure or New Column - Which one to use when?	
7	Evaluation Context = [Filter + Row] Context; Context Transition	
8	Iterator function (SUMX)	
9	Exercise: Discount calculation [Sales x Disc %] using Calculated Column, SUM, SUMX	
10	Overview - 'Quick Measure' for readymade DAX Patterns	
11	Why create a measure for a simple thing as SUM?	
12	What is the concept of Time Intelligence functions? Where is it used? - Date Master (List of unique dates with no gaps) - One to Many relationships	
13	How to add Comments in a DAX	
14	CALENDARAUTO	
15	CALENDAR with DATE, MAXX and MINX	
16	CALCULATE & the concept of modifying Filter context	
17	CALCULATE with DATEADD (compare sales of different periods)	
18	DATESINPERIOD	
19	FIRSTDATE, LASTDATE	
20	DATESYTD, TOTALYTD	
21	DIVIDE (handles error cases)	
22	ALL vs ALLSELECTED	
23	Using in-built filters of CALCULATE with operators for AND / OR logic	
24	CALCULATE with FILTER	
25	DISTINCTCOUNT (unique customers, products etc.)	
26	COUNTROWS (total transactions)	
27	RELATED	
28	IF vs. SWITCH [if time permits]	
4 Overview of some report visualisation features		30 Mins
1	Toggle-based Charts view: Use Shapes as buttons along with 'Selection Pane' & 'Bookmarks'	
2	Using 'New Parameter' to create 'What if' - GENERATESERIES, SELECTEDVALUE	
3	Custom Tooltip - On hover visuals	
4	Overview of DAX Suggestions (new update)	
End		