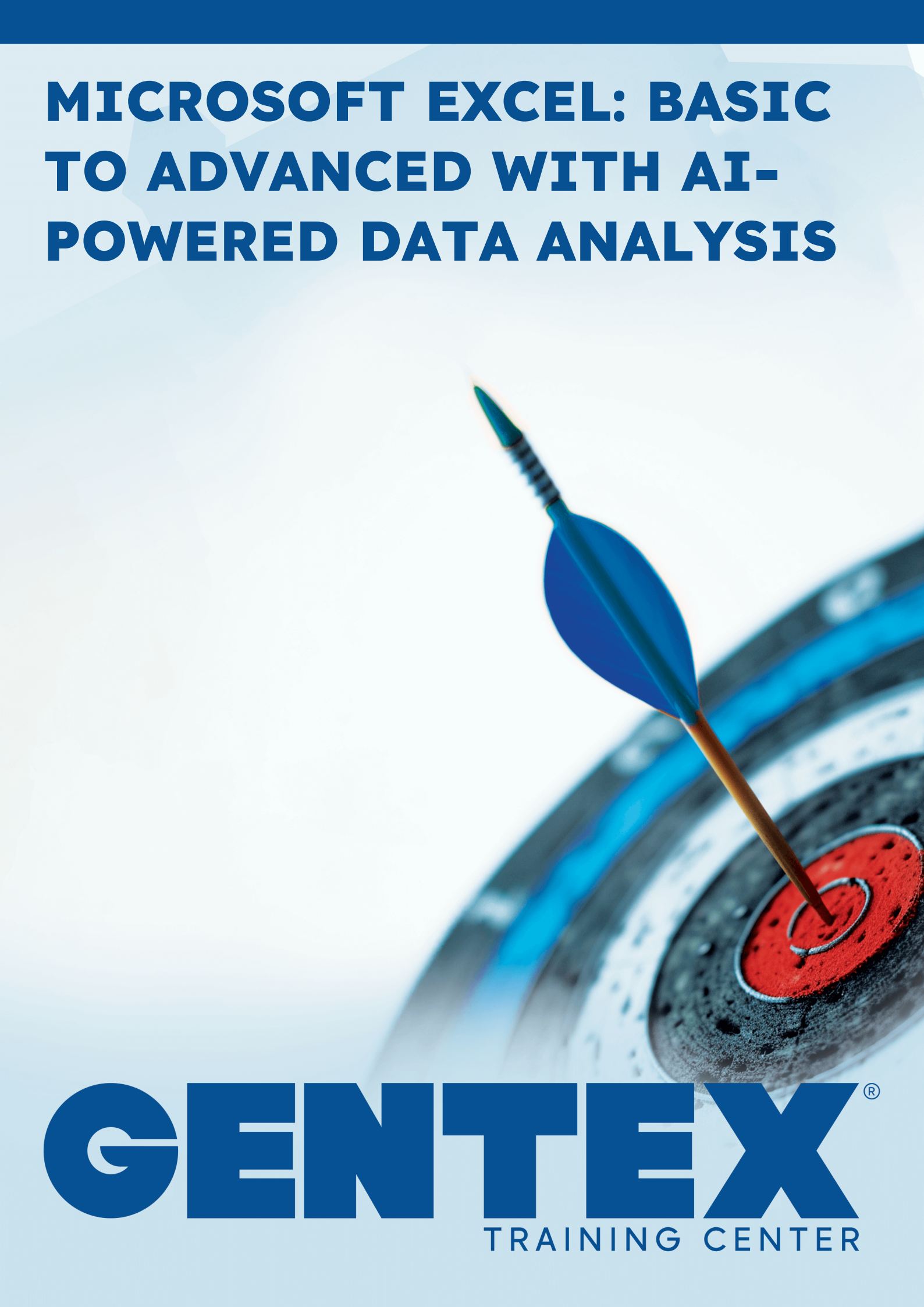
# MICROSOFT EXCEL: BASIC TO ADVANCED WITH AI-POWERED DATA ANALYSIS



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# Introduction

Excel remains the tool most professionals reach for when numbers have to become answers. Yet many users stop at basic formulas and manual work, losing hours to tasks that a well-built worksheet handles in seconds. This Microsoft Excel: Basic to Advanced with AI-Powered Data Analysis Training Course takes participants from confident spreadsheet use to professional analysis and reporting. Participants learn advanced functions, pivot tables, conditional analysis, dashboard design, and automation, and they learn how to apply AI assistants to suggest formulas, clean data, and speed up reporting. Furthermore, the course ties every technique to real workplace scenarios rather than abstract exercises.

# Microsoft Excel: Basic to Advanced with AI-Powered Data Analysis Course Objectives

- Work confidently with the Excel interface, ribbons, and workbook structure.
- Enter, format, validate, and organise data to professional standards.
- Apply essential and advanced formulas using relative and absolute references.
- Use logical, text, date, lookup, and reference functions in combination.
- Clean and prepare large datasets using Power Query and data tools.
- Build PivotTables, PivotCharts, and calculated fields for fast analysis.
- Apply conditional formatting, sorting, filtering, and what-if analysis.
- Design interactive dashboards with charts, slicers, and dynamic ranges.
- Automate repetitive tasks with macros and AI-assisted formula generation.
- Consolidate data from multiple sources and present findings clearly.

# Course Methodology

- Facilitated sessions on live workbooks with real business datasets.

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- Keyboard and formula drills using exercises drawn from office scenarios.
- Guided labs on Power Query, PivotTables, and dashboard building.
- Case studies on analysing sales, inventory, HR, and financial data.
- Group exercise on a mini reporting project with peer review.

## Who Should Take This Course

- Administrative and financial department staff.
- Supervisors, heads of department, and team leaders.
- Anyone whose work depends on reports and data analysis.
- Data entry and reporting officers.
- HR, sales, and operations support staff.
- Professionals wanting to apply AI tools inside Excel.

## Microsoft Excel: Basic to Advanced with AI-Powered Data Analysis Course Outlines

## Day 1: Excel Basics and Building a Strong Foundation

- Excel interface, ribbons, quick access toolbar, and workbook navigation.
- Entering, editing, and formatting data efficiently.
- Managing rows, columns, worksheets, and tables.
- Printing setup, freeze panes, and view management.
- Data validation, lists, and preventing input errors.
- Formulas and operators: the rules of a correct calculation.
- Relative, absolute, and mixed references with practical examples.

## Day 2: Smart Formulas and Functions

- Mathematical and statistical functions: SUM, AVERAGE, COUNT, and their conditional forms.
- Logical functions: IF, AND, OR, IFS, and nested logic.
- Text functions: CONCAT, TEXTJOIN, LEFT, RIGHT, MID, and TRIM.
- Date and time functions for ageing, due dates, and period reporting.
- Lookup and reference functions: VLOOKUP, XLOOKUP, INDEX, and MATCH.
- Combining functions into advanced solutions.
- Using AI assistants to suggest, explain, and debug formulas.

## Day 3: Data Analysis and Decision Making

- Sorting and advanced filtering, including custom and multi-level filters.
- PivotTables: layout, grouping, calculated fields, and value settings.
- PivotCharts and connecting multiple tables to one pivot.
- Conditional formatting to highlight trends, exceptions, and outliers.
- Trend and pattern analysis with sparklines and data bars.
- What-if analysis: data tables, goal seek, and scenario manager.
- AI-supported analysis for summarising and interpreting datasets.

## Day 4: Professional Reports and Interactive Dashboards

- Chart selection and professional formatting of charts.
- Building interactive dashboards with slicers and timelines.
- Dynamic ranges, named ranges, and structured references.

- Linking data from multiple files and sources.
- Power Query for importing, transforming, and merging data.
- Using AI to draft report commentary and summaries.
- A mini applied project building a working dashboard.

## Day 5: Automation and Advanced Professional Practice

- Introduction to task automation in Excel with macros.
- Recording, editing, and running simple macros.
- Integrating Excel with AI tools for formula and analysis support.
- Shortcuts, productivity techniques, and workbook design standards.
- Protecting workbooks, sheets, and cells.
- Best practices for large files, performance, and version control.
- A final applied project with performance assessment.

## Conclusion

By successfully completing the Microsoft Excel: Basic to Advanced with AI-Powered Data Analysis Training Course, participants will have acquired a practical command of advanced formulas, data cleaning, PivotTables, dashboards, automation, and AI-assisted analysis, together with the discipline to design workbooks others can read and reuse. They will leave able to turn raw data into reports and decisions with far less manual effort. Gentex Training Center delivers this programme with data and reporting practitioners who use these techniques in daily business work.

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# FAQs for the Microsoft Excel: Basic to Advanced with AI-Powered Data Analysis course

## Q1 What is the "Microsoft Excel: Basic to Advanced with AI-Powered Data Analysis" course about?

It is a five-day programme that takes participants from basic Excel use to professional analysis and reporting. It covers advanced formulas, data cleaning with Power Query, PivotTables, dashboards, automation with macros, and AI-assisted analysis.

## Q2 What are the key benefits of the Microsoft Excel: Basic to Advanced with AI-Powered Data Analysis course?

Participants cut hours of manual work through formulas, PivotTables, and automation, analyse large datasets accurately, and build reports that management acts on. They also gain AI-assisted techniques that shorten the time from raw data to decision.

## Q3 What skills will I gain from the Microsoft Excel: Basic to Advanced with AI-Powered Data Analysis course?

You will gain professional data entry, formatting, and validation, advanced formula and function construction, PivotTable and dashboard reporting, and task automation with AI-assisted data analysis and interpretation.

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## Q4 What tools, methods, or standards are covered in the Microsoft Excel: Basic to Advanced with AI-Powered Data Analysis course?

The course works with relative, absolute, and mixed cell references, logical, text, date and lookup functions including IF, VLOOKUP, XLOOKUP, INDEX and MATCH, data validation lists, sorting and advanced filtering, PivotTables with calculated fields and PivotCharts, conditional formatting, what-if analysis with data tables, goal seek and scenario manager, Power Query, slicers and timelines, macro recording and editing, named and structured ranges, and AI assistants for formula suggestion and debugging.

## Q5 How is the Microsoft Excel: Basic to Advanced with AI-Powered Data Analysis course applied in real-world practice?

Teams apply it when preparing monthly sales, inventory, HR, and financial reports, cleaning exported data before analysis, building KPI dashboards for management reviews, automating recurring reports with macros, and consolidating figures from multiple files.