PST TRAINING (PTY) LTD

PST Training (Pty) Ltd

Physical Address: Montrose Place, 2nd Floor, Bella Rosa Street, Rosenpark, Bellville, 7500
Phone: 021 914 0850
Fax: 086 634 6330
Cell: 082 894 6643
Email: info@psttraining.co.za

Microsoft Power BI (Dax Formulas)

Overview

This one-day advanced course builds on the foundational skills covered in Power BI (Level 1). Participants will deepen their understanding of DAX formulas, data modelling and advanced reporting techniques. The course introduces calculated columns and measures, advanced time intelligence functions and the creation of dynamic, automated reports. Learners will also gain experience designing measures tables and optimising their data models for enhanced performance and analysis.

By the end of the course, delegates will be able to create robust, professional Power BI reports that support HR, Payroll, Training and other business functions with accurate, interactive data insights.

Objectives

Participants will learn to:

- Generate and manage Date Tables using DAX, CALENDAR and CALENDARAUTO.
- Apply advanced DAX date and time functions such as DAY, MONTH, YEAR, WEEKDAY, WEEKNUM and QUARTER.
- Use calculated columns and measures to enhance data models.
- Implement logical and conditional formulas using IF, AND, OR, SWITCH and nested functions.
- Employ X-functions (SUMX, AVERAGEX, COUNTX, MINX, MAXX) for iterative calculations.
- Apply filter and ranking functions such as ALL, REMOVEFILTERS, ISBLANK and RANKX.
- Create time-based measures like Year-to-Date, Prior-Year and Opening Balance calculations.
- Build and maintain a Measures Table to streamline reporting.
- Optimise calculations and prepare data models for efficient, interactive reporting.

Course Prerequisite

Power BI (Level 1) or equivalent experience

Language of Delivery

English

Delivery Methods

Facilitated by a competent and experienced subject-matter trainer using interactive, experiential techniques such as questions, demonstrations, discussions and hands-on exercises.

Who should attend?

This course is designed for users who already have basic knowledge of Power BI and want to perform advanced data modelling and analytical reporting. It is especially beneficial for:

- Data Analysts and Business Intelligence Professionals
- HR and Payroll Analysts
- Training and L&D Managers
- Finance, Accounting and Operations Managers
- Project Managers and Business Advisors

Course Outline

This course consists of the following 4 modules	
Module 1	**Date Tables** • Generate Date Tables using DAX, CALENDARAUTO, and CALENDAR • Apply DAY, MONTH, YEAR, WEEKDAY, WEEKNUM, and QUARTER functions • Create combined fields: Month & Year, Quarter & Year • Use TODAY and DATEDIFF to calculate ages and durations • Apply EDATE for date offsets
Module 2	**Calculated Columns and Functions** • Create Calculated Columns • Use DIVIDE, RELATED, and RELATEDTABLE functions • Build formulas with IF, AND, OR, and SWITCH logic • Apply SUMX, AVERAGEX, COUNTX, MINX, and MAXX for advanced calculations • Combine text fields using CONCATENATE
Module 3	**Calculated Measures and Advanced DAX** • Create Calculated Measures using IN, ALL, and REMOVEFILTERS • Develop measures for Total Sales, YTD Sales, Prior Year Sales, and Fiscal YTD • Apply RANKX and ALLSELECTED for ranking and top-N analysis • Calculate Opening Balances and Weekday Sales using LASTDATE and LASTNONBLANK

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Module 4	**Measures Table Management** • Create a dedicated Measures Table • Save, edit and delete measures • Organise measures into folders for efficient navigation

Additional Information

Duration	1 Day	
Includes	• Comprehensive Manual • Lunch & Refreshments (not applicable to on-site / online training)	• Electronic Certificate (on successful completion of the course) • Electronic Delegate Feedback Questionnaire

PST Training (Pty) Ltd has been assessed and accredited as having satisfactorily met the MICT ETQA Specified Training Provider criteria.
It provides an accepted benchmark of knowledge and skills, ensuring specified levels of competency and ability in terms of industry standards.
Accreditation Number - ACC/2007/02/603.

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