

# Advanced Excel & Dashboarding with Claude AI

Course Outline — Table of Contents | Duration: 16 Hours

## Module 1: Excel Foundations, Done Right

- Interface, navigation, and workbook structure for efficient working
- Data entry best practices, formatting, and cell styles
- Absolute vs relative vs mixed referencing (the foundation for everything else)
- Naming ranges and why it matters for clean formulas

## Module 2: Core Functions Every User Should Master

- Logical functions: IF, AND, OR, nested IF, IFS
- Conditional aggregation: SUMIF/SUMIFS, COUNTIF/COUNTIFS, AVERAGEIF/AVERAGEIFS
- Text functions: LEFT, RIGHT, MID, TRIM, CONCATENATE/TEXTJOIN, TEXT
- Date and time functions: TODAY, NETWORKDAYS, EDATE, DATEDIF
- Using Claude to convert business requirements into the right formula

## Module 3: Lookup and Reference Functions

- VLOOKUP and HLOOKUP — uses and limitations
- INDEX-MATCH for flexible, two-way lookups
- XLOOKUP — the modern replacement and why it's preferred
- Combining lookups with IFERROR for clean outputs
- Using Claude to troubleshoot lookup errors and choose the right function for the scenario

## Module 4: Data Management and Cleaning at Scale

- Excel Tables: structured references and dynamic ranges
- Sorting, multi-level filtering, and advanced filter criteria
- Data validation (dropdowns, input rules, error alerts)
- Removing duplicates, handling blanks, and standardizing inconsistent data
- Using Claude to audit a dataset and suggest cleanup steps

## Module 5: PivotTables and PivotCharts for Analysis

- Building PivotTables from raw transactional data
- Grouping, filtering, slicers, and calculated fields
- Creating PivotCharts linked to PivotTable summaries
- Refreshing and maintaining Pivot-based reports
- Using Claude to interpret Pivot output and recommend groupings

## Module 6: Charts and Visual Storytelling

- Choosing the right chart type for the message (trend, comparison, composition)
- Combo charts, secondary axes, and formatting for clarity
- Sparklines for compact, in-cell trend visuals
- Conditional formatting (data bars, color scales, icon sets, custom rules)
- Using Claude to suggest the most effective visual for a given dataset

## Module 7: Building Interactive Dashboards

- Dashboard design principles — layout, hierarchy, and readability
- Connecting slicers and timelines to multiple Pivots/Charts
- Using form controls (dropdowns, option buttons) for interactivity
- Combining KPIs, charts, and tables into a single dashboard view
- Using Claude to review a dashboard draft and suggest improvements

## Module 8: Productivity, Automation, and Working with Claude

- Useful shortcuts and time-saving techniques for daily Excel use
- Introduction to basic automation (macros/recording — conceptual overview)
- Practical ways to use Claude for formula generation, data summarization, and report drafting
- Building a complete mini-report/dashboard end-to-end with Claude's assistance
- Q&A and wrap-up