

Microsoft Excel (Basic to Advanced + AI) (1 Month)

Syllabus

01: Excel Foundation – Building Core Competence

1.1 Excel User Interface

- ✓ Workbook/Worksheet concepts
- ✓ Ribbon, Tabs, Quick Access Toolbar
- ✓ Rows, Columns, Cells, Ranges
- ✓ Saving, Sharing, AutoSave (Cloud)

1.2 Data Entry & Formatting

- ✓ Data types and cell formatting
- ✓ AutoFill, Flash Fill
- ✓ Merge & Center, Wrap Text
- ✓ Number, Date, Currency formats

1.3 Basic Formulas

- ✓ SUM, AVERAGE, MIN, MAX, COUNT, COUNTA
- ✓ Cell references: Relative, Absolute, Mixed
- ✓ Using the formula bar and named ranges

02: Intermediate Excel – Structured Data Handling

2.1 Logical Functions

- ✓ IF, AND, OR, NOT, Nested IF, IFS
- ✓ Error handling: IFERROR, IFNA, ISERR, ISNA, ISNUMBER, ISTEXT, ISFORMULA, ISEVEN, ISODD, ISOMITTED

2.2 Text Functions

- ✓ Extracting: LEFT, RIGHT, MID, LEN, TEXT
- ✓ Searching: SEARCH, FIND
- ✓ Cleaning & transforming: TRIM, SUBSTITUTE, REPLACE, CLEAN, EXACT, REPT, TEXTBEFORE, TEXTAFTER, TEXTSPLIT

2.3 Conditional Aggregates

- ✓ SUMIF, SUMIFS, COUNTIF, COUNTIFS, AVERAGEIF, AVERAGEIFS, COUNTBLANK, SUBTOTAL

2.4 Data Validation & Cleaning

- ✓ Dropdowns, input restrictions
- ✓ Remove duplicates
- ✓ Text to Columns
- ✓ Flash Fill smart patterns

03: Advanced Excel – Lookups, Arrays, and Analytics

3.1 Lookup & Reference

- ✓ LOOKUP, VLOOKUP, HLOOKUP, XLOOKUP
- ✓ INDEX, MATCH, CHOOSE, CHOOSECOLS, CHOOSEROWS
- ✓ Row/Column helpers: ROW, COLUMN, ROWS, COLUMNS, SHEET, SHEETS, TOROWS, TOCOLS

3.2 Dynamic Arrays (Microsoft 365+)

- ✓ FILTER, UNIQUE, SORT, SORTBY, SEQUENCE, RANDARRAY, ARRAYTOTEXT, MAKEARRAY, TRANSPOSE, BYCOL, BYROW

3.3 Financial Functions

- ✓ Loans & Investments: PMT, IPMT, PPMT, FV, PV, RATE, NPER

3.4 Mathematical & Statistical

- ✓ MEDIAN, MODE, MOD, ROUND, INT, QUOTIENT, LARGE, SMALL, POWER, SQRT, ABS, FREQUENCY, RANK

3.5 Conversion & Utility Functions

- ✓ CONVERT, ROMAN, BIN2DEC, DEC2BIN, HEX2BIN, BIN2HEX, DOLLAR, FIXED, CHAR, CODE, INFO, FORMULATEXT, HYPERLINK

04: Expert Excel – Dashboards, Pivoting & Automation

4.1 PivotTables & PivotCharts

- ✓ Creating, grouping, filtering
- ✓ Calculated fields
- ✓ Slicers and timelines
- ✓ PivotCharts for reporting

4.2 Advanced Charting & Visualization

- ✓ Combo charts, dual axis
- ✓ Dynamic charts using named ranges
- ✓ Sparklines
- ✓ Inserting and customizing IMAGE

4.3 What-If Analysis & Forecasting

- ✓ Goal Seek, Scenario Manager, Data Tables
- ✓ Forecast Sheets
- ✓ Sensitivity modelling

4.4 Automation & Macros

- ✓ Recording Macros
- ✓ Intro to VBA (Optional)
- ✓ Worksheet events (Optional)
- ✓ Named ranges for automation (Optional)

05: Excel + AI (Microsoft 365 Copilot Integration)

5.1 Introduction to Microsoft Copilot in Excel

- ✓ Overview of Copilot and its capabilities
- ✓ Requirements and Microsoft 365 licensing
- ✓ Best practices for prompting

5.2 AI-Powered Tasks

- ✓ Generating formulas with Copilot
- ✓ Natural language queries (e.g., "Show me sales growth this quarter")
- ✓ Auto-analysis of data trends
- ✓ AI-assisted chart creation
- ✓ Building dashboards with Copilot suggestions

5.3 AI in Practice

- ✓ Smart data cleaning using Copilot
- ✓ Predictive analysis using AI
- ✓ Real-time summaries and visual insights
- ✓ Suggestions for PivotTables and Charts

5.4 Data Insights with AI

- ✓ Use "Analyze Data" pane
- ✓ Q&A with datasets
- ✓ Natural language to formula translation
- ✓ AI-backed recommendations for formatting and trends

06: Capstone Project & Certification

- Dynamic business dashboard with slicers and PivotTables
- Investment calculator using financial & array functions
- AI-assisted sales report with trends and summaries