INTERNATIONAL TRAINING INSTITUTE



MICROSOFT EXCEL WITH AI

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Course Overview

This three-day workshop gives you practical, hands-on training in Microsoft Excel - one of the most widely used tools in business and workplaces around the world. Whether you are new to Excel or want to take your skills to a higher level, this course is designed to guide you step by step from the basics all the way through to advanced features, data analysis, and modern AI-powered tools.

You will learn how to work with data confidently - cleaning it, organising it, analysing it, and presenting it in a clear and professional way. By the final day, you will have built interactive dashboards and learned how to use AI tools to speed up your work and make better decisions from your data.

No prior experience with Excel or data analysis is needed. If you have used Excel before, even at a basic level, you will find this course builds on what you already know and opens up a whole new range of possibilities.

Learning Outcomes

By the end of this course, participants will be able to:

1. Navigate Excel confidently and work with data, formulas, and formatting
2. Use a wide range of Excel functions to analyse and summarise data
3. Clean, reshape, and prepare data using Power Query
4. Build structured data models using PivotTables and PivotCharts
5. Apply advanced formulas including XLOOKUP, dynamic arrays, and nested logic
6. Use AI tools to generate, explain, and debug formulas
7. Design professional, interactive dashboards in Excel using AI-assisted tools
8. Connect Excel data to Power BI and create interactive visual reports
9. Publish and share dashboards for team collaboration
10. Apply best practices in data presentation and reporting

DAY 1 - Foundations, Functions & Data Preparation

Module 1: Getting Started with Excel and Basic Formulas

Topics Covered:

- Introduction to Excel and its main features
- Understanding ribbons, menus, and toolbars
- Creating, saving, and managing workbooks and worksheets
- Working with data types and cell references
- Basic formatting: font, colour, alignment, borders, and number formats
- Useful keyboard shortcuts to work faster
- Using common functions: SUM, AVERAGE, MIN, MAX, and COUNT
- Performing basic arithmetic: addition, subtraction, multiplication, division, and percentages
- Applying conditional formulas: COUNTIF and SUMIF
- Understanding absolute (A1) and relative (A1) cell references
- Using AutoFill and quick formula tips
- Identifying and fixing simple formula errors
- Keyboard shortcuts for everyday Excel tasks

Learning Outcome:

Participants will be able to navigate the Excel environment with confidence, work with different data types and cell references, apply basic formatting, use essential functions and formulas for everyday calculations, and perform tasks more efficiently using keyboard shortcuts.

Module 2: Working with Logical, Text, and Date Functions

Topics Covered:

- Logical functions: IF, AND, OR, and nested IF statements
- Lookup functions: VLOOKUP and HLOOKUP for finding data across tables
- Text functions: LEFT, RIGHT, MID, LEN, TRIM, CONCATENATE and more
- Date and time functions: TODAY, NOW, DAY, MONTH, YEAR and more
- Understanding common chart types: bar, column, line, pie, and area charts
- Choosing the right chart type for your data
- Formatting and customising charts for clear presentation

Learning Outcome:

Participants will be able to apply logical, text, and date functions to automate their spreadsheets, and use basic charts and graphs to turn data into easy-to-understand visuals.

DAY 2 - Advanced Analysis, Power Query & PivotTables

Module 3: Advanced Formulas and Functions

Topics Covered:

- Advanced logical functions: IFS and IFERROR for cleaner, error-free formulas
- Modern lookup functions: INDEX-MATCH and XLOOKUP for flexible data retrieval
- Multi-condition calculations: SUMIFS, COUNTIFS, and AVERAGEIFS
- Dynamic array functions: FILTER, SORT, and UNIQUE for automatic list generation
- Combining text, date, and lookup formulas for workflow automation
- Using named ranges and structured table references for cleaner formulas

Learning Outcome:

Participants will be able to write advanced, flexible formulas that handle complex data lookups, multi-condition calculations, and dynamic outputs without manual updates.

Module 4: Power Query for Data Transformation

Topics Covered:

- Introduction to the Power Query Editor and how it works
- Connecting and importing data from Excel files, CSV files, and other sources
- Removing duplicate records, errors, and blank rows
- Splitting, merging, and renaming columns
- Changing data types and applying formatting transformations
- Grouping and aggregating data for summary analysis
- Pivoting and unpivoting data to restructure tables
- Appending and merging queries to combine data from multiple tables
- Loading clean, prepared data back into Excel for analysis

Learning Outcome:

Participants will be able to use Power Query to connect to data sources, clean and reshape messy data, and load it into Excel in a structured format ready for PivotTables and reporting.

Module 5: PivotTables and PivotCharts

Topics Covered:

- Understanding what a PivotTable is and why it is useful for data analysis
- Creating PivotTables from existing data sets
- Arranging rows, columns, values, and filters for meaningful summaries
- Grouping, sorting, and filtering data within a PivotTable
- Showing values as percentage of total or difference from a baseline
- Adding slicers for easy, visual filtering without changing the table
- Formatting and refreshing PivotTables when source data is updated
- Creating PivotCharts to present summarised data visually
- Building multi-level PivotTables for detailed breakdowns
- Show Value As options: % of Row, % of Column, Running Total, and comparison fields
- Using slicers and timelines together for interactive date-based filtering
- Combining multiple PivotTables in a single summary report
- Designing professional PivotCharts for presentations and reporting

Learning Outcome:

Participants will be able to build and customise PivotTables and PivotCharts that summarise large data sets quickly, apply interactive filters, and present findings in a clear, visual format.

DAY 3 - AI Tools, Dashboards & Power BI

Module 6: Excel with AI Integration

Topics Covered:

- Introduction to AI features available in modern versions of Microsoft Excel
- Understanding how AI supports automation, analysis, and decision-making
- Exploring Microsoft Copilot in Excel: what it can do and how to use it
- Using other AI assistants to generate and explain Excel formulas
- Applying AI tools to summarise data, identify trends, and generate insights
- Using Copilot to create PivotTables, charts, and formulas automatically
- AI-assisted data cleaning and formatting suggestions
- Using AI to write, check, and debug formulas faster

Learning Outcome:

Participants will be able to use Microsoft Copilot and AI tools to work more efficiently in Excel - generating formulas, summarising data, and identifying patterns with less effort and greater accuracy.

Module 7: Dashboard Design Using AI Tools

Topics Covered:

- Planning and structuring an effective dashboard before building it
- Combining PivotTables, charts, and key metrics into a single, clean interface
- Adding slicers, form controls, and navigation buttons for interactivity
- Creating KPI indicators using icon sets and conditional formatting
- Applying consistent themes and professional layouts for clarity and impact
- Using AI tools to generate and refine dashboard layouts automatically
- Using AI tools to recommend chart types and design improvements
- Using AI tools to plan and structure dashboard logic and layout

Learning Outcome:

Participants will be able to design and build interactive, professional Excel dashboards using AI tools - combining data, visuals, and controls into a single interface that supports clear reporting and fast decision-making.

Module 8: Introduction to Power BI for Interactive Dashboards

Topics Covered:

- Introduction to the Power BI interface and how it works alongside Excel
- Connecting Excel data to Power BI Desktop
- Creating core visuals: bar charts, pie charts, line graphs, and KPI cards
- Applying filters and building simple data relationships between tables

Learning Outcome:

Participants will be able to connect Excel data to Power BI, build interactive visual reports, and publish and share live dashboards with their team.

Practical Activities

Each day includes dedicated hands-on sessions where participants work with real-world datasets to apply the concepts covered. Activities are structured progressively across the three days:

- Day 1 - Navigating Excel, writing formulas, and applying logical, text, and date functions using realistic workplace data
- Day 2 - Cleaning and transforming data with Power Query, then building PivotTables and PivotCharts for analysis and reporting
- Day 3 - Using AI tools to generate formulas and insights, designing a complete interactive dashboard, and publishing a live report in Power BI

Who Should Attend?

- Professionals who regularly work with data and reports
- Finance, operations, HR, and administrative staff
- Business analysts and data analysts seeking to expand their skills
- Managers and team leaders responsible for reporting and performance tracking
- IT professionals supporting business intelligence initiatives
- Excel users looking to move into more advanced analysis and AI-powered tools
- Students and graduates seeking practical, in-demand data skills

Prerequisites

No prior experience with Excel or data analysis is required. Basic familiarity with Microsoft Excel will be helpful but not essential.

Course Duration

- Duration: 3 Days - 9 AM to 5 PM each day
- Mode: Face-to-face / Instructor-led
- Includes hands-on practical sessions each day

Certification

Participants who successfully complete the workshop will be awarded a Certificate of Attainment from the International Training Institute.