



Course: Advanced Excel Training

Duration: 12 hours

3 Days | 4 hours per session

Trainer: Manaal Kurrumbacus

Day 1 - Data Foundations & Transformation

Objective

Enable participants to structure and clean real-world Excel data to create a reliable foundation for analysis.

Theory & Concepts

- Why data structure matters for analysis and automation
- Common real-world data quality issues (text, numbers, dates)
- Raw data vs clean data: separation of concerns
- Principles of reproducible data cleaning
- When to use formulas vs Power Query

Key Topics

- Structuring datasets using Excel Tables
- Best practices for working with raw vs clean data
- Cleaning and standardising text fields
- Identifying and fixing hidden data quality issues
- Handling missing and inconsistent numeric values
- Cleaning and standardising date fields for time-based analysis
- Creating calculated business fields such as variance and status
- Using lookup logic to standardise categories
- Introduction to Power Query as an alternative data transformation approach

Hands-on Practice (Supervised Lab)

Participants will independently:

- Convert raw datasets into structured tables



- Create a clean data layer from raw data
- Standardise text, numeric, and date fields
- Apply basic business calculations
- Validate data quality and identify errors

Outcomes

- ✓ Clean, analysis-ready dataset
- ✓ Improved confidence handling messy real-world data
- ✓ Clear understanding of data quality principles



Day 2 - Analysis with Advanced Pivot Tables

Objective

Analyse cleaned data using advanced PivotTable techniques to uncover trends, variances, and performance insights.

Theory & Concepts

- Analytical thinking: turning data into questions
- Time-based analysis concepts
- Comparative and trend analysis techniques

Key Topics

- Building core PivotTables for budget vs actual analysis
- Variance analysis by project and department
- Time-based analysis using grouped dates
- Categorising numerical data into meaningful ranges
- Creating advanced pivot metrics
- Trend analysis using running totals
- Designing multiple analytical views from the same dataset
- Interactive filtering using slicers and timelines
- Connecting slicers across multiple PivotTables [Hands-on Practice](#)

(Supervised Lab)

Participants will independently:

- Build multiple PivotTables from the same dataset
- Analyse variance by different dimensions
- Perform time-based and trend analysis
- Create interactive views using slicers and timelines
- Answer business questions using PivotTables

Outcomes

- ✓ Robust analytical reporting model



- ✓ Clear visibility into performance drivers
- ✓ Interactive, user-driven analysis



Day 3 - Visualisation, Dashboards & Automation

Objective

Transform analysis into executive-ready dashboards and introduce automation using Python in Excel.

Theory & Concepts

Visualisation & Storytelling

- How decision-makers consume data
- Choosing visuals based on insight, not aesthetics
- Avoiding common dashboard design mistakes
- Principles of effective data storytelling

Automation & Python in Excel

- Where Excel formulas and PivotTables reach their limits
- Why automation matters in modern analytics
- When to use Excel vs Python
- Overview of analytical workflows using Python

Key Topics

Visualisation & Dashboards

- Applying insight-driven conditional formatting
- Highlighting performance using indicators
- Choosing the right charts for different analytical questions
- Creating charts directly from PivotTables
- Designing clean, interactive dashboards
- Dashboard layout, alignment, and usability best practices

Automation with Python in Excel

- Overview of Python integration within Excel
- Importing Excel data into Python
- Data exploration and distribution analysis
- Identifying outliers and exceptions



- Ranking and summarising performance
- Creating charts using Python
- Comparing Excel vs Python approaches for analysis and automation

Hands-on Practice (Supervised Lab)

Participants will independently:

- Build an interactive dashboard from their analysis
- Apply conditional formatting to highlight insights
- Create charts for executive reporting
- Perform basic automated analysis using Python in Excel
- Compare manual vs automated approaches

Outcomes

- ✓ Executive-level interactive dashboard
- ✓ Strong data storytelling skills
- ✓ Understanding when and how to use Python to extend Excel