

# Sangy Academy

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## ■ Course Title: Introduction to Data Analysis with Excel

**Duration:** 3 months (2 sessions/week × 2 hours/session)

**Total Sessions:** 24

**Target Audience:** Beginners and early professionals

**Delivery Mode:** Hands-on with practical examples

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## ■ COURSE OUTLINE

### ■ Month 1: Excel Basics and Data Handling

#### Week 1: Getting Started with Excel

- **Lesson 1: Introduction to Excel for Data Analysis**
  - Overview of Excel interface
  - Workbook structure (worksheets, cells, ranges)
  - Data types and formatting
- **Lesson 2: Entering and Managing Data**
  - Best practices for data entry
  - Sorting and filtering
  - Data validation techniques

#### Week 2: Organizing and Cleaning Data

- **Lesson 3: Working with Tables**
  - Creating and managing Excel tables
  - Structured references
- **Lesson 4: Cleaning Data**
  - Removing duplicates
  - TRIM, CLEAN, FIND/REPLACE
  - Flash Fill and basic error handling

### **Week 3: Basic Formulas and Functions**

- **Lesson 5: Introduction to Formulas**
  - Cell referencing (relative, absolute)
  - Basic arithmetic formulas
- **Lesson 6: Common Excel Functions**
  - SUM, AVERAGE, COUNT, MIN, MAX
  - Logical functions: IF, AND, OR, IFERROR

### **Week 4: Working with Dates and Text**

- **Lesson 7: Date Functions**
    - TODAY(), NOW(), DATEDIF, EOMONTH
  - **Lesson 8: Text Functions**
    - LEFT(), RIGHT(), MID(), LEN(), CONCATENATE(), TEXT()
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## **Month 2: Data Analysis and Visualization**

### **Week 5: Intermediate Functions**

- **Lesson 9: Lookup and Reference Functions**
  - VLOOKUP, HLOOKUP, XLOOKUP (if supported), INDEX, MATCH
- **Lesson 10: Nested Functions and Formula Combinations**
  - Combining IF with AND/OR, using functions together

### **Week 6: PivotTables for Data Analysis**

- **Lesson 11: Introduction to PivotTables**
  - Creating PivotTables
  - Drag and drop fields
- **Lesson 12: Analyzing with PivotTables**
  - Grouping data, filters, slicers
  - Value field settings and calculated fields

### **Week 7: Charts and Visualization**

- **Lesson 13: Creating Basic Charts**
  - Column, bar, line, pie, and combo charts
  - Chart elements and formatting
- **Lesson 14: Advanced Charting Techniques**
  - Trendlines, dual axes, sparklines

- Dynamic charts using named ranges

## **Week 8: Conditional Formatting and Dashboards**

- **Lesson 15: Conditional Formatting**
    - Highlighting rules, data bars, icon sets
  - **Lesson 16: Introduction to Dashboards**
    - Building mini dashboards with charts and slicers
    - Layout and interactivity tips
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## **Month 3: Practical Applications and Case Studies**

### **Week 9: Data Analysis Techniques**

- **Lesson 17: Descriptive Statistics in Excel**
  - Mean, median, mode, variance, standard deviation
  - Using the **Analysis ToolPak**
- **Lesson 18: Trend and Forecast Analysis**
  - Linear trends, forecast sheets, seasonal patterns

### **Week 10: Business Case Studies**

- **Lesson 19: Sales & Revenue Analysis**
  - Sales trends, customer segmentation
- **Lesson 20: HR or Inventory Analysis**
  - Employee attrition, stock movement, aging reports

### **Week 11: Excel for Reporting**

- **Lesson 21: Creating Professional Reports**
  - Templates, formatting, print settings
- **Lesson 22: Automating Reports with Named Ranges and Formulas**
  - Dynamic ranges, linking sheets, reusable formats

### **Week 12: Capstone Project and Review**

- **Lesson 23: Capstone Project (Group/Individual)**
    - Real-world dataset, analysis + dashboard/report
  - **Lesson 24: Final Presentation + Review + Q&A**
    - Project presentations
    - Recap of key skills and feedback
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## **Deliverables**

- Weekly practice files
  - Mid-course quiz (Week 6)
  - Capstone project with feedback
  - Certificate of Completion
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