# AI With Advanced Excel

**Unit 1: Basic Excel Fundamentals Refresher (Day 1 - Day 2)**

**Day 1: Excel Interface and Essentials**

* Ribbon, Quick Access Toolbar, Workbook navigation
* Cell formatting, number formats
* Data types and entry best practices
* Real-life task 1: Create a formatted employee attendance sheet
* Real-life task 2: Prepare a personal monthly expense tracker

**Day 2: Formulas and Cell Referencing**

* Absolute, relative, and mixed referencing
* Mathematical & logical formulas (SUM, IF, AVERAGE, etc.)
* Error types and troubleshooting
* Real-life task 1: Salary sheet with conditional incentives
* Real-life task 2: Sales commission calculator with bonus thresholds

**Unit 2: Data Management and Cleaning (Day 3 - Day 5)**

**Day 3: Data Cleaning Basics**

* Removing duplicates
* Text functions: TRIM, LEN, LEFT, RIGHT, MID
* Real-life task 1: Clean client contact records
* Real-life task 2: Standardize product codes from raw data

**Day 4: Data Validation and Dropdowns**

* Preventing data entry errors
* Creating dynamic dropdowns using lists
* Real-life task 1: Create a validated invoice entry form
* Real-life task 2: Student mark entry sheet with valid grade options

**Day 5: Advanced Text & Date Functions**

* CONCATENATE, TEXTJOIN, FIND, SEARCH
* DATE, TODAY, NETWORKDAYS, EOMONTH
* Real-life task 1: Employee leave tracker with automatic leave balance
* Real-life task 2: Project deadline tracker with alerts for upcoming deadlines

**Unit 3: Logical & Lookup Functions (Day 6 - Day 8)**

**Day 6: Logical Formulas**

* IF, AND, OR, NOT, nested IFs
* Real-life task 1: Auto-eligibility checker for promotions based on KPIs
* Real-life task 2: Attendance status report (Present/Absent) with automated messages

**Day 7: Advanced Lookup Techniques**

* INDEX & MATCH
* CHOOSE, OFFSET
* VLOOKUP, HLOOKUP, XLOOKUP
* Avoiding LOOKUP limitations
* Real-life task 1: Auto-grade student performance from marks
* Real-life task 2: Product price retrieval from a master inventory list

**Day 8: Error Handling & Named Ranges**

* IFERROR, ISBLANK, ISNA
* Define and use named ranges
* Real-life task 1: Dynamic project budgeting with error-handling formulas
* Real-life task 2: Customer payment tracker highlighting missing entries

**Unit 4: Data Analysis Tools (Day 9 - Day 11)**

**Day 9: Sorting, Filtering, and Subtotals**

* Custom sorting, advanced filters
* Real-life task 1: Segment-wise sales report
* Real-life task 2: Employee list sorted by department and tenure

**Day 10: Conditional Formatting**

* Rules based on values, dates, duplicates
* Icon sets, data bars (informational only)
* Real-life task 1: Highlight overdue payments in ledger
* Real-life task 2: Highlight low-performing students in a marksheet

**Day 11: Tables and Structured References**

* Excel Tables vs. normal ranges
* Structured referencing and table formulas
* Real-life task 1: Expense tracker using Excel Tables
* Real-life task 2: Inventory management table with dynamic totals

**Unit 5: Pivot Tables and Charts (Day 12 - Day 14)**

**Day 12: Pivot Tables Basics**

* Creating pivot tables
* Grouping data, value summaries
* Real-life task 1: Department-wise sales performance summary
* Real-life task 2: Customer segmentation based on purchase history

**Day 13: Advanced Pivot Table Techniques**

* Calculated fields, slicers
* Multi-level pivot tables
* Real-life task 1: Region-wise customer segmentation
* Real-life task 2: Monthly revenue analysis with product categories

**Day 14: Data Visualization with Charts**

* Column, Bar, Line, Pie, Combo charts
* Real-life task 1: Visual dashboard for product-wise profit tracking
* Real-life task 2: Attendance trends visualization for HR reports

**Unit 6: Dashboards and Reporting (Day 15 - Day 16)**

**Day 15: Interactive Dashboard Elements**

* Linking charts and pivot tables
* Form controls: scroll bar, drop-downs
* Real-life task 1: Create a sales dashboard for management
* Real-life task 2: KPI tracker for marketing campaigns

**Day 16: Automating Reports**

* Linking Excel to Word/PowerPoint
* Exporting as PDF
* Real-life task 1: Monthly report generation template
* Real-life task 2: Auto-update expense summary report

**Unit 7: Advanced Excel Features (Day 17 - Day 18)**

**Day 17: Power Query Introduction**

* Importing and transforming data
* Merging and appending queries
* Real-life task 1: Combine multiple monthly sales files into one dataset
* Real-life task 2: Consolidate regional HR attendance files

**Day 18: What-If Analysis & Goal Seek**

* Scenario Manager, Goal Seek, Data Tables
* Real-life task 1: Loan repayment simulation
* Real-life task 2: Revenue forecasting with different pricing scenarios

**Day 18 (Additional)**: Macros & VBA Introduction

* Recording macros for repetitive tasks
* Basic VBA script writing and button assignment
* Real-life task 1: Automate formatting of monthly invoices
* Real-life task 2: Generate automatic reminder emails for overdue payments

**Unit 8: Excel AI Tools & Copilot Integration (Day 19 - Day 20)**

**Day 19: Microsoft Excel Copilot**

* How to enable and access Excel Copilot
* Use cases: formula generation, pattern analysis, summarization
* Real-life task 1: Use Copilot to analyze a raw dataset and summarize findings
* Real-life task 2: Generate predictive trends for quarterly sales

**Day 20: ChatGPT + Excel Integration**

* Using ChatGPT to write or explain Excel formulas
* Prompt engineering for Excel
* Real-life task 1: Automate report writing using ChatGPT insights
* Real-life task 2: Generate HR performance summary report with AI explanations