TECRIONIX

Modern Excel for Data Analysis:

Live Online & On-site Training Program

From formulas to automated, decision-ready reports

Program Overview

Designed for intermediate and advanced Excel users, this hands-on program goes beyond traditional spreadsheets and introduces the modern capabilities of Excel for analysis, modeling, reporting, and automation. Through real-world business scenarios, participants will learn to harness modern Excel functions and features such as Dynamic Array Functions, XLOOKUP, LAMBDA, LET, Power Query, Power Pivot, and DAX to build efficient reporting solutions, develop interactive dashboards, and deliver meaningful insights for better decision-making.

The program emphasizes modern tools and techniques that enable professionals to work smarter, automate repetitive tasks, and unlock the full analytical power of Excel.

Led by experienced BI practitioners, this program is ideal for professionals who want to elevate their analytical thinking, enhance productivity, and harness the full power of Excel for modern data analysis and automation.

Prerequisites

This program is intended for intermediate and advanced Excel users who are comfortable working with formulas, worksheets, and basic data analysis. Participants should have a working knowledge of Excel and a desire to develop modern analytical, reporting, and automation skills.
No prior knowledge of Power Query, Power Pivot, or DAX is required. Participants need Excel for Microsoft 365 on Windows, as several features covered, such as GROUPBY, PIVOTBY, and Power Pivot, are not available in older Excel versions or on Mac.

Training Benefits:

By the end of this training, you will be able to:

- Utilize Dynamic Array Functions and modern Excel features.
- Apply XLOOKUP, LET, and LAMBDA to simplify complex calculations.
- Transform and automate data preparation using Power Query.
- Build analytical models with Power Pivot and DAX.
- Create dynamic reports and interactive dashboards.

- Integrate and analyze data from multiple sources.
- Design scalable and reusable reporting solutions.
- Use AI assistants and Copilot to write formulas and analyze data faster.
- Improve productivity and support better business decisions with Modern Excel.

Training Modules:

Module 01: Modern Excel Mindset & Setup

- Excel as a data engine vs. a traditional spreadsheet tool
- Structured Tables vs. ranges: best practices for scalability
- Dynamic arrays vs. legacy formulas: a shift in approach
- Workbook architecture for large models: separating inputs, calculations, and outputs
- Excel versions explained: which features need Microsoft 365

Module 02: Modern Lookups & Core Formula Logic

- XLOOKUP in depth: exact/approximate, reverse, horizontal, and multi-condition lookups
- Comparing VLOOKUP/HLOOKUP and INDEX + MATCH with XLOOKUP and XMATCH
- Clean error and missing-data handling: IFERROR, IFNA
- Modern decision logic: IFS, SWITCH

Module 03: Dynamic Array Functions

- Filtering and sorting: FILTER, SORT, SORTBY, UNIQUE, SEQUENCE, RANDARRAY
- Reshaping and stacking: VSTACK, HSTACK, TOCOL, TOROW, TAKE, DROP, CHOOSECOLS, CHOOSEROWS, WRAPROWS, WRAPCOLS, EXPAND
- Text parsing: TEXTSPLIT, TEXTBEFORE, TEXTAFTER
- Formula-driven aggregation: GROUPBY, PIVOTBY
- The spill operator #, spilled-range references, and dependency management
- Reducing or eliminating helper columns

Module 04: Advanced Formula Engineering: LET & LAMBDA

- LET for readability and performance (compute once, reuse)
- LAMBDA to build reusable custom functions without VBA
- Functional helpers: MAP, REDUCE, SCAN, BYROW, BYCOL, MAKEARRAY
- Saving and sharing LAMBDA functions with the Name Manager, including recursion
- Simplifying nested logic into named, testable functions

Module 05: Power Query for Data Transformation & Automation

- Import from files, folders, workbooks, the web, and databases, and build repeatable refresh steps
- Clean and standardize data: data types, trimming, split/merge, removing errors and blanks, fill down
- Reshape for analysis: unpivot/pivot, append, merge (joins), group by
- M-language basics: the formula bar, custom steps, parameters, and reusable query functions
- Automation without VBA: refresh-ready flows for monthly and weekly reporting

Module 06: Building Data Models for Relational Reporting

- Why models beat flat tables for BI reporting
- Relationships: keys, granularity, avoiding many-to-many pitfalls
- Fact vs. dimension tables, and building a simple star-schema model
- Calculated columns vs. measures — when to use each
- Build a proper date/calendar table

Module 07: Power Pivot & DAX for Advanced Analytics

- Filter context and row context — so measures behave correctly in dashboards
- Core functions: CALCULATE, SUMX and iterators, DIVIDE, KEEPFILTERS, REMOVEFILTERS
- KPI patterns: totals, ratios, variance, % change, running totals
- Time intelligence: YTD, MTD, prior period, period-over-period
- Use DAX measures in PivotTables for dynamic reports and dashboards

Module 08: Dynamic Reports with PivotTables & PivotCharts

- Build PivotTables the right way: layout, grouping, field settings
- Advanced behavior: sorting, "Show Values As" (% of total, running total, rank), calculated fields
- PivotTables from the Data Model vs. a single range
- Pivot cache and performance tips for large datasets
- When GROUPBY and PIVOTBY are a better choice than PivotTables, plus common limitations and workarounds

Module 09: Visual Analytics with Advanced Charts

- Chart selection by data type and message
- Modern business charts: combo, waterfall/variance, funnel, histogram, treemap
- PivotCharts tied to slicers and filters
- In-cell visuals: sparklines, data bars, color scales
- Presentation-grade chart formatting

Module 10: Designing Interactive & Dynamic Dashboards in Excel

- Layout principles: grid, visual hierarchy, spacing, consistency
- Combine dynamic arrays, PivotTables, and slicers on one canvas
- Slicers and timelines, multi-pivot interactivity, slicer panels, and reset patterns
- Dynamic titles and KPI cards driven by formulas
- User navigation and filter experience, and avoiding cluttered reports

Module 11: Working Smarter with AI (Copilot, ChatGPT, Claude etc.)

- Understand what AI assistants are, and how they support everyday Excel work
- Use Copilot in Excel (where licensed) to analyze data, suggest formulas, and highlight insights

- Get help writing, explaining, and fixing formulas, LAMBDA functions, and Power Query steps in plain business language
- Turn numbers into clear summaries and commentary for management
- Write clear prompts and check AI answers before they reach a report
- Use AI responsibly: data privacy, company policies, and what should never be shared with an AI tool

Module 12: Protecting Worksheets and Workbooks

- Protect sheets, cells, and workbook structure, and understand what Excel protection does and does not secure
- Version history, AutoSave, and file recovery with OneDrive and SharePoint
- Workbook properties and the Document Inspector to remove hidden data
- Prepare files for secure sharing

About Your Trainer



Muhammad Imran

BI Consultant | Corporate Trainer | Power BI | Excel

16+ years of professional experience · 8+ years in Business Intelligence · Pakistan, the Middle East and Southeast Asia

Muhammad Imran is an experienced **Business Intelligence Consultant and corporate trainer with over 16 years** of professional experience, including over 8 years specializing in Business Intelligence, analytics, reporting automation, and data-driven transformation.

He has conducted on-site and online corporate training for hundreds of professionals across diverse business functions. His training approach emphasizes simplifying complex concepts through practical, real-world business scenarios, enabling participants to confidently apply the skills in their day-to-day work.

He has worked across Pakistan, the Middle East, and Southeast Asia, delivering Power BI solutions across diverse industries and business functions. His expertise spans Finance, FP&A, Treasury, Supply Chain, Retail, Sales, Inventory, HR, and Operations, combining strong business understanding with hands-on technical expertise.

Training Approach

Hands-on, scenario-based learning using practical business examples, with an emphasis on building participants' confidence and ability to independently develop and maintain Excel reports and dashboards.

Microsoft Certifications

- Microsoft Certified: Power BI Data Analyst Associate *(PL-300)*
- Microsoft Certified Solutions Associate: BI Reporting *(MCSA)*
- Microsoft Office Expert: Microsoft Excel 2016 *(MOS Excel)*
- Microsoft Office Specialist: Microsoft Outlook 2016 *(MOS Outlook)*

Selected Projects and Business Impact

Portfolio Performance & Investment Visibility — Saudi Arabia

At **Majd Development & Investment Company (Al Majdouie Group)**, established a structured reporting framework for multi-asset portfolios, giving investment leadership clearer visibility into portfolio performance, AUM, and investment decision-making.

Finance Transformation & Reporting Automation — UAE

At **Desertcart**, a Dubai-headquartered global e-commerce company serving 100+ countries, supporting Finance transformation by replacing manual reporting with automated management reporting across month-end, revenue, cost, P&L, Balance Sheet, Cash Flow, budgeting, treasury, and profitability.

Telecom Analytics — Bahrain

At **Batelco**, Bahrain's leading telecommunications company and part of the Beyon Group, delivered Power BI analytics across subscriber base, utilization, traffic, and revenue, strengthening business visibility, reporting performance, data security, and stakeholder decision-making.

Retail Performance & Enterprise Visibility Across Southeast Asia

At **GMG**, a Dubai-headquartered global retail and well-being group operating across 20 countries, led regional BI delivery from Kuala Lumpur across Finance, FP&A, Treasury, Supply Chain, Retail, HR, Procurement, and Operations. Delivered 20+ Power BI dashboards for hundreds of users, reducing manual reporting effort by 60%.

Pharmaceutical Supply Chain Transformation — Pakistan

At **Highnoon Laboratories**, delivered Power BI solutions across planning, production, inventory, sales, and distribution for 350+ SKUs, supporting transformations that contributed to a 20% increase in production and 15% growth in secondary sales. At **Global Pharmaceuticals**, delivered Power BI reporting across five manufacturing plants and 400+ SKUs.

Enroll or Arrange This Training for Your Team

This program runs as public batches and as private training for companies, delivered live online or on-site. To enroll, or to discuss a session tailored to your team, contact us:

Email: imran.muhammad@tecrionix.com
Phone / WhatsApp: +92 333 6083969
Website: https://tecrionix.com/